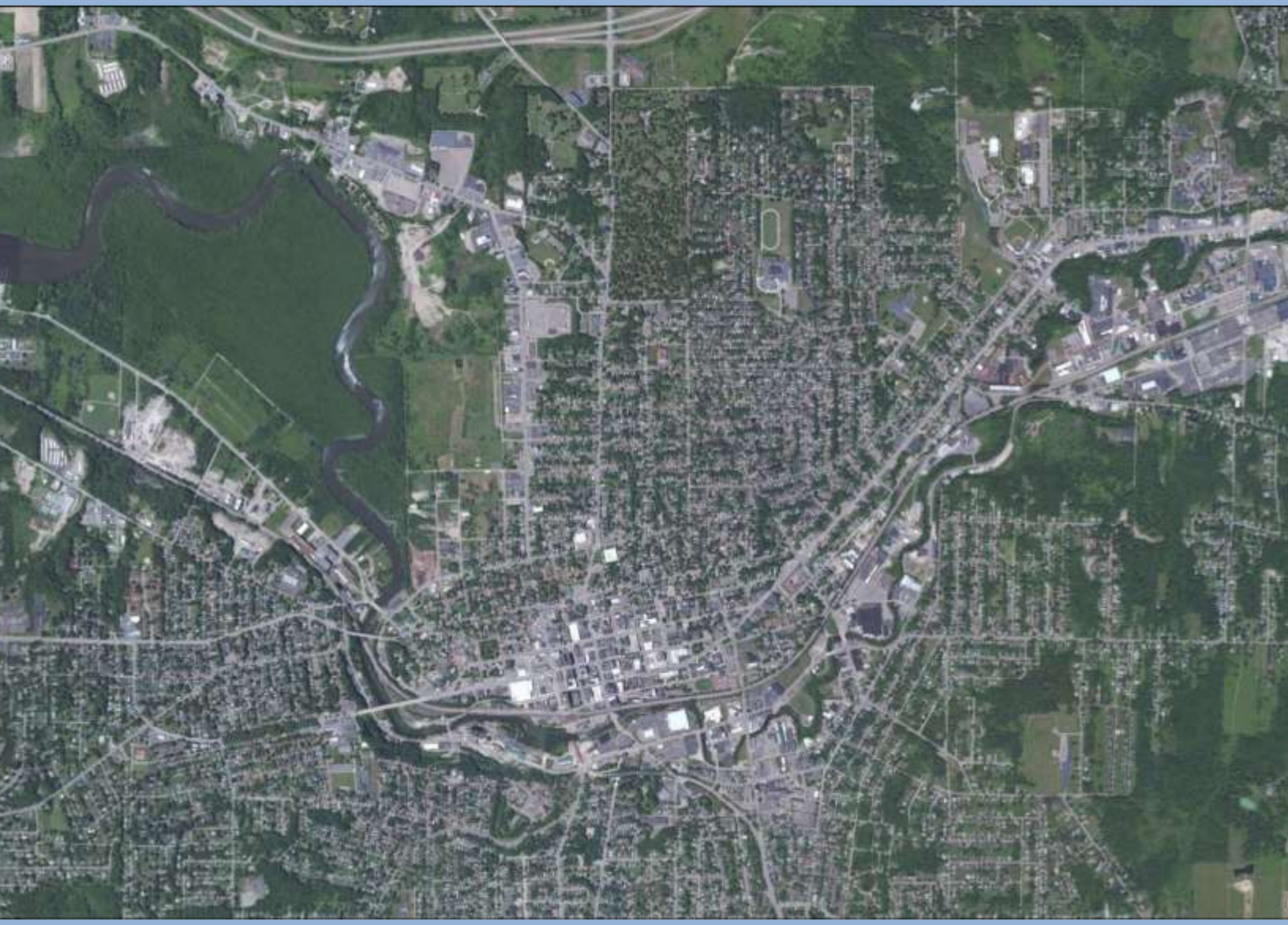


CITY OF JAMESTOWN

LOCAL WATERFRONT REVITALIZATION PROGRAM

JUNE 2016

FINAL DRAFT

This report was prepared for the New York State Department of State with funds provided under Title 11 of the Environmental Protection Fund.

LABELLA Associates, P.C. | Engineering Architecture Environmental Planning
Biohabitats
W-ZHA, LLC
Goody Clancy
GPI
HARRIS BEACH PLLC Attorneys at Law

CONTENTS

INTRODUCTION 1

GOALS AND OBJECTIVES OF THE LWRP 1

ORGANIZATION OF THE REPORT 3

SECTION I – WATERFRONT REVITALIZATION AREA BOUNDARY 6

SUB AREAS 7

SECTION II – INVENTORY AND ANALYSIS 12

2.1 REGIONAL SETTING AND COMMUNITY CHARACTERISTICS 12

REGIONAL GEOGRAPHIC SETTING 12

COMMUNITY AND WATERFRONT DEVELOPMENT HISTORY 18

CURRENT DEMOGRAPHIC CONDITIONS 20

ECONOMIC CONTEXT 25

EXISTING PLANNING INITIATIVES 30

2.2 EXISTING LAND USE AND ZONING 34

EXISTING LAND USE 34

ZONING AND OTHER LAND USE REGULATIONS 38

LAND OWNERSHIP PATTERNS 43

BROWNFIELD, UNDERUTILIZED, AND VACANT SITES 46

WATER-DEPENDENT AND WATER-ENHANCED USES 55

2.3 SURFACE WATERS AND SURFACE WATER USES 60

MARINAS, DOCKS, AND BULKHEADS 60

VESSEL USE AND NAVIGATION 63

2.4 PUBLIC ACCESS AND RECREATION 76

PUBLIC ACCESS 76

RECREATION 77

2.5 HISTORIC AND CULTURAL RESOURCES 80

SCENIC RESOURCES 82

2.6 PUBLIC INFRASTRUCTURE 90

WATER SUPPLY 90

WASTEWATER DISPOSAL 90

STORMWATER RUNOFF AND STORM DRAINAGE 91
SOLID WASTE DISPOSAL 95
TRANSPORTATION SYSTEMS 95
2.7 WATER QUALITY 113
2.8 NATURAL RESOURCES 114
WETLANDS 114
FISH AND WILDLIFE 115
2.9 TOPOGRAPHY, GEOLOGY AND SOILS 121
2.10 FLOODING AND EROSION 122
FLOODING, FLOOD PLAINS, AND SHORELINE TOPOGRAPHY 122
NATURAL PROTECTIVE FEATURES AND EROSION 123
2.11 SUMMARY AND DISCUSSION 123
SECTION III – LOCAL WATERFRONT REVITALIZATION PROGRAM POLICIES 130
3.1 DEVELOPED WATERFRONT POLICIES 130
POLICY 1: 130
POLICY 2: 138
POLICY 3: 143
3.2 NATURAL WATERFRONT POLICIES 145
POLICY 4: 145
POLICY 5: 148
POLICY 6: 153
POLICY 7: 160
POLICY 8: 161
3.3 PUBLIC WATERFRONT POLICIES 165
POLICY 9: 165
3.4 WORKING WATERFRONT POLICIES 170
POLICY 10: 170
POLICY 11: 174
POLICY 12: 175
POLICY 13: 176

SECTION IV – PROPOSED LAND AND WATER USES AND PROPOSED PROJECTS 182

4.1 PROPOSED LAND USES 182

4.2 PROPOSED WATER USES / HARBOR MANAGEMENT 183

4.3 PROPOSED PROJECTS 186

OVERALL GOALS AND OBJECTIVES 187

ECONOMIC DEVELOPMENT 200

QUALITY OF LIFE IMPROVEMENTS 222

NATURAL/ENVIRONMENTAL ENHANCEMENTS AND IMPROVEMENTS 229

ADDITIONAL STRATEGIES 239

SECTION V – TECHNIQUES FOR LOCAL IMPLEMENTATION 244

5.1 EXISTING LAWS 244

5.2 PROPOSED LOCAL LAWS NECESSARY TO IMPLEMENT LWRP 249

CONSISTENCY REVIEW LAW 249

ZONING 249

5.3 OTHER PUBLIC AND PRIVATE ACTIONS NECESSARY TO IMPLEMENT THE LWRP 250

5.4 MANAGEMENT STRUCTURE FOR IMPLEMENTING THE LWRP 250

5.5 FINANCIAL RESOURCES NECESSARY TO IMPLEMENT THE LWRP 252

5.6 LOCAL REGULATORY CHANGES 255

SECTION VI – STATE ACTIONS AND PROGRAMS LIKELY TO AFFECT IMPLEMENTATION 258

6.1 STATE PROGRAMS THAT SHOULD BE UNDERTAKEN IN A MANNER CONSISTENT WITH THE LWRP 259

6.2 STATE PROGRAMS NECESSARY TO FURTHER THE LWRP 269

SECTION VII – LOCAL COMMITMENT AND CONSULTATION 274

7.1 LOCAL COMMITMENT 274

7.2 CONSULTATION 274

LOCAL WATERFRONT REVITALIZATION PROGRAM PROMOTION 274

PUBLIC MEETINGS 275

STEERING COMMITTEE MEETINGS 276

STAKEHOLDER ENGAGEMENT 276

APPENDICES 278

SUPPORTING DOCUMENTS 330

TABLE OF FIGURES

FIGURE 1. WATERFRONT REVITALIZATION 8
FIGURE 2. SUB AREAS MAP 9
FIGURE 3. COMMUNITY CONTEXT 14
FIGURE 4. STUDY AREA CONTEXT MAP 16
FIGURE 5. CENSUS TRACTS WITHIN THE LWRP STUDY AREA 21
FIGURE 6. LAND USE MAP 36
FIGURE 7. ZONING MAP 40
FIGURE 8. URBAN DESIGN GUIDELINE DISTRICTS WITHIN THE LWRP STUDY AREA 43
FIGURE 9. OWNERSHIP MAP 44
FIGURE 10. BROWNFIELD, UNDERUTILIZED, AND/OR VACANT SITES – BOA PRE-NOM MAP 48
FIGURE 11. BROWNFIELD, UNDERUTILIZED, AND/OR VACANT SITES - BOA NOM MAP 50
FIGURE 12. WATER DEPENDENT AND ENHANCED USES MAP 58
FIGURE 13. PIPELINES AND CABLE RIVER CROSSINGS MAP 74
FIGURE 14. PARKS AND OPEN SPACE MAP 78
FIGURE 15. HISTORIC AND 86
FIGURE 16. SCENIC RESOURCES MAP 88
FIGURE 17. WATER MAINS MAP 92
FIGURE 18. VEHICLE CIRCULATION MAP 96
FIGURE 19. EXISTING RIVERWALK TRAIL NETWORK 108
FIGURE 20. NATURAL RESOURCES MAP 116
FIGURE 21. GENERALIZED LAND USE RECOMMENDATIONS MAP 184
FIGURE 22. PROPOSED ECONOMIC DEVELOPMENT PROJECTS MAP 194
FIGURE 23. PROPOSED QUALITY OF LIFE IMPROVEMENT PROJECTS MAP 196
FIGURE 24. PROPOSED NATURAL/ENVIRONMENTAL ENHANCEMENT & IMPROVEMENT PROJECTS MAP 198
FIGURE 25. DOWNTOWN RIVERFRONT & MEDICAL AREA OPPORTUNITY ZONES 202
FIGURE 26. DOWNTOWN RIVERFRONT & MEDICAL AREA OPPORTUNITY ZONES NEAR-TERM DEVELOPMENT POTENTIAL 203
FIGURE 27. DOWNTOWN RIVERFRONT & MEDICAL AREA OPPORTUNITY ZONES LONG-TERM DEVELOPMENT POTENTIAL 204

FIGURE 28. POTENTIAL DEVELOPMENT PATTERN - VIEW OF DOWNTOWN RIVERWALK NORTH SHORE.....205

FIGURE 29. POTENTIAL DEVELOPMENT PATTERN - VIEW OF DOWNTOWN RIVERWALK FROM SOUTH TO NORTH SHORE..... 206

FIGURE 30. PHASE 1 NATIONAL COMEDY CENTER - PRELIMINARY SITE PLAN..... 208

FIGURE 31. COMPLETE BUILD OUT OF THE NATIONAL COMEDY CENTER - PRELIMINARY SITE PLAN... 209

FIGURE 32. DAHLSTROM COMPLEX DEVELOPMENT POTENTIAL - OPTION A 218

FIGURE 33. DAHLSTROM COMPLEX DEVELOPMENT POTENTIAL - OPTION B 219

FIGURE 34. DAHLSTROM COMPLEX DEVELOPMENT POTENTIAL – OBLIQUE VIEW 220

FIGURE 35. DAHLSTROM COMPLEX DEVELOPMENT PATTERN - STREET-LEVEL VIEW 221

FIGURE 36. RIVERWALK TRAILHEAD AT TROLLEY BUILDING SITE - STREET-LEVEL VIEW..... 224

FIGURE 37: MCCREA POINT PARK DEVELOPMENT POTENTIAL – OBLIQUE VIEW 230

FIGURE 38. MCCREA POINT PARK DEVELOPMENT POTENTIAL – STREET-LEVEL VIEW 231

LIST OF TABLES

TABLE 1. POPULATION 20
TABLE 2. CENSUS TRACT POPULATION CHARACTERISTICS 21
TABLE 3. CENSUS TRACT HOUSEHOLD CHARACTERISTICS 22
TABLE 4. CENSUS TRACT EDUCATION AND INCOME CHARACTERISTICS....22
TABLE 5. CENSUS TRACT WORK CHARACTERISTICS 23
TABLE 6. CENSUS TRACT HOUSING UNIT CHARACTERISTICS 24
TABLE 7. JOB INFLOW/OUTFLOW - CITY OF JAMESTOWN - 2010....25
TABLE 8. JAMESTOWN CITY SHARE OF CHAUTAUQUA COUNTY JOBS - 2010....26
TABLE 9. PRIMARY JOB TRENDS - CHAUTAUQUA COUNTY - 2002-2010....27
TABLE 10. PRIMARY JOB TRENDS - CITY OF JAMESTOWN - 2002-2010 27
TABLE 11. EMPLOYMENT PROJECTIONS - CHAUTAUQUA COUNTY - 2010-2020....28
TABLE 12. CHAUTAUQUA COUNTY AND THE CITY OF JAMESTOWN RETAIL SALES - 2000-2009 29
TABLE 13. LAND USE IN THE LWRP STUDY AREA 35
TABLE 14. ZONING CATEGORIES IN THE LWRP STUDY AREA 39
TABLE 15. PUBLIC AND QUASI-PUBLIC LAND OWNERSHIP DISTRIBUTION IN THE LWRP STUDY AREA ...43
TABLE 16. BROWNFIELD, UNDERUTILIZED, AND VACANT PROPERTIES – CHADAKOIN OUTLET DISTRICT 52
TABLE 17. BROWNFIELD, UNDERUTILIZED, AND VACANT PROPERTIES – DOWNTOWN DISTRICT AND INDUSTRIAL HERITAGE AND EAST END INDUSTRIAL CORRIDORS....53
TABLE 18. FUNCTIONAL CLASSIFICATION OF ROADS NORTH OF THE RIVER....98
TABLE 19. FUNCTIONAL CLASSIFICATION OF ROADS PRIMARILY SOUTH OF THE RIVER 98
TABLE 20. SECONDARY ROUTES PERPENDICULAR TO THE CHADAKOIN RIVER 100
TABLE 21. PUBLIC PARKING RAMPS AND SURFACE LOTS 111
TABLE 22. CITY OF JAMESTOWN LWRP: PROPOSED PROJECTS IMPLEMENTATION MATRIX....188
TABLE 23. POTENTIAL GRANT ASSISTANCE PROGRAMS....253

APPENDICES

Appendix A: Local Waterfront Revitalization Program Consistency Review Law and Waterfront Assessment Form

Appendix B: Guidelines for Notification and Review

Appendix C: Determination of Significance and Compliance with SEQR

Appendix D: Waterfront Development Overlay District Zoning Regulations

SUPPORTING DOCUMENTS

Document 1: Economic and Market Analysis

Document 2: Ecological Conditions and Living Infrastructure Framework

Document 3: Urban Design Analysis

Document 4: Inventory and Analysis of Transportation and Municipal Infrastructure Systems

This page intentionally left blank.

INTRODUCTION

GOALS AND OBJECTIVES OF THE LWRP

The City of Jamestown and its various partners have undertaken a series of planning and development initiatives over the past decade with the intent of improving the City. The City of Jamestown Local Waterfront Revitalization Program (LWRP) is a locally prepared comprehensive land and water use plan for the City's natural, public, and developed waterfront resources along the Chadakoin River. A LWRP is prepared with assistance from the New York State Department of State (NYS DOS) in accordance with the New York State Waterfront Revitalization of Waterfront Areas and Inland Waterways Act (NYS Executive Law Article 42). The LWRP provides a framework within which critical waterfront issues can be addressed, and planned waterfront improvement projects can be pursued and implemented.

The overall goal of the City of Jamestown LWRP is the continuing improvement of the quality of life within the City, including economic, health, and aesthetic conditions. The objectives of the LWRP include:

- Formalizing the community's vision for its waterfront, which will significantly increase The City's ability to attract and manage development activities that complement the unique cultural and natural characteristics of its waterfront.
- Identifying long-term land and water uses along the waterfront.
- Identifying specific projects and policies to encourage environmental protection, foster economic development, protect valuable water resources, and improve public waterfront access.

Once completed and approved by the New York State Secretary of State, the LWRP will provide the City with the local controls to guide waterfront development. More importantly, a distinct benefit of the LWRP is the legal ability to ensure that all state or local government actions proposed for its waterfront only occur in a fashion prescribed by the LWRP. This "consistency" provision is a strong tool that assures that State and local government works in unison, and not at cross purposes, to build a stronger economy and healthier waterfront environment.

The following Vision Statement was created during the course of the project:

VISION STATEMENT

City of Jamestown
Local Waterfront Revitalization Program

We see a diverse community of City and County residents with good paying, value-added jobs at a variety of commercial and industrial businesses within the Study Area. Access to the Chadakoin River has been strengthened in various portions of the Study Area, and the community has strong connections to points east and west via a network of trails. Development along the River has been completed in a manner that provides access and draws residents and tourists with increased retail and entertainment opportunities. Previously underutilized and brownfield properties have been reclaimed for greenspace, residential, commercial, industrial, and mixed-use developments. Manufacturing sector industries are clustered along River Street and in the eastern section of the City while new commercial developments have flourished in the downtown and along Harrison Street. The Medical Corridor is established and provides a direct link between the hospital and the Riverwalk Center.

ORGANIZATION OF THE REPORT

The report is organized according to the outline provided by the New York Department of State (NYSDOS) for all LWRP projects inclusive of a harbor management plan funded under Title 11 of the Environmental Protection Fund:

Section I. Waterfront Revitalization Area Boundary delineates the waterfront revitalization area and harbor management planning area as well as creates sub-areas to facilitate analysis of the study area.

Section II. Inventory and Analysis inventories and describes existing natural and man-made resources and conditions within the waterfront area as well as uses of the surface waters and underwater lands in the harbor management planning area.

Section III. Local Waterfront Revitalization Policies refines applicable State waterfront revitalization policies to reflect local conditions and circumstances.

Section IV. Proposed Land and Water Uses and Proposed Projects discusses the proposed land and water uses and proposed projects necessary to implement the LWRP.

Section V. Techniques for Local Implementation of the Program describes existing and proposed local laws and regulations which are necessary to implement the recommended policies, proposed uses, and projects. Additionally, this section describes public and private sector actions necessary to implement the LWRP, a local management structure for reviewing proposed waterfront projects for consistency with the LWRP, and the financial resources required to implement the LWRP.

Section VI. State Actions and Programs Likely to Affect Implementation of the LWRP provides a list of state agency actions and programs which are to be undertaken in a manner consistent with the LWRP and describes specific state actions necessary to further implementation of the LWRP.

Section VII. Local Commitment and Consultation describes the public and municipal consultation efforts undertaken in preparation of the LWRP, including study promotion, public meetings, stakeholder meetings, and steering committee meetings.



Section I
Waterfront Revitalization Area Boundary

SECTION I – WATERFRONT REVITALIZATION AREA BOUNDARY

Geographically, the City of Jamestown Local Waterfront Revitalization Program (LWRP) Study Area spans the entire width of the City of Jamestown, following the Chadakoin River over six and one-half miles west to east through a series of widely different character areas ranging from quiet, wooded river settings to an urban business district to industrial areas. The City of Jamestown's Waterfront Revitalization Area is described below and is shown on Figure 1.

Beginning at the eastern boundary formed by the City's corporate boundary at the intersection of East Second Street (Route 394) and Tiffany Avenue;

Then south along Tiffany Avenue until its intersection with Buffalo Street (Route 40);

Then west along Buffalo Street (Route 40) until its intersection with Allen Street;

Then south and west along Allen Street until its intersection with Institute Street;

Then south along Institute Street until its intersection with Washington Street (NYS Route 60);

Then west along Washington Street (NYS Route 60) until its intersection with Glasgow Avenue;

Then west along Glasgow Avenue which becomes Mount Vernon Place to its intersection with Sprague Street;

Then north along Sprague Street until its intersection with Front Street;

Then west along Front Street until its intersection with Hall Avenue;

Then north along Hall Avenue until its intersection with Livingston Avenue;

Then north along Livingston Avenue until its intersection with Seymour Street;

Then north along Seymour Street and continuing past the street end to the railroad tracks;

Then northwest along the railroad tracks until its intersection with the City corporate limits;

Then north and northeast along the City corporate limits until its intersection with Fluvanna Avenue (Route 430);

Then southeast along Fluvanna Avenue (Route 430) until its intersection with Washington Street (Route 951C);

Then south along Washington Street (Rout 951C) until its intersection with West Eighth Street;

Then west along West Eighth Street until its intersection with Fairmount Avenue;

Then southeast along Fairmount Avenue until its intersection with West Fourth Street;

Then north and northeast along West Fourth Street which becomes East Fourth Street until its intersection with East Second Street (Route 394);

Then northeast along East Second Street (Route 394) until its intersection with the City corporate limits at Tiffany Avenue.

These boundaries were selected to encompass the entire length of the Chadakoin River within the corporate limits of the City of Jamestown. Also within the boundaries are all waterfront properties or properties with current water-related uses. The Study Area also contains properties with the potential for redevelopment with direct water-related uses or to support use of the waterfront. The Study Area encompasses 1,413 acres and contains 1,879 parcels.

The *landward boundary* for the LWRP includes all land area located within the above described LWRP Study Area while the *waterside boundary* includes all portions of the Chadakoin River located within the boundaries of the City of Jamestown. The boundary also encompasses the entire roadways within, and that form, the boundary of the Study Area.

SUB AREAS

To facilitate analysis, the Jamestown Waterfront Revitalization Area was divided into four sub areas as shown in Figure 2. This division was necessary because the Study Area is relatively large and the character of the River, needs, building types, land use composition and business mix varied throughout the Study Area.

The four LWRP sub areas include:

1. ***Chadakoin Outlet District*** – this area stretches from the western City boundary to the edge of McCrea Point Park, from Fluvanna Avenue/Washington Street to the railroad tracks and includes the Chadakoin River and associated wetlands complex in the western portion of the City.

2. ***Downtown District*** – this area stretches from McCrea Point Park to Winsor Street, from 4th Street to Allen Street/Glasgow Avenue/Hall Avenue and includes the City's downtown core and Brooklyn Square.

3. ***Industrial Heritage Corridor*** – this area stretches from Winsor Street to the east side of the Dahlstrom Complex, from 2nd Street to Allen Street and includes many historic manufacturing facilities which are currently either vacant or underutilized.

4. ***East End Industrial Corridor*** – this area stretches from the east side of the Dahlstrom Complex to Tiffany Avenue (the eastern City boundary), from 2nd Street to Buffalo Street and includes many modern manufacturing facilities which are currently underutilized or fully active.

LABELLA Associates, P.C.

300 STATE STREET
ROCHESTER, NY 14614
P: (585) 454-6110
F: (585) 454-3066

CITY OF JAMESTOWN

LOCAL WATERFRONT REVITALIZATION PROGRAM

Boundary Map

- LWRP Study Area
- City Corporate Limits
- Railroad
- Interstate
- State 900 Route
- State Touring Route
- County Touring Route

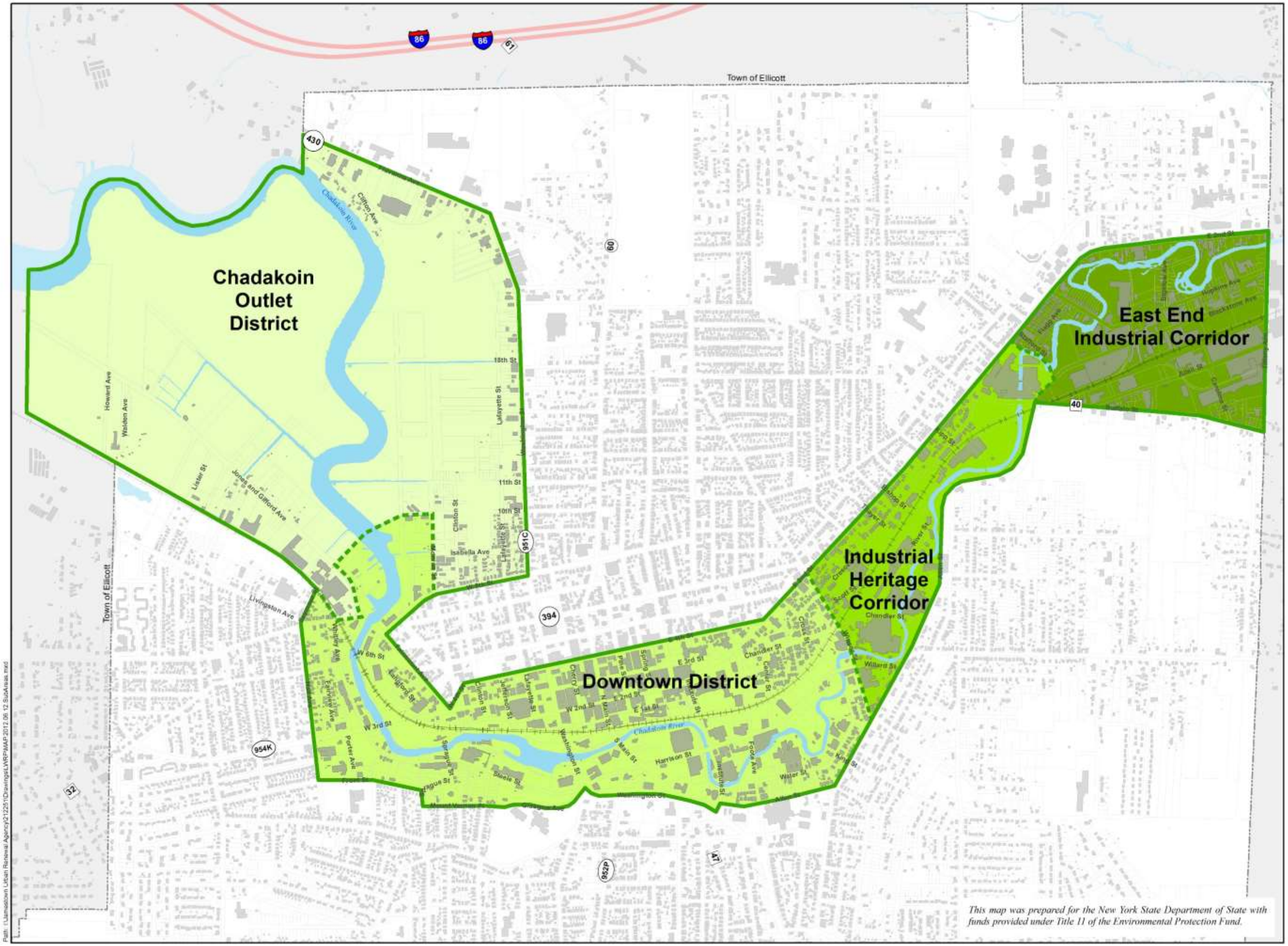
Sources:
1. City of Jamestown Local Waterfront Revitalization Program Work Plan Map - Edited by LaBella to reflect steering committee revisions
2. Bing Maps Aerial: 2010 Microsoft Corporation and its data suppliers

0 1,000 Feet

1:15,000

This map was prepared for the New York State Department of State with funds provided under Title 11 of the Environmental Protection Fund.

Figure 1. Waterfront Revitalization Area Boundary Map



This map was prepared for the New York State Department of State with funds provided under Title 11 of the Environmental Protection Fund.

Path: I:\Jamestown Urban Renewal Agency\212251\Drawings\LWRP\MAP\2012.06.12 SubAreas.mxd

LABELLA Associates, P.C.

CITY OF JAMESTOWN

LOCAL WATERFRONT REVITALIZATION PROGRAM

Sub Areas

LWRP Study Area

Sub Area Boundaries

Sub Areas

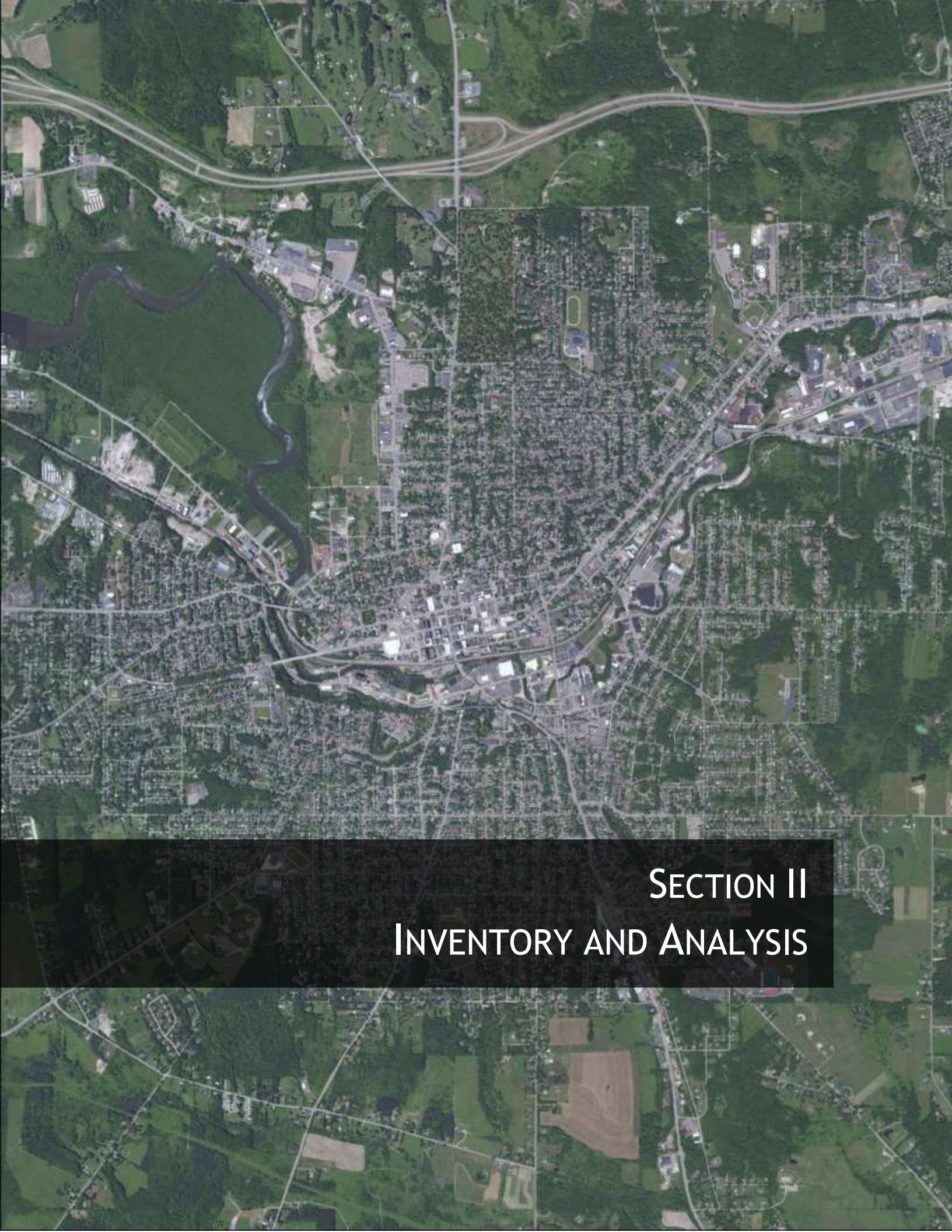
- Chadakoin Outlet District
- Downtown District
- Industrial Heritage Corridor
- East End Industrial Corridor

Sources:
1. City of Jamestown Local Waterfront Revitalization Program Work Plan Map - Edited by LaBella to reflect steering committee revisions

0 1,000 Feet

1:15,000

Figure 2. Sub Areas Map



Section II
Inventory and Analysis

SECTION II – INVENTORY AND ANALYSIS

2.1 REGIONAL SETTING AND COMMUNITY CHARACTERISTICS

REGIONAL GEOGRAPHIC SETTING

The Local Waterfront Revitalization Program (LWRP) Study Area is located in the City of Jamestown, New York. The City of Jamestown is located in southeastern Chautauqua County in the westernmost portion of New York State. The Towns of Busti, Ellicott and Kiantone and the Villages of Falconer and Celoron border the City of Jamestown. The City is approximately 75 miles south of Buffalo, New York and 53 miles east of Erie, Pennsylvania. Figure 3 illustrates the regional context of the City of Jamestown while Figure 4 illustrates the Study Area context.

The City of Jamestown is accessible from the east and west from the Southern Tier Expressway (Interstate 86). NYS Route 60 and US Route 62 are the primary north/south corridors into the City of Jamestown, and state roads provide access to northern Chautauqua County and the Greater Buffalo area. The Chautauqua County Airport is located three miles north of Jamestown, and provides regular commuter service to Pittsburgh, Pennsylvania. The Western New York and Pennsylvania Railroad (WNYP) operates a short line railroad that passes through the Study Area. Although rail service in Jamestown is limited to freight, passenger rail service is available in nearby Erie and Buffalo.

The City is located approximately one mile west of the eastern end of Chautauqua Lake, and is bisected by the Chautauqua Lake Outlet, also known as the Chadakoin River. The Chadakoin River meanders over six and one-half miles in a general west to east direction throughout the entire width of the City creating over 13.5 miles of shoreline. The Study Area includes this length of River, shoreline, and abutting land as described in Section I and depicted in Figure 1.

This page intentionally left blank.



Local Waterfront Revitalization Program Study Area within Chautauqua County

- LWRP Study Area
- City of Jamestown
- Municipality Boundaries
- County Boundaries
- State Boundary

0 5 Miles

1:500,000

This map was prepared for the New York State Department of State with funds provided under Title 11 of the Environmental Protection Fund.

Path: I:\Jamestown Urban Renewal Agency\212251\Drawings\LWRP\MAP 2012.04.12.CommunityContext.mxd

Local Waterfront Revitalization Program Study Area within the Western NY Region



LABELLA Associates, P.C.

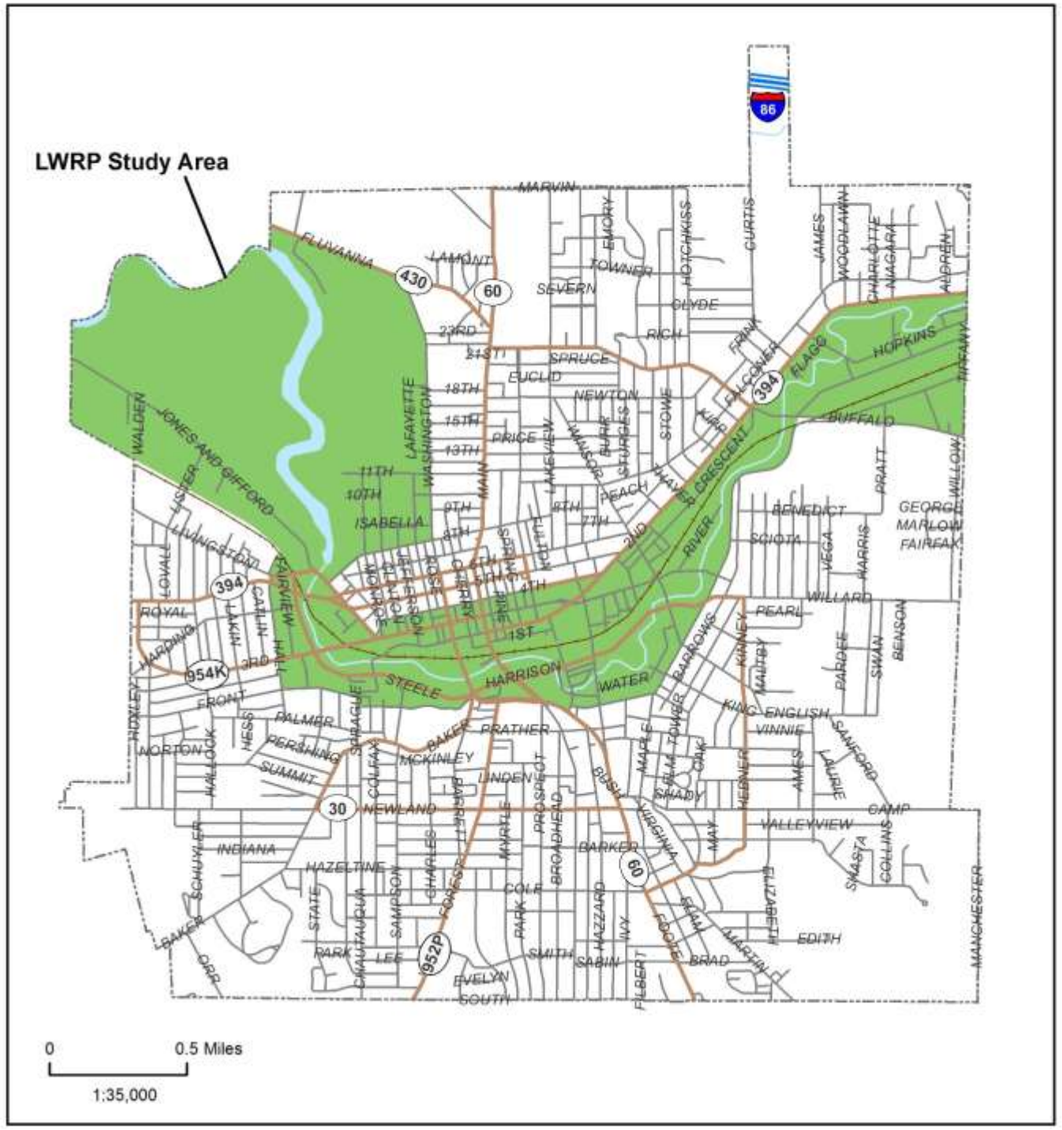
CITY OF JAMESTOWN

LOCAL WATERFRONT REVITALIZATION PROGRAM

Community Context Map

Sources:
1. City of Jamestown Local Waterfront Revitalization Program Work Plan Map - Edited by LaBella to reflect steering committee revisions
2. Regional Roads: ESRI Regional Major Highways Shapefile
3. Water: ESRI Regional Water and River Shapefiles
4. Municipal and County Boundaries: Census data Shapefiles

Figure 3. Community Context Map

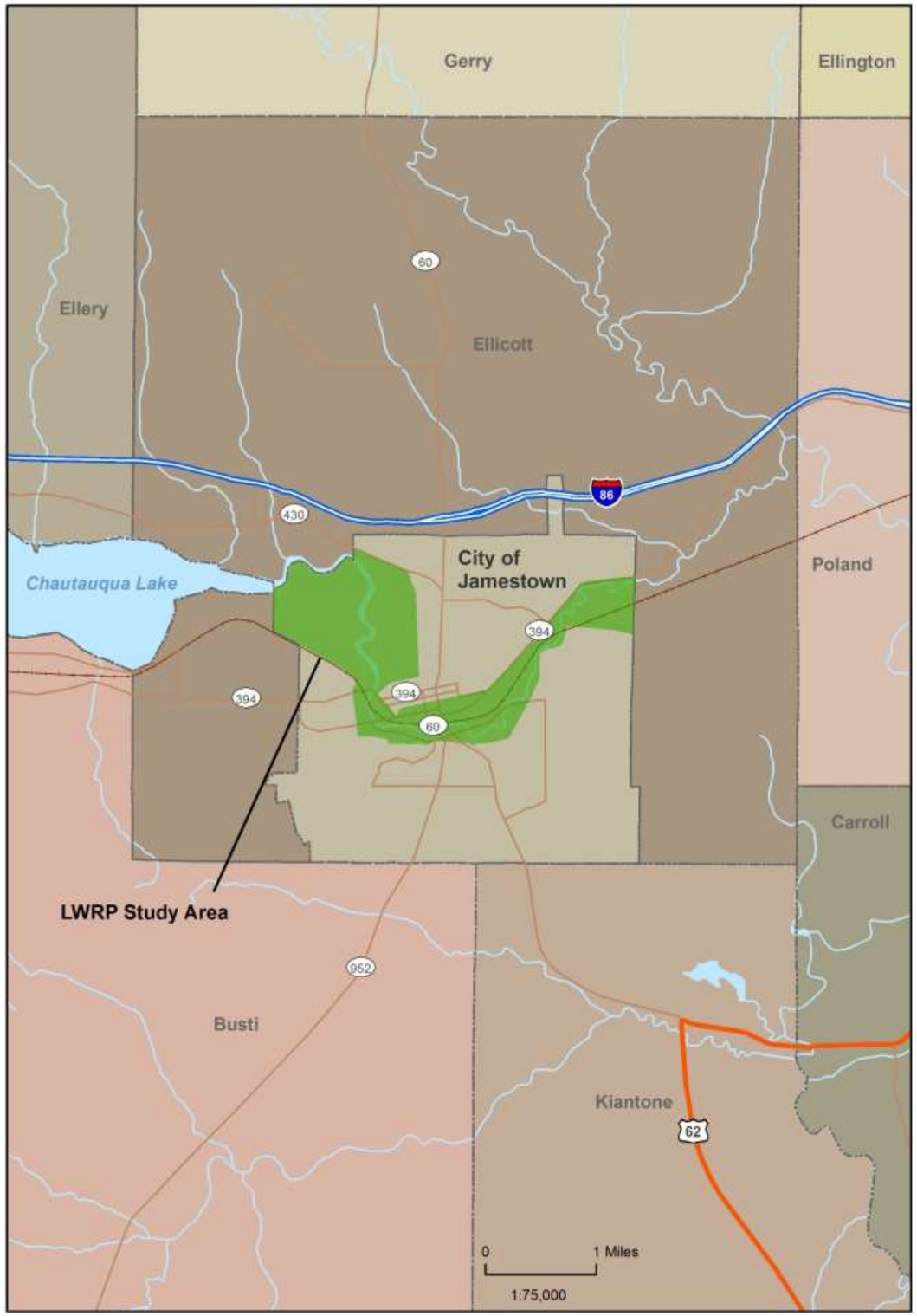


Local Waterfront Revitalization Program Study Area within the City of Jamestown

This map was prepared for the New York State Department of State with funds provided under Title 11 of the Environmental Protection Fund.

Path: I:\Jamestown Urban Renewal Agency\212251\Drawings\LWRP\MAP 2012.04.16.StudyAreaContext.mxd

Local Waterfront Revitalization Program Study Area Relative to Adjacent Towns



LABELLA Associates, P.C.

CITY OF JAMESTOWN

LOCAL WATERFRONT REVITALIZATION PROGRAM

Study Area Context Map

- LWRP Study Area
- City/Town (Fill Colors Vary)
- Limited Access
- Highway
- Major Road
- Railroads
- Water Bodies

Sources:
1. City of Jamestown Local Waterfront Revitalization Program Work Plan Map - Edited by LaBella to reflect steering committee revisions
2. Regional Roads: ESRI Minor Highways Shapefile
3. Water: ESRI Regional Water and River Shapefiles
4. Municipal Boundaries: Census data Shapefiles

Figure 4. Study Area Context Map

COMMUNITY AND WATERFRONT DEVELOPMENT HISTORY

The City of Jamestown's history is closely linked to the development along its waterfront, and the Chadakoin River was the significant factor for attracting settlers to the area in both prehistoric and historic times. The River provided potable water, food, and a transportation link to other areas.

During prehistoric times, the Proto-Erie group of Native Americans are believed to have inhabited the region from as long ago as 6000 B.C. Evidence, dating from ca. 1000 A.D., of the southern Ohio Hopewell culture had been linked to two sites within the City. One of these sites is in close proximity to the River near present day Steele Street.

After the millennium, the Erie Tribe of Native Americans lived in villages scattered throughout the region. These Erie people were later vanquished by the Seneca Nation of the Iroquois Confederacy. The Seneca, as with previous groups, were attracted here by the plentiful fish and game that the region offered. A group of Seneca Indians, under a well-known leader and a friend of George Washington by the name Cornplanter, established a camp on a hillside, south of the Chadakoin River. This camp site was located near the present day Washington Street Bridge.

In 1739, exploration by the French, under Baron de Longueuil resulted in the first mapping of the area including the site of present day Jamestown. An expedition by Captain Joseph Celoron de Blainville in 1749 renewed French claims on the area. Celoron camped within the bounds of Jamestown on June 23 and 24 of that year. The location of this encampment is marked on Jones and Gifford Avenue. The Treaty of Paris, signed in 1763, ended French claim in this area. Twenty years later, the British relinquished their claim over this land to the United States at the close of the American Revolution.

After the Revolution, early settlement of the region was promoted directly through River access. Keelboats brought manufactured goods from the east and food from the south to the settlers in the region. The site of the keelboat landing in pioneering days was located on the River, east of present day Main Street and is commemorated at that location by the Keelboat Landing pocket park. The importing and exporting of goods over the River attracted more settlers to the Jamestown area promoting the growth and expansion of the community.

Although many of the early settlers of Jamestown were transplanted from the New England area, the pattern of early development did not follow the typical "New England" concept. The typical plan for a community, with development around a central square or "village green" was not utilized. Development, instead took place in a pattern which paralleled the Rivers' edge, along the north shore of the River.

Waterpower, and the potential it provided for milling and other business enterprises, was the impetus for industry in Jamestown. In 1811, James Prendergast, the founder from whom Jamestown is named, built a log house, saw mill and dam upon the north bank of the Chadakoin River. The site where he built these structures is near present day Sprague and Second Streets. The ample waterpower and the available timber were the key factors that prompted him to develop the site as a milling center.

Locally available resources spurred the development of Jamestown's commerce and industry over the years. Lumber, furniture, and textile industries relied on the River to ship raw materials in and ship finished goods to outside markets. The waterway was the mainstay for the local industry, until the latter half of the nineteenth century when the railroad surpassed it for transporting goods. Water travel up until the 1860s remained a key mode of transportation due to primitive road conditions and the hilly terrain. Beginning in 1828, steamboats plied the waters of Chautauqua Lake carrying passengers to hotel docks, picnic and entertainment sites all along its shores. The steamboat landing, located at Fairmount Avenue and 8th Streets, operated until the late 1950s.

The coming of rail transportation to Jamestown in 1860 was a major factor in the prosperity and expansion of the City. The advent of the railroad created rapid economic changes, which enabled small factories and artisans shops to expand into larger plants. However, the significant role the River had played in moving goods greatly decreased when the railroad took over as the primary mode of transportation and shipping. The usefulness of the River continued further to deteriorate as the railroad and road systems continued to improve. The resulting loss of usefulness devalued the River to a point where the community "turned its' back" toward the River.

Many of the physical signs of these historic sites have long been erased. One of the five locally designated historic zoning districts, containing a turn-of-the-century textile mill complex, and a few key historic markers are what remain to denote the importance the River has played upon the development of the community.

CURRENT DEMOGRAPHIC CONDITIONS

The population of the City of Jamestown has varied over the last 20 years (Table 1). Between 1990 and 2000 the City lost nearly 3,000 residents or 8.5 percent of its population settling at 31,730 residents in 2000. In 2010, the population of the City began to stabilize as evidenced by the less significant loss of 500 residents since 2000. Chautauqua County's population has decreased over the last 20 years by nearly 7,000 residents ending up at about 135,000 residents in 2010.

Population in the LWRP Study Area, as estimated by Census Tract population data, has declined in some tracts and grown in others. Portions of Census Tracts 301, 303, 304, 305, and 306 are within the Study Area (Figure 5). Tract 303 located in the north-western portion of the Study Area lost residents at an increasing rate between 1990 and 2010, currently residing at about 2,000 people. Tracts 304 and 305 located in the south-western and central portions of the Study Area lost residents between 1990 and 2010 but saw a smaller reduction rate between the latter decade settling at about 4,000 and 3,500 people, respectively. Tracts 301 and 306, located in the eastern portions of the Study Area, experienced the largest population reduction rates between 1990 and 2000, but gained population by 2010 both ending up with about 4,000 residents each.

Table 1. Population

	Population (Year)			Change 1990-2000		Change 2000-2010	
Area	1990	2000	2010	Number	Percent	Number	Percent
Tract 301	4,392	3,732	4,024	-660	-15.03%	292	7.82%
Tract 303	2,662	2,441	2,132	-221	-8.30%	-309	-12.66%
Tract 304	4,566	4,303	4,152	-263	-5.76%	-151	-3.51%
Tract 305	3,989	3,688	3,519	-301	-7.55%	-169	-4.58%
Tract 306	4,440	3,844	3,964	-596	-13.42%	120	3.12%
City of Jamestown	34,681	31,730	31,146	-2,951	-8.51%	-584	-1.84%
Chautauqua County	141,895	139,750	134,905	-2,145	-1.51%	-4,845	-3.47%
New York State	17,990,455	18,976,457	19,378,102	986,002	5.48%	401,645	2.12%

Source: US Census Bureau's Factfinder

Census Tract demographics as shown in Tables 2 through 6 also characterize the differences and similarities across the LWRP Study Area. All five Census Tracts have had an increase in the percentage of racial minority and Hispanic/Latino residents between 2000 and 2010. Tract 303 has the largest percentage of racially and ethnically diverse people while Tract 304 has the lowest. The percentage of female population has decreased in all five Census Tracts. The percentage of dependent population (those less than 18 years old or 65 years and older) within Census Tracts 303, 304, 305, and 306 has decreased to levels comparable with the City while Tract 301, despite its decrease, still has a marginally higher dependent population. The median age within the Census Tracts ranges from 32.8 years old in Tract 303 to 39.6 years old in Tract 304.

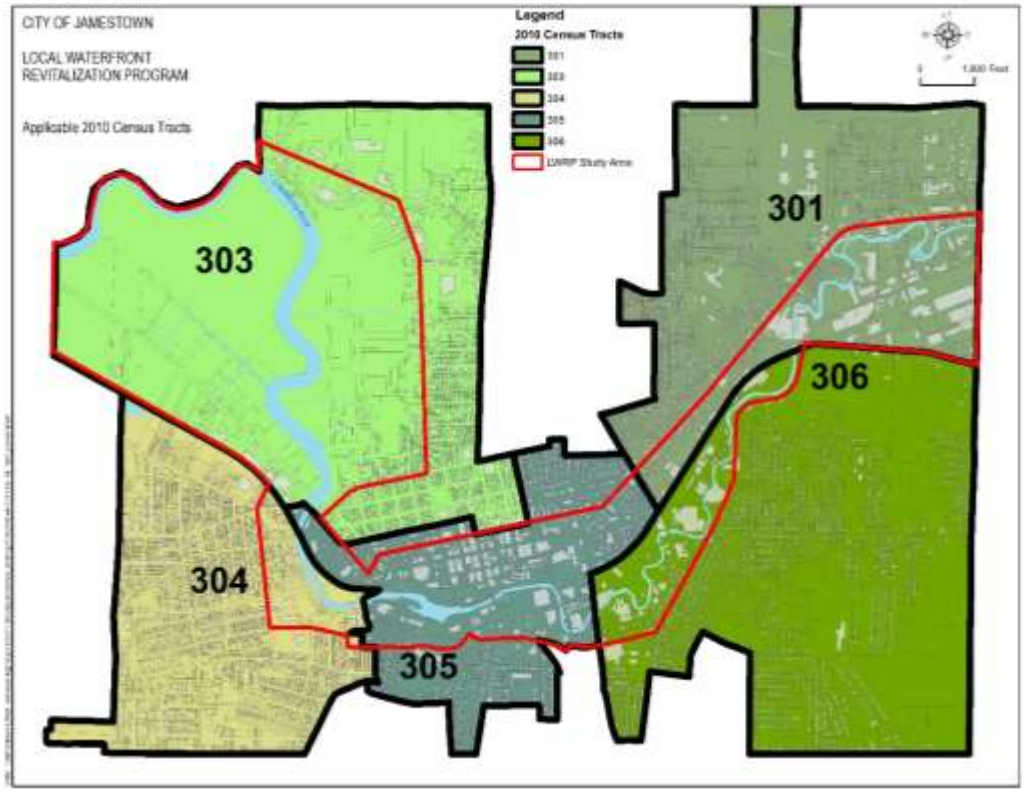


Figure 5. Census Tracts within the LWRP Study Area
Source: US Census Bureau's TIGER/Line database

Table 2. Census Tract Population Characteristics

	Tract 301	Tract 303	Tract 304	Tract 305	Tract 306	City of Jamestown	Chautauqua County	New York State
Minority Race (all races other than White)								
2010	12.20%	27.20%	6.09%	17.87%	9.74%	11.56%	7.43%	34.25%
2000	8.31%	26.46%	3.88%	13.48%	6.58%	8.48%	5.96%	32.05%
Change	*46.89%*	*2.80%*	*57.01%*	*32.64%*	*47.95%*	*36.30%*	*24.67%*	*6.85%*
Hispanic and/or Latino								
2010	10.06%	18.01%	3.44%	15.32%	8.85%	8.79%	6.11%	17.63%
2000	5.98%	11.55%	1.81%	10.82%	4.55%	4.94%	4.22%	15.11%
Change	*68.44%*	*55.91%*	*90.00%*	*41.58%*	*94.50%*	*78.01%*	*44.67%*	*16.69%*
Female Population								
2010	50.62%	49.16%	52.12%	51.44%	49.55%	51.39%	50.70%	51.61%
2000	52.12%	49.77%	53.52%	52.98%	51.20%	52.34%	51.24%	51.80%
Change	*-2.87%*	*-1.24%*	*-2.62%*	*-2.92%*	*-3.22%*	*-1.83%*	*-1.05%*	*-0.37%*
Dependents (Less than 18 yrs old or 65 years and older)								
2010	42.37%	38.79%	37.79%	39.76%	37.24%	39.22%	38.42%	35.83%
2000	43.35%	39.57%	41.32%	43.06%	41.21%	41.81%	40.50%	37.62%
Change	*-2.27%*	*-1.98%*	*-8.55%*	*-7.67%*	*-9.64%*	*-6.20%*	*-5.15%*	*-4.76%*
Median Age								
2010	35.1	32.8	39.6	38.5	36.5	36.9	40.9	38.0
2000	34.0	33.2	37.7	38.3	33.9	36.2	37.9	35.9
Change	*3.24%*	*-1.20%*	*5.04%*	*0.52%*	*7.67%*	*1.93%*	*7.92%*	*5.85%*

Source: US Census Bureau's Factfinder

The total number of households has decreased marginally in Census Tracts 301, 304, 305, and 306 (ranging between 1,500 and 1,800 each) with a significant decrease in Tract 303 to less than 900 households. The percentage of family households has

also decreased in all five Census Tracts. Tract 305's substantially lower (36%) percentage of family households is indicative of its downtown nature. Average household sizes have remained fairly constant in all Tracts between 2000 and 2010.

Table 3. Census Tract Household Characteristics

	Tract 301	Tract 303	Tract 304	Tract 305	Tract 306	City of Jamestown	Chautauqua County	New York State
Total Households								
2010	1,542	891	1,838	1,707	1,521	13,122	54,244	7,317,755
2000	1,575	1,031	1,873	1,734	1,580	13,558	54,515	7,056,860
Change	*-2.10%*	*-13.58%*	*-1.87%*	*-1.56%*	*-3.73%*	*-3.22%*	*-0.50%*	*3.70%*
Family Households								
2010	54.02%	52.41%	58.76%	35.85%	61.47%	56.48%	62.87%	63.54%
2000	57.97%	54.12%	60.76%	37.25%	63.61%	58.28%	65.97%	65.74%
Change	*-6.81%*	*-3.16%*	*-3.29%*	*-3.76%*	*-3.36%*	*-3.09%*	*-4.71%*	*-3.35%*
Average Household Size								
2010	2.31	2.38	2.26	1.93	2.38	2.29	2.37	2.57
2000	2.31	2.35	2.27	1.91	2.41	2.29	2.45	2.61
Change	*0.00%*	*1.28%*	*-0.44%*	*1.05%*	*-1.24%*	*0.00%*	*-3.27%*	*-1.53%*

Source: US Census Bureau's Factfinder

Educational attainment has increased in all five Census Tracts with a larger percentage of the adult population having obtained a high school diploma and/or college degree. Despite these increases, only 67 percent of adult residents within Tract 303 have received a high school diploma. Median household income has increased in all five Census Tracts; however, Tracts 301 ($25,306) and 303 ($25,991) have slightly lower and Tract 305 ($16,312) has considerably lower median household incomes than the City ($33,092) as a whole. Per capita income is substantially lower in all Census Tracts (except Tract 304) compared to the City as a whole. In fact, Tract 301 experienced a decrease in per capita income between 2000 and 2010 to $13,000. Not surprisingly, poverty rates in all Census Tracts (except Tract 304) are higher than the City as a whole, especially in Tract 305 in which nearly 42 percent of individuals live in poverty. Tract 303 was the only Tract to experience a reduction in the percentage of individuals living in poverty.

Table 4. Census Tract Education and Income Characteristics

	Tract 301	Tract 303	Tract 304	Tract 305	Tract 306	City of Jamestown	Chautauqua County	New York State
Education (High School Diploma or Equivalent and Greater)								
2010	82.56%	67.41%	92.53%	73.98%	81.77%	84.27%	86.20%	84.45%
2000	77.15%	66.37%	86.08%	63.72%	77.72%	79.42%	81.19%	79.06%
Change	*7.01%*	*1.56%*	*7.50%*	*16.10%*	*5.21%*	*6.11%*	*6.17%*	*6.81%*
Median Household Income (does not take into account inflation)								
2010	$25,306	$25,991	$37,813	$16,312	$31,672	$33,092	$40,639	$55,603
2000	$22,490	$17,622	$33,217	$13,830	$26,024	$25,837	$33,458	$43,393
Change	*12.52%*	*47.49%*	*13.84%*	*17.95%*	*21.70%*	*28.08%*	*21.46%*	*28.14%*
Per Capita Income (does not take into account inflation)								
2010	$12,976	$13,513	$21,968	$13,853	$15,613	$18,374	$21,033	$30,948
2000	$13,562	$12,904	$18,394	$11,294	$12,850	$15,316	$16,840	$23,389
Change	*-4.32%*	*4.72%*	*19.43%*	*22.66%*	*21.50%*	*19.97%*	*24.90%*	*32.32%*
Individuals Below the Poverty Level								
2010	34.02%	28.59%	11.90%	41.69%	32.86%	23.42%	17.14%	14.16%
2000	24.40%	32.43%	9.93%	33.93%	24.35%	19.55%	13.84%	14.59%
Change	*39.41%*	*-11.85%*	*19.91%*	*22.86%*	*34.91%*	*19.78%*	*23.79%*	*-2.93%*

Source: US Census Bureau's Factfinder

Unemployment rates have increased in all Census Tracts between 2000 and 2010, doubling in Tracts 301 (to 20%) and 303 (to 32%) and nearly tripling in Tract 305 (to 24%). Less and less of those who are employed are working within their neighborhood of residence. About 50 percent of employed residents within Census Tracts 301, 305, and 306 work within their neighborhood of residence, while 60 percent residing within Tract 303 and 40 percent residing within Tract 304 can claim the same. The majority of employed residents drive to work alone (in a single occupancy vehicle); however, the percentage of people using public transit, walking, or biking to work has increased in all Census Tracts (except Tract 301). In fact, 22 percent of employed residents in Tract 305 and 24 percent of employed residents in Tract 303 use public transit, walk, or bike to work. The percentage of households without access to a vehicle has increased in some Census Tracts (Tracts 304, 305, and 306) and decreased in others (Tracts 301 and 303). Nearly 44 percent of households within Tract 305 do not have access to a vehicle.

Table 5. Census Tract Work Characteristics

	Tract 301	Tract 303	Tract 304	Tract 305	Tract 306	City of Jamestown	Chautauqua County	New York State
Unemployed								
2010	20.03%	32.22%	6.57%	24.14%	15.92%	13.76%	8.12%	7.50%
2000	9.89%	17.86%	5.37%	8.52%	10.67%	8.34%	6.25%	7.08%
Change	*102.49%*	*80.34%*	*22.31%*	*183.40%*	*49.13%*	*65.02%*	*29.95%*	*6.02%*
Worked within Neighborhood of Residence								
2010	51.81%	59.71%	39.76%	52.38%	48.27%	50.15%	39.93%	58.93%
2000	58.61%	64.02%	52.95%	65.12%	61.61%	58.87%	44.93%	57.38%
Change	*-11.60%*	*-6.73%*	*-24.90%*	*-19.57%*	*-21.65%*	*-14.82%*	*-11.13%*	*2.71%*
Trip to Work (Drove Alone)								
2010	76.66%	55.18%	78.79%	60.81%	70.81%	74.38%	78.67%	54.12%
2000	69.10%	56.69%	83.39%	58.76%	72.29%	75.09%	78.51%	56.26%
Change	*10.95%*	*-2.67%*	*-5.51%*	*3.50%*	*-2.05%*	*-0.94%*	*0.20%*	*-3.81%*
Trip to Work (Transit, Walk, or Bike)								
2010	10.19%	24.11%	8.25%	22.21%	12.05%	10.45%	7.24%	33.95%
2000	12.50%	20.96%	4.50%	21.26%	9.39%	8.71%	6.50%	30.97%
Change	*-18.45%*	*15.03%*	*83.32%*	*4.49%*	*28.32%*	*19.94%*	*11.36%*	*9.63%*
No Household Access to a Vehicle								
2010	22.36%	29.66%	14.42%	43.94%	23.53%	20.65%	10.86%	28.50%
2000	24.95%	36.01%	11.13%	43.60%	16.84%	20.03%	11.21%	29.66%
Change	*-10.38%*	*-17.64%*	*29.54%*	*0.77%*	*39.74%*	*3.11%*	*-3.15%*	*-3.89%*

Source: US Census Bureau's Factfinder

The total number of housing units has remained fairly constant in Census Tracts 301, 304, and 305 with a sizeable decrease in Tracts 303 and 306. Vacancy rates have increased in all Census Tracts (except Tract 306), the highest rate found in Tract 303 (over 18%). Ownership rates have decreased in all five Census Tracts ranging from 14 percent owner occupied in Tract 305 to 61 percent owner occupied in Tract 304. Median gross rent has increased in all five Census Tracts, the largest increase in Tract 303 to nearly $700 a month. Median housing value has also increased in all five Census Tracts; however, Tract 303's ($38,400) median housing value is substantially lower than the City's ($63,500) as a whole. The majority of housing stock in all five Census Tracts was built prior to 1939, the highest percentage (74%) found in Tract 303.

Table 6. Census Tract Housing Unit Characteristics

	Tract 301	Tract 303	Tract 304	Tract 305	Tract 306	City of Jamestown	Chautauqua County	New York State
Total Housing Units								
2010	1,774	1,092	2,021	2,011	1,684	14,738	66,920	8,108,103
2000	1,762	1,219	2,012	2,029	1,768	15,027	64,900	7,679,307
Change	*0.68%*	*-10.42%*	*0.45%*	*-0.89%*	*-4.75%*	*-1.92%*	*3.11%*	*5.58%*
Housing Vacancy Rate								
2010	13.08%	18.41%	9.05%	15.12%	9.68%	10.96%	18.94%	9.75%
2000	10.61%	15.42%	6.91%	14.54%	10.63%	9.78%	16.00%	8.11%
Change	*23.22%*	*19.35%*	*31.07%*	*3.97%*	*-8.97%*	*12.16%*	*18.38%*	*20.26%*
Housing Units Owner Occupied								
2010	40.34%	36.14%	60.99%	14.12%	53.45%	49.15%	67.98%	53.27%
2000	45.21%	36.47%	63.32%	17.42%	54.18%	51.35%	69.25%	52.99%
Change	*-10.77%*	*-0.91%*	*-3.68%*	*-18.94%*	*-1.34%*	*-4.29%*	*-1.83%*	*0.53%*
Median Gross Rent (does not take into account inflation)								
2010	$640	$686	$596	$441	$567	$555	$581	$977
2000	$430	$381	$462	$325	$408	$407	$438	$672
Change	*48.84%*	*80.05%*	*29.00%*	*35.69%*	*38.97%*	*36.36%*	*32.65%*	*45.39%*
Median Housing Value (does not take into account inflation)								
2010	$55,600	$38,400	$66,200	$49,500	$46,900	$63,500	$79,600	$303,900
2000	$43,500	$36,000	$55,300	$34,900	$43,600	$50,500	$62,700	$147,600
Change	*27.82%*	*6.67%*	*19.71%*	*41.83%*	*7.57%*	*25.74%*	*26.95%*	*105.89%*
Homes Built Prior to 1939								
2010	56.14%	74.37%	58.64%	64.49%	65.25%	61.05%	46.57%	34.05%
2000	67.48%	75.00%	57.77%	71.27%	67.14%	63.97%	47.28%	31.23%
Change	*-16.80%*	*-0.84%*	*1.51%*	*-9.50%*	*-2.81%*	*-4.56%*	*-1.50%*	*9.02%*

Source: US Census Bureau's Factfinder

In summary, Census Tract 303 has a much smaller population than the other tracts. There are a high percentage of racial minority and Hispanic/Latino residents. The Tract's median age and educational attainment are low; while unemployment rates are high. Despite these facts, the percentage of residents living in poverty has decreased. Many employed residents work within the neighborhood and use public transit, walk, or bike to work. This Tract has high vacancy rates and an old housing stock. Rent prices are high while housing value is low. Census Tract 304 has the lowest percentage of racial minority and Hispanic/Latino residents. There is a high median age, educational attainment, and median household and per capita income. Poverty and unemployment rates are low. Many people work outside of the neighborhood and therefore drive personal vehicles to work. This Tract has low vacancy rates, high ownership rates, and a high median housing value. Census Tract 305 has many characteristics indicative of its' downtown nature. There are a low percentage of family households leading to a low median household income. The highest poverty rates are found in this tract. Many households do not have access to a vehicle. A large percentage of housing units are rented which is complimented by the lowest median rent compared to the other tracts. Census Tracts 301 and 306 were usually in between the high and low extremes of the demographic variables.

ECONOMIC CONTEXT

W-ZHA was retained to identify market and economic trends impacting the Jamestown economy. The following employment overview section is summarized from W-ZHA's report. The full report is included in Supporting Document 1.

The City of Jamestown has more jobs (13,523 jobs in 2010) than employed residents (11,152 people in 2010). This gap is more evident when considering approximately two-thirds of the City of Jamestown's jobs are held by people who live outside of the city. The majority of Jamestown residents (57%) are actually working outside of the City (see Table 7).

Table 7. Job Inflow/Outflow - City of Jamestown - 2010

	Total	Percent
Employed in City	13,523	
Employed in City, Lives Outside	8,716	64%
Employed and Lives in City	4,807	36%
Lives in City	11,152	
Lives in City, Works Outside	6,345	57%
Lives and Works in City	4,807	43%

Source: U.S. Census; W-ZHA

According to the Census, in 2010, the City of Jamestown contained approximately one-third of the County's jobs (see Table 8). While the City holds a substantial share of many of the different employment types, several are of particular importance. First, manufacturing is the largest employment industry within the County. Despite significant job losses within this industry, approximately one out of four Chautauqua County manufacturing jobs is located within the City of Jamestown. Second, health care/social services is the second largest employment industry within the County. Unlike manufacturing, this industry is growing substantially. The City of Jamestown contains over half of the County's health care and social services jobs. Major employers in this industry located within the City of Jamestown include the WCA Hospital and the Resource Center. Lastly, while not a significant job generator, it is important to note that the City of Jamestown is the cultural and recreation center of the County. The City contains 65 percent of the County's arts, entertainment, and recreation jobs. The Jamestown Savings Ice Arena is a major recreation anchor that draws attendance from the larger region. The Downtown also contains the Reg Lenna Civic Center, the Lucille Ball-Desi Arnaz Center, and the Fenton History Center.

According to the Census, Chautauqua County lost six percent of its jobs between 2002 and 2010, while the City of Jamestown, lost only five percent of its jobs (see Tables 9 and 10). The manufacturing industry experienced the largest loss of jobs in both the County and the City. While the County lost 25 percent of its manufacturing jobs between 2002 and 2010, the City of Jamestown lost 43 percent (or 1,620) of its

manufacturing jobs. Still, despite these significant loses, 16 percent of city jobs are in the manufacturing industry making it the second largest employment generator within the City. The second hardest hit industry within the City of Jamestown was retail trade. An additional 542 retail jobs were lost in the City.

Table 8. Jamestown City Share of Chautauqua County Jobs - 2010

	County Jobs	Jamestown City Share
Agriculture, Forestry, Fishing and Hunting	434	0%
Mining, Quarrying, and Oil/Gas Extraction	170	28%
Utilities	214	7%
Construction	1,263	18%
Manufacturing	9,419	23%
Wholesale Trade	1,039	27%
Retail Trade	5,434	21%
Transportation and Warehousing	1,113	24%
Information	625	40%
Finance and Insurance	804	38%
Real Estate	446	28%
Professional, Scientific, and Technical Services	860	40%
Management of Companies	112	36%
Admin Support & Waste Management	2,247	57%
Educational Service	5,372	27%
Health Care and Social Services	7,174	52%
Arts, Entertainment and Recreation	396	64%
Accommodations and Food Services	3,569	20%
Other Services (exc. Public Admin)	1,861	35%
Public Admin	3,342	8%
Total	**45,894**	**34%**

Source: U.S. Census; W-ZHA

On the positive side, the health care and social services industry grew substantially between 2002 and 2010, making it by far the largest employment generator within the City of Jamestown. Nearly three in ten jobs within the City are in this industry. Employing 3,725 individuals in 2010, the City's health care and social services industry grew by 852 jobs between 2002 and 2010. Anchoring the health care industry is the WCA Hospital which employs approximately 1,150 people at a variety of skill levels and the Resource Center which employs approximately 1,700 people (throughout the entire County) also at a variety of skill levels. As is true in many communities, the hospital and the Resource Center are very important economic anchors that not only employ residents, but service the health and social needs of the community. The City of Jamestown's administration support and waste management industry also experienced significant growth between 2002 and 2010 gaining 774 jobs.

Table 9. Primary Job Trends - Chautauqua County - 2002-2010

	2002		2010		Change	
	Jobs	Share of Total	Jobs	Share of Total	#	%
Agriculture, Forestry, Fishing and Hunting	439	1%	434	1%	(5)	-1%
Mining, Quarrying, and Oil/Gas Extraction	156	0%	170	0%	14	9%
Utilities	289	1%	214	0%	(75)	-26%
Construction	1,287	3%	1,263	3%	(24)	-2%
Manufacturing	12,498	26%	9,419	21%	(3,079)	-25%
Wholesale Trade	1,447	3%	1,039	2%	(408)	-28%
Retail Trade	5,853	12%	5,434	12%	(419)	-7%
Transportation and Warehousing	1,245	3%	1,113	2%	(132)	-11%
Information	714	1%	625	1%	(89)	-12%
Finance and Insurance	711	1%	804	2%	93	13%
Real Estate	362	1%	446	1%	84	23%
Professional, Scientific, and Technical Services	1,021	2%	860	2%	(161)	-16%
Management of Companies	238	0%	112	0%	(126)	-53%
Admin Support & Waste Management	1,179	2%	2,247	5%	1,068	91%
Educational Service	5,652	12%	5,372	12%	(280)	-5%
Health Care and Social Services	5,662	12%	7,174	16%	1,512	27%
Arts, Entertainment and Recreation	536	1%	396	1%	(140)	-26%
Accommodations and Food Services	3,808	8%	3,569	8%	(239)	-6%
Other Services (exc. Public Admin)	1,919	4%	1,861	4%	(58)	-3%
Public Admin	3,918	8%	3,342	7%	(576)	-15%
Total	**48,934**		**45,894**		**(3,040)**	**-6%**

Source: U.S. Census; W-ZHA

Table 10. Primary Job Trends - City of Jamestown - 2002-2010

	2002		2010		Change	
	Jobs	Share of Total	Jobs	Share of Total	#	%
Agriculture, Forestry, Fishing and Hunting	24	0%	1	0%	(23)	-96%
Mining, Quarrying, and Oil/Gas Extraction	12	0%	48	0%	36	300%
Utilities	38	0%	16	0%	(22)	-58%
Construction	184	1%	228	2%	44	24%
Manufacturing	3,750	26%	2,130	16%	(1,620)	-43%
Wholesale Trade	343	2%	283	2%	(60)	-17%
Retail Trade	1,697	12%	1,155	9%	(542)	-32%
Transportation and Warehousing	232	2%	266	2%	34	15%
Information	352	2%	252	2%	(100)	-28%
Finance and Insurance	280	2%	304	2%	24	9%
Real Estate	122	1%	124	1%	2	2%
Professional, Scientific, and Technical Services	438	3%	342	3%	(96)	-22%
Management of Companies	40	0%	40	0%	0	0%
Admin Support & Waste Management	514	4%	1,288	10%	774	151%
Educational Service	1,349	9%	1,432	11%	83	6%
Health Care and Social Services	2,873	20%	3,725	28%	852	30%
Arts, Entertainment and Recreation	210	1%	253	2%	43	20%
Accommodations and Food Services	765	5%	731	5%	(34)	-4%
Other Services (exc. Public Admin)	657	5%	652	5%	(5)	-1%
Public Admin	413	3%	253	2%	(160)	-39%
Total	**14,293**		**13,523**		**(770)**	**-5%**

Source: U.S. Census; W-ZHA

Despite decreases in employment levels over the past few decades, Moody's Analytics (which produces at-place employment projections by industry) projects that Chautauqua County's employment will increase by eight percent between 2010 and 2020 (see Table 11). This represents an important turn-around from the last ten years. Employment in health care and social services is projected to continue to grow at a rapid pace. While manufacturing is projected to lose employment, the rate of employment loss is projected to be slower in the coming decade than it has been. Significant employment gains are projected in the accommodations and food service industries.

Table 11. Employment Projections - Chautauqua County - 2010-2020

Industry	% Change
Agriculture, Forestry, Fishing and Hunting	n/a
Mining, Quarrying, and Oil/Gas Extraction	0%
Utilities	-9%
Construction	23%
Manufacturing	-8%
Wholesale Trade	6%
Retail Trade	-1%
Transportation and Warehousing	0%
Information	14%
Finance and Insurance	8%
Real Estate	2%
Professional, Scientific, and Technical Services	7%
Management of Companies	-4%
Admin Support & Waste Management	23%
Educational Service	12%
Health Care and Social Services	22%
Arts, Entertainment and Recreation	10%
Accommodations and Food Services	17%
Other Services (exc. Public Admin)	8%
Public Admin	5%
Total	**8%**

Source: Moody's Analytics; W-ZHA

Sales, Marketing & Management, Inc. tracks retail sales over time through their "Survey of Buying Power". The most recent Survey data is from 2009. Table 12 below summarizes retail sales for Chautauqua County and the City of Jamestown.[1] The sales are presented in 2000 dollars in order to show real change (net of inflation).

Due to substantial losses in motor vehicle parts and dealers sales, the City of Jamestown experienced a four percent decrease in retail sales between 2000 and 2009 while Chautauqua County's retail sales increased five percent over the same time period. Sales in motor vehicles and parts declined significantly in both Chautauqua County (a 55% decrease) and the City of Jamestown (a 60% decrease).

[1] Not all retail categories are included, therefore the sub categories in the table do not add up to the total amount.

The County saw sales in food and beverage increase significantly (a 52% increase) as did the City (a 40% increase). The City's retail sales increased in eating and drinking, general merchandise and furniture and appliances over this timeframe as well. Where City eating and drinking sales accounted for 21 percent of the County's eating and drinking sales in 2000, this value has increased to 24% nine years later.

Table 12. Chautauqua County and the City of Jamestown Retail Sales - 2000-2009

	2000	2009*	Change	
			#	%
Chautauqua County				
Total	**$134,240,400**	**$1,412,870,000**	**$1,278,629,600**	**5%**
Grocery Food & Beverage	$164,710,000	$250,689,000	$85,979,000	52%
Eat & Drink	$108,844,000	$109,139,000	$295,000	0%
General Merchandise	$235,535,000	$233,771,000	($1,764,000)	-1%
Furniture & Appliances	$29,147,000	$16,165,000	($12,982,000)	-45%
Motor Vehicles Parts & Dealers	$461,201,000	$205,273,000	($255,928,000)	-55%
City of Jamestown				
Total	**$372,926,000**	**$359,626,000**	**($13,300,000)**	**-4%**
Grocery Food & Beverage	$48,795,000	$68,494,000	$19,699,000	40%
Eat & Drink	$23,189,000	$26,638,000	$3,449,000	15%
General Merchandise	$0	$22,577,000	$22,577,000	100%+
Furniture & Appliances	$5,182,000	$5,925,000	$743,000	14%
Motor Vehicles Parts & Dealers	$228,999,000	$92,173,000	($136,826,000)	-60%

* 2009 sales have been adjusted for inflation. The 2009 sales are in 2000 dollars.
Source: Sales, Marketing & Management; W-ZHA

The tourism market has been hurt by the recession, and the Chautauqua County Visitors Bureau's "Tourism Performance Measure: 2007-2011" report states, "One traditional metric of tourism activity is the number of Visitor (Information) packets mailed out. CCVB reached a high of 27,181 in 2008, which was the strongest year on record for tourism nationally, and on a state level. Information requests declined during the early recession (2009), and then dropped more significantly during 2010 as CCVB marketing resources decreased due to State and County cutbacks, forced by the recession. As State funding for marketing resumed and county funding via the occupancy tax increased somewhat in 2011, CCVB achieved resurgence in visitor information requests. In 2011, the number of Visitor Information packets mailed out was virtually equal to the (prior) five year average of 23,142."

Despite these numbers, the Chautauqua County Visitor's Bureau concludes, overall, that the tourism industry is growing two to three percent per year.

According to the Chautauqua County Visitor's Bureau, local franchise hotels have been maintaining close to 50 percent occupancy over the last three years with higher occupancy rates in the summer and fall months offsetting lower rates in the winter and spring months. Franchise hotel revenue has increased over the last three years from approximately $22 million in 2009 to $25.5 million in 2011. It appears that the tourism economy is relatively stable.

EXISTING PLANNING INITIATIVES

The City of Jamestown and Chautauqua County have had success in recent years with the development of several planning initiatives. However, many of the concepts advanced in these planning initiatives have not been implemented but remain on the City's/County's agenda, and may need to be revisited and prioritized in light of current and projected economic conditions and community needs.

JAMESTOWN RIVERFRONT RECLAMATION AND DEVELOPMENT STUDY

The *Jamestown Riverfront Reclamation and Development Study* was completed during the late 1980s, updated in 1991, and formally adopted by the City Council in 1994. The outcome of this effort was to promote recreational, economic, and open space uses along the Chadakoin River. The study suggested the establishment of a series of parks, green spaces, a continuous bike path and Riverwalk throughout the community. Recommendations were context sensitive, considering the differing environs and characteristics of five unique natural and manmade zones along the River.

CITY OF JAMESTOWN COMPREHENSIVE PLAN

The *City of Jamestown's Comprehensive Plan (Comprehensive Plan)* was written in 1998. The *Comprehensive Plan* states that two major constraints to the development of Jamestown are the lack of access to the River and the presence of hazardous materials along the River corridor. The LWRP offers a solution to these constraints by planning for the remediation of these sites to foster the redevelopment of the River corridor as a recreational and commercial resource.

SOUTHERN TIER WEST REGIONAL DEVELOPMENT STUDY

Southern Tier West Regional Planning and Development Board is a NYS regional planning board that serves Chautauqua, Allegany and Cattaraugus Counties. Southern Tier West issued a *Comprehensive Economic Development Strategy* in 2012. One of the goals of this plan is to increase the region's brainpower. To accomplish this goal, the plan suggests actively attracting and retaining young professionals to work in the region by marketing the quality of life in the region, including recreational opportunities. Another goal is to create quality, connected places. This can be achieved through enhancement and utilization of the region's natural resources in an environmentally sensitive manner including the maintenance and improvement of natural recreational and tourist opportunities and the promotion of the region as a destination for outdoor recreation activities (enhancement of access to nature and environmental preservation).

JAMESTOWN URBAN DESIGN PLAN

The *Jamestown Urban Design Plan (Urban Design Plan)* was prepared in August 2006 and was formally adopted by the Jamestown Planning Commission and the Jamestown City Council in December 2006. The *Urban Design Plan* essentially has three goals: to transform the Chadakoin Riverfront into a regional destination; to strengthen the downtown core through new development, streetscaping and programming; and to adopt and promote higher design standards for new development to keep with Jamestown's character and heritage. Volume II of the *Urban Design Plan* sets forth design standards for new development. The boundary of the area for which the design guidelines apply consists mainly of downtown Jamestown and along the River corridor from McCrea Point to Institute Street. The Jamestown Renaissance Corporation (a not-for-profit organization created to support the implementation of this plan) has completed storefront restorations along Main and East and West Third Streets. While this plan and its design guidelines do not apply to the entire LWRP Study Area, it does apply to a sizeable portion of the LWRP's **Downtown District** (see Figure 8). The goals and general message of creating attractive, green, and multi-modal developments which center on enhancing the Riverfront are critical to the City of Jamestown Waterfront Revitalization Area.

CITY OF JAMESTOWN: TRAFFIC AND STREETSCAPE ENHANCEMENT PLAN

The *City of Jamestown: Traffic and Streetscape Enhancement Plan* was prepared in 2008 using funds through the 2004-2005 Quality Communities Grant Program and the Gebbie Foundation. Created as the next step in implementing the vision of the *Urban Design Plan*, the *Traffic and Streetscape Enhancement Plan* provides a strategy for improving traffic circulation and enhancing the aesthetics and safety of the downtown streetscape. Traffic feasibility studies were conducted for proposed traffic circulation changes found in the *Urban Design Plan*. Additionally, guidelines were developed to improve the physical streetscape within the downtown. The plan focuses on the downtown pedestrian core, bounded between the Riverfront and Fourth Street, from Jefferson Street to Foote Avenue. The plan mentions the importance of creating pedestrian connections to Riverwalk and other Riverfront areas. Specific recommendations focus on improving Riverwalk through the installation of wayfinding signage and traffic calming measures, particularly where it crosses Main Street.

THE CITY OF JAMESTOWN: A LIVABLE COMMUNITY

The *City of Jamestown: A Livable Community* plan was prepared in 2010 to "set strategic objectives for neighborhoods in the same manner the Urban Design Plan (UDP) had done for Jamestown's downtown." Comprised of three sections, the first entitled "Reinvesting in Itself" focuses on "private and public strategic actions for 'market-based' neighborhood revitalization." Section Two details the City's vision and planning principles as related to neighborhood, housing, and infrastructure issues while Section Three provides collaborative actions and specific recommendations for implementation of the plan. Recommendations revolve around tangible aspects, such as creating choices in housing alternatives and facilitating easy access to green spaces, and intangible aspects, such as a nurturing a sense of community and community empowerment.

CHADAKOIN RIVER REVITALIZATION STUDY: BROWNFIELD OPPORTUNITY AREAS PROGRAM

The City of Jamestown and Jamestown Urban Renewal Agency (JURA) has received funding from the Brownfield Opportunity Area (BOA) grant program on numerous occasions. In 2008, the Chadakoin River Corridor Brownfield Opportunity Area Pre-Nomination Study was completed. This study focused on the geographic area surrounding the Chadakoin River from the Fairmount Avenue Bridge to the Dahlstrom Complex. With the goal of reconnecting the City to the River and Lake, this study documented basic information about the characteristics of the study area and provided site profiles of the identified brownfields. Preliminary analysis and recommendations were presented with the understanding that the City would pursue subsequent stages of the BOA program. The City received additional BOA funding to move the Pre-Nomination study area into the second (Nomination) study phase. This Nomination Study which spans along the River corridor from McCrea Point Park to Tiffany Avenue (the eastern City boundary) is nearing completion.

The City also received additional funding to conduct a Pre-Nomination study of the adjacent Chadakoin River Outlet area. The Pre-Nomination study of this area of the River corridor north of McCrea Point Park has recently been completed and the City has received additional funding to move this study area into the second (Nomination) study phase. The two BOA study areas, when combined, nearly coincide with the LWRP Study Area.

JAMESTOWN BICYCLE AND PEDESTRIAN PLAN

Currently in draft form, the *Pedestrian and Bicycle Plan* for the City of Jamestown aims "to provide recommendations for improving walking and bicycling conditions

in Jamestown for anyone who desires to live an active lifestyle by bicycling or walking to school, work, and other local destinations; or by going for a walk or bicycle ride to the City's parks, the library, or downtown." The plan inventories existing conditions including planning efforts, ordinances, crash data analysis, Safe Routes to School analysis, GIS analysis, infrastructure analysis, etc. Goals and action items relating to the five E's (Education, Engineering, Encouragement, Enforcement, and Evaluation and Planning) are presented. Additionally, the plan details over 100 pedestrian network recommendations, over 50 bicycle network recommendations, and nearly 40 street intersection enhancement recommendations. These recommendations include filling in the gaps of the existing non-complete sidewalk network, installing bike lanes and sidewalks along key routes, constructing shared use paths, and installing high visibility crosswalks, countdown timers, bike boxes, signage, and pavement markings at key intersections to name a few. The plan concludes with implementation strategies and resources.

CHAUTAUQUA LAKE WATERFRONT REVITALIZATION PROGRAM

The Chautauqua Lake Local Waterfront Revitalization Program (LWRP) covers the Towns of Chautauqua, Ellery, Ellicott, Busti and North Harmony and the Villages of Mayville, Bemus Point, Celoron and Lakewood. The LWRP establishes a shared vision for a long-term waterfront revitalization program that seeks to strengthen the local economy, expand waterfront access opportunities, and protect natural and cultural resources. The eastern boundary of the Chautauqua Lake LWRP meets the western boundary of the City of Jamestown LWRP.

CHAUTAUQUA COUNTY GREENWAY PLAN

The *Chautauqua County Greenway Plan* was prepared in 2012 to provide "a blueprint for making decisions regarding greenway and trail development that will enhance the quality of life for residents of the County." The plan inventories existing natural, cultural, historic, and recreational assets of the County, analyzes and synthesizes these assets into the plan's vision, goals, and objectives, and ultimately provides specific recommendations to accomplish the plan's goals. Goals include providing active living/alternative transportation opportunities, connectivity and trail development, and marketing and tourism to name a few. Specific recommendations involving Jamestown include adoption of local Complete Street Policies, completion of the Chadakoin Park Trail (Riverwalk Trail extension), creation of off-road trail/bicycle connections to Lakewood and Mason Industrial Park, development of on-road bicycle trails to Ashville and Frewsburg, development of a rail trail to Mayville, enhancement of the Chadakoin River Water Trail, and creation of a portage area around the Warner Dam to name a few.

2.2 EXISTING LAND USE AND ZONING

The following sections describe the land uses and existing zoning within the upland regions of the City of Jamestown's Waterfront Revitalization Area.

EXISTING LAND USE

The City of Jamestown is a largely developed urban area with the exception of undeveloped areas on the west end of the City that includes an approximately 350-acre wetland complex surrounding the Chadakoin River. The City of Jamestown's LWRP Study Area includes a variety of land uses within approximately 1,413 acres or 2.2 square miles (Table 13). Approximately 29 percent of the City's Study Area is used for parkland or as open space, 16 percent is commercial use, 12 percent is roads, 11 percent is vacant land, nine percent is industrial use, eight percent is utility/transportation services, seven percent is water, five percent is residential use, and three percent is government/community services. Existing land uses within the Study Area are shown on Figure 6.

The land use pattern within the Study Area varies by sub area. The **Chadakoin Outlet District** has the most segregated land use pattern in the Study Area. Along the south side of Jones and Gifford Avenue, historic industrial sites (many of which are now underutilized or vacant) are adjacent to the railroad. The north side of Jones and Gifford Avenue is predominantly vacant due to poor soil stability. The Clinton Street, Isabella Avenue, Lafayette Street, and 8th Street area is characterized by a mixture of poorly maintained commercial, residential, and vacant properties. Washington Street and Fluvanna Avenue are lined with commercial properties, a number of which are automobile dealerships. The Chadakoin River, associated wetlands, Jones Memorial Park, and Chadakoin Park (former City Landfill) dominate the central portion of the sub area.

The **Downtown District** has the most complicated land use pattern in the Study Area. The Chadakoin River bisects this sub area into north and south sections. The north side of the river is lined by railroad tracks. To the far west of this sub area McCrea Point Park welcomes river users from Chautauqua Lake into the City, while the Weitsman Scrap Yard (located just across the River) is a non-desirable/ non-compatible land use. The downtown core with its mixture of commercial and government uses is located on the north side of this sub area. The south side contains the Board of Public Utilities (BPU) electrical generating station, Brooklyn Square (an urban renewal project which includes retail space and the Jamestown Area Medical Associates), Panzarella Park, and large portions of the existing Riverwalk Trail. The west and east ends of this sub area contain a mixture of residential, commercial, light manufacturing, and vacant uses. The future

development of several large vacant parcels located within the eastern portion of this sub area will determine whether the eastern end becomes an extension of the traditional downtown and growing medical corridor or an extension of the neighboring Industrial Heritage Corridor.

Land uses in the **Industrial Heritage Corridor** east of the Downtown District are much less varied. The railroad separates slightly from the River's edge, sandwiching the many historic, underutilized, and obsolete manufacturing uses. At the northeast end of the sub area, the Dahlstrom Complex (large portions of which have recently been demolished) is located on both sides of the River. A mixture of commercial, residential, and vacant properties are found along East Second Street and the north side of Crescent Avenue.

Much like the Industrial Heritage District, the **East End Industrial Corridor** primarily consists of manufacturing uses between and along the River and railroad. However, many of these manufacturing facilities are more modern and fully utilized. The few that are underutilized (i.e., Bush Industries and Crawford Furniture Manufacturing) can be easily retrofitted for reuse by new industrial businesses. Residential properties are peppered throughout this highly industrial area and commercial properties are located along East Second Street. There is also a fair amount of important open space/floodplain on the southern edge of the River, along the Hope's Windows property (which is generally located along the northern side of Hopkins Avenue from Angove Avenue to Bigelow Avenue).

Table 13. Land Use in the LWRP Study Area

Land Use	Acres	Parcels
Residential	69.3	536
Commercial	223.0	501
Industrial	134.7	91
Utility / Transportation Services	116.4	71
Government / Community Services	41.8	50
Vacant	154.9	545
Park / Open Space	405.5	85
Roads	163.0	
Water	104.3	
Total	**1,412.9**	**1,879**

Source: Chautauqua County Real Property Tax Service

LABELLA Associates, P.C.

300 STATE STREET
ROCHESTER, NY 14614
P: (585) 454-6110
F: (585) 454-3066

CITY OF JAMESTOWN

LOCAL WATERFRONT REVITALIZATION PROGRAM

Area Landuse

LWRP Area

Land Use Category

- Park / Open Space
- Vacant
- Residential
- Commercial
- Government / Community Services
- Utility / Transportation Services
- Industrial
- Unknown
- Surface Water

Sources:
1. City of Jamestown Local Waterfront Revitalization Program Work Plan Map - Edited by LaBella to reflect steering committee revisions
2. Land Use extracted from the Real Property Database provided by Chautauqua County with slight modifications by LaBella based on aerial imagery and site visits

0 1,000 Feet

1:15,000

This map was prepared for the New York State Department of State with funds provided under Title 11 of the Environmental Protection Fund.

Path: I:\Jamestown Urban Renewal Agency\2122510\Drawings\LWRP\WAP 2012.04.17 Landuse.mxd

Figure 6. Land Use Map

ZONING AND OTHER LAND USE REGULATIONS

In October 1998, the City of Jamestown adopted a new Zoning Ordinance and Map. The Zoning Ordinance has been designed to preserve existing open spaces, lessen congestion in the streets, secure safety from fire, flood and other dangers, and facilitate the adequate provision of transportation, parks, utilities, schools, and other public services. The Ordinance serves to protect and enhance the existing character of each district and conserve the value of land while promoting the most appropriate use of land throughout the City of Jamestown. The Zoning Ordinance is administered by the Zoning Board of Appeals, the Planning Commission and the Building Inspector. The Building Inspector is empowered as the enforcing officer for the provisions for the Zoning Ordinance. The Zoning Board of Appeals has the power to authorize use or area variances in cases of hardship or practical difficulties and special use permits. Lastly, the Planning Commission oversees the site-plan review process and ultimately is charged with approving or rejecting the site plan in accordance with the City's Zoning Ordinance.

ZONING CATEGORIES

Zoning in the City of Jamestown's Waterfront Revitalization Area, as shown in Figure 7, is generally reflective of current land uses. Thirty-six percent of the Study Area is designated as *Land Conservation Zones*, primarily surrounding the western portion of the River. *Manufacturing* and *Light Manufacturing Zones* surround the remainder of the River and the south side of Jones and Gifford Avenue, accounting for 35 percent of the Study Area. Various *Commercial Zones* dominate the downtown core, Brooklyn Square, and along Fluvanna Avenue, Washington Street, and East Second Street, accounting for 19 percent of the Study Area. The remaining 10 percent of the Study Area is designated as various *Residential Zones* (Table 14).

Table 14. Zoning Categories in the LWRP Study Area

Zone	Principal Uses	Accessory Uses	Acres
L-C Land Conservation	Noncommercial agriculture, parks, playgrounds, marinas, game preserves, fire stations, police substations	Signs	508.9
R-1 Single-Family Residential	Single-family dwellings, places of worship, schools, parks, playgrounds, planned unit residential developments	Private garages, off-street parking, private swimming pools, signs	30.0
R-2 Two-Family Residential	R-1 uses, two-family dwellings, owner-occupied beauty parlors/barber shops (with special use permit)	As permitted in R-1, signs	90.1
R-C Multiple-Family Residential	R-2 uses, multi-family dwellings, mortuaries, medical/professional offices, day-care centers, hospitals, public parking lots, B&B (with special use permit), boardinghouses/nursing homes (with special use permit)	As permitted in R-2, signs	22.0
C-1 Neighborhood Commercial	R-C uses, business offices, personal service establishments, enclosed retail, banks, commercial swimming pools, B&B's	As permitted in R-C, coffee/snack bars, manufacturing/processing of articles for on-site retail sale, signs	0.0
C-2 Community Commercial	C-1 uses, gas stations, auto repair, restaurants, hotels, non-public schools, bowling alleys, theaters, unrestricted retail	As permitted in C-1, signs	61.9
C-3 Central Business	C-2 uses, bus/railroad stations, sports arenas, auditoriums, convention centers, museums, art galleries, libraries, public assembly places, light manufacturing/warehousing (with special use permit)	As permitted in C-2, signs	50.7
C-4 Central Commercial	C-3 uses	As permitted in C-3, signs	60.3
C-M Service and Highway Commercial	C-4 uses (provided all non-residential uses are primarily oriented toward a major street), auto/marine sale and service, greenhouses, bottling works, wholesale bakery plants, dry-cleaning and laundry, car washes, animal hospitals/kennels, tattoo parlors	As permitted in C-4, signs	101.4
L-M Light Manufacturing	C-M uses (except dwellings), research/development facilities, warehouses, laboratories, assembly plants, distribution plants, storage facilities, light manufacturing or clean industrial operations (with approval)	As permitted in C-M, signs	184.2
M Manufacturing	L-M uses, concrete manufacturing, incinerators, open storage, railroad yards, welding shops, foundries, truck terminals, metal plating works, adult uses (with special use permit), junk/scrap yards (with special use permit)	As permitted in L-M, signs	307.6

Source: City of Jamestown

LABELLA Associates, P.C.

CITY OF JAMESTOWN

LOCAL WATERFRONT REVITALIZATION PROGRAM

Zoning

- LWRP Study Area

City of Jamestown Zoning District

- R-1 Single Family Residential
- R-2 Double Family Residential
- R-C Multi-family Residential and Professional Office
- C-1 Neighborhood Commercial
- C-2 Community Shopping
- C-3 Central Business
- C-4 Central Retail
- C-M Service & Highway Commercial
- L-M Light Manufacturing
- M Manufacturing
- L-C Land Conservation
- PE Historic Preservation Overlay (Not Labelled)

Sources:
1. City of Jamestown Local Waterfront Revitalization Program Work Plan Map - Edited by LaBella to reflect steering committee revisions
2. City of Jamestown Zoning shapefiles provided by the City of Jamestown.

0 1,000 Feet

1:15,000

This map was prepared for the New York State Department of State with funds provided under Title 11 of the Environmental Protection Fund.

Path: I:\Jamestown Urban Renewal Agency\212251\Drawings\LWRP\MAP 2012.04.17 Zoning.mxd

Figure 7. Zoning Map

HISTORIC PRESERVATION OVERLAY DISTRICT

The Historic Preservation Overlay District consist of five separate areas within the City that were created "to promote and enhance the architectural heritage of the historically significant sectors of the City; and to encourage the preservation and enhancement of facades, signage and aesthetics of the existing buildings; and to permit new construction in a manner which complements the existing urban form of the district." The majority of one and small portions of two of the five Historic Preservation Overlay Districts are located within the LWRP Study Area and encompass a combined 26.1-acre area. Most of this 26.1-acre area is located within the downtown core (see Figure 7). All projects within the Historic Preservation Overlay Districts which require a building permit for exterior work are subject to preservation and enhancement review by either the Department of Development and the Department of Public Works or the Planning Commission. Projects must be in harmony with the historically significant uses within the neighborhood, general character of the neighborhood, and architectural integrity and style of the effected structures.

JAMESTOWN URBAN DESIGN PLAN – URBAN DESIGN GUIDELINES

The *Jamestown Urban Design Plan (UDP)* (as previously discussed in the *Existing Planning Initiatives* section of this Report) sets forth urban design guidelines for five design areas within the City of Jamestown: the Riverfront, the Downtown Core, the West End, Brooklyn Square, and the Extended Downtown. Portions of these areas are within the LRWP Study Area and are shown in Figure 8. The design guidelines allow City staff, project proponents and the community to work together toward achieving a better downtown. With the exception of single-family residential projects, the guidelines apply to any proposed development to be located within any of the five design areas and that exceeds at least one of the following thresholds under the formal site plan review procedure:

- 12 parking spaces
- 5,000 square feet of gross floor area
- Expansion of an existing facility by more than 25% of the gross floor area of the facility
- New residential construction with three or more units

Additionally, the design guidelines apply to all proposed manufacturing or light manufacturing development or redevelopment to be located within any of the five design areas.

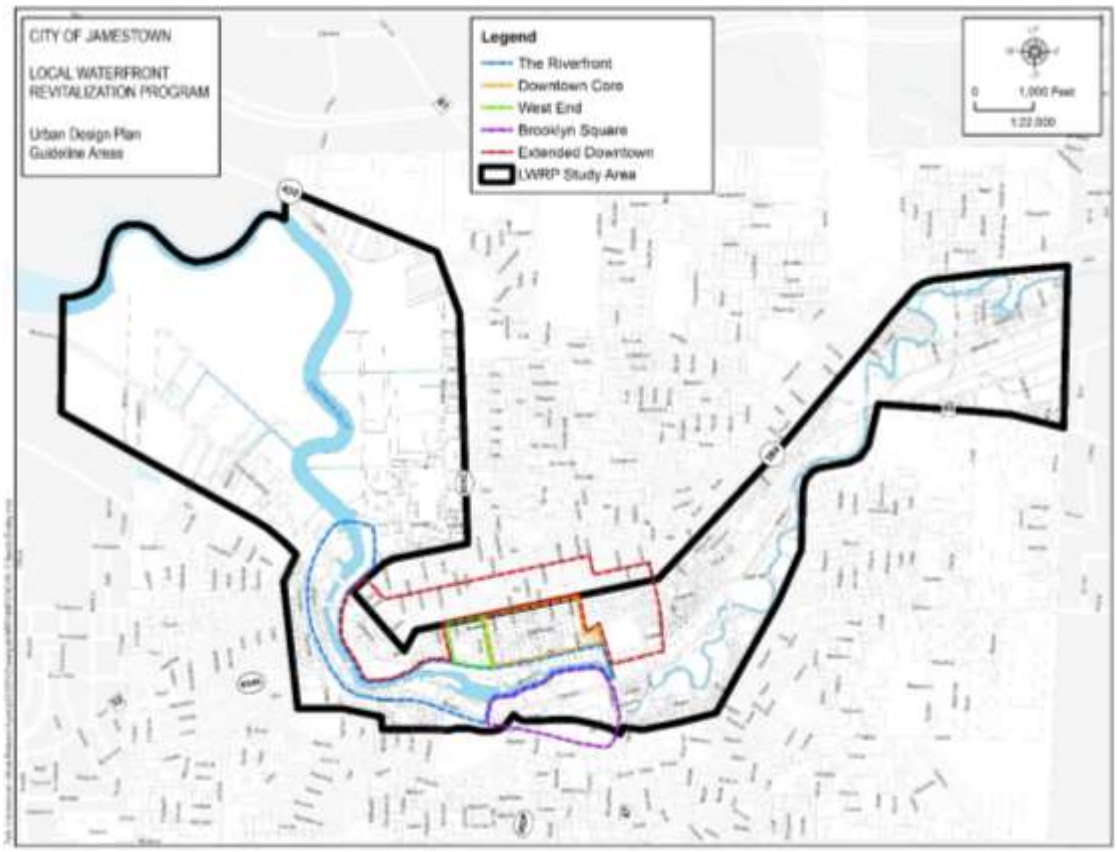


Figure 8. Urban Design Guideline Districts within the LWRP Study Area
Source: Jamestown Urban Design Plan

LAND OWNERSHIP PATTERNS

One unique aspect of the Study Area is the amount of land owned by public and quasi-public agencies including the City of Jamestown, the City of Jamestown School District, the Chautauqua County Industrial Development Agency, Chautauqua County, New York State, the Federal government, and the Southern Tier Extension Railroad Authority (STERA) (see Figure 9). Combined, these entities own over 50 percent (582 acres) of the Study Area. The City of Jamestown is by far the largest contributor owning 42 percent (477 acres) of the Study Area (Table 15).

Table 15. Public and Quasi-Public Land Ownership Distribution in the LWRP Study Area

Owner	Acres
City of Jamestown	477.3
Jamestown School District	18.3
Chautauqua County IDA	11.7
Chautauqua County	2.7
New York State	3.3
Federal	2.2
Utility/Rail	60.1

Source: Chautauqua County Real Property Tax Services



LABELLA Associates, P.C.

CITY OF JAMESTOWN

LOCAL WATERFRONT REVITALIZATION PROGRAM

Property Ownership

LWRP Study Area

Ownership

- Private Property
- City of Jamestown
- City of Jamestown School District
- Chautauqua County IDA
- Chautauqua County
- New York State
- Federal
- Utility/Railroad
- Ownership Unknown

Sources:
1. City of Jamestown Local Waterfront Revitalization Program Work Plan Map - Edited by LaBella to reflect steering committee revisions
2. Ownership extracted from the Real Property Database provided by Chautauqua County.

0 1,000 Feet

1:15,000

Figure 9. Ownership Map

The remaining nearly 50 percent of the Study Area is owned privately for residential, commercial, and manufacturing purposes.

Within the **Chadakoin Outlet District**, public and quasi-public agencies own 70 percent (428 acres) of the land. Over 400 acres (66%) of the land is owned by the City of Jamestown including Jones Memorial Park, Chadakoin Park (portions of which were the former City Landfill), and the Chadakoin River wetlands. Additionally, the County owns two small parcels and the rail authority owns a portion of an old railroad right-of-way which is currently slated for a multi-use trail conversion (see the discussion of the Chadakoin Park Bike Trail in the *Pedestrian and Bicycle Infrastructure* section of this Report).

All of the above mentioned public and quasi-public agencies own land within the **Downtown District**. Large contributors include the City of Jamestown (which owns numerous government buildings, the Board of Public Utilities facilities, and the Riverwalk Trail), the rail authority, and the Chautauqua County IDA.

Within the **Industrial Heritage Corridor** and the **East End Industrial Corridor** public and quasi-public land ownership is limited. Contributors include the City of Jamestown, the City of Jamestown School District, the rail authority, and Chautauqua County.

BROWNFIELD, UNDERUTILIZED, AND VACANT SITES

Numerous brownfield, underutilized, and vacant sites are located within the City of Jamestown Waterfront Revitalization Area. Although these properties may currently be unproductive and blighted, the remediation and redevelopment of these sites provide a real and significant opportunity to revitalize the waterfront while eliminating potential exposure to hazardous materials and other substances.

The brownfield, underutilized, and vacant sites within the LWRP Study Area are being inventoried and described as part of the City's two Brownfield Opportunity Area (BOA) Program projects. These studies are currently underway. These sites, including existing environmental concerns and potential reuse options, are discussed in extensive detail within the two BOA documents (*Chadakoin River West Pre-Nomination Study* and *Chadakoin River Central/Eastern Nomination Study*) and the reader is referred to those documents for further information.

To aid in referencing the various brownfield, underutilized, and vacant sites, separate maps and tables have been provided for the two separate brownfield studies. Table 16 describes and Figure 10 depicts the brownfield, underutilized, and vacant sites within the **Chadakoin Outlet District**, which coincides with the

Chadakoin River West BOA Pre-Nomination study area. The *Chadakoin River Central/Eastern BOA Nomination* study area nearly coincides with the LWRP's **Downtown District**, **Industrial Heritage Corridor**, and **East End Industrial Corridor**, and brownfield, underutilized, and vacant sites within these sub areas are described in Table 17 and depicted on Figure 11.

The City of Jamestown Waterfront Revitalization Area includes 65 sites categorized as brownfield, underutilized and vacant sites. Brownfield sites are defined by New York State law as any real property, the redevelopment or reuse of which may be complicated by the presence *or potential presence* of environmental contamination. Underutilized sites are properties which include some form of physical improvement (ex. buildings, parking lots, etc.) but are abandoned, not being used to their full potential, or are located in prime development areas and contain uses which are inconsistent with the Community's vision for that area. Properties with development potential, no physical improvements on them, and designated as vacant on the real property data, were labeled as vacant. As the above three categories (brownfield, underutilized, and vacant) are not mutually exclusive, sites were labeled using the highest applicable category.

The character of the brownfield, underutilized, and vacant sites varies considerably. The list of sites includes scrap yards, industrial buildings, warehouses, parking lots, auto shops, row buildings, office buildings, gas stations, condemned homes, abandoned buildings, a former City landfill, and vacant lots.

Throughout the Study Area, 35 of the sites are classified as potential brownfields, 29 are classified as underutilized and one is classified as vacant. The property designations were made based on evaluation of real property data, publicly available environmental records (Phase I reports, spills, etc.), aerial photography, Sanborn maps, site visits and information provided by Steering Committee members.

The 65 sites occupy approximately 250 acres in the City of Jamestown and are assessed at almost $15.2 million. They range in size from less than a tenth of an acre to over 100 acres. The majority of the sites (30) totaling 79.4 acres are located in the *M Manufacturing District*. An additional 18 sites totaling 16.4 acres are located in the *C-2 Community Shopping*, *C-3 Central Business*, and *C-4 Central Retail* commercial districts. Seven sites totaling 26.0 acres are located in the *L-M Light Manufacturing District*. Three sites (13.4 acres) are located in the *R-2 Two-Family Residential District*. Six sites totaling 10.3 acres are located in the *C-M Service and Highway Commercial District*.

Site No.	Site Name
1	Automatic Voting Machine Corp
2	55 Jones & Gifford Ave
3	19 Jones & Gifford Ave
4	Former Furniture Manufacturer
5	Reliable Garage
6	Former Jamestown City Landfill
7	Pelican Site
8	Dunn Wright Building
9	C&B Cleaners
10	Anderson Cleaners
11	The Eatery
12	Vacant Big Box Store

This map was prepared for the New York State Department of State with funds provided under Title 11 of the Environmental Protection Fund.

Path: I:\Jamestown Urban Renewal Agency\212251\Drawings\LWRP\MAP 2012.08.30 ProNonBrownVacUnderType.mxd

LABELLA Associates, P.C.

300 STATE STREET
ROCHESTER, NY 14614
P: (585) 454-6110
F: (585)454-3066

CITY OF JAMESTOWN

LOCAL WATERFRONT REVITALIZATION PROGRAM

Brownfield, Underutilized, and/or Vacant Sites within the BOA Pre-Nomination and LWRP Study Areas

LWRP Study Area

BOA Pre-Nomination Study Area

Site Characterization

- Potential Brownfield Site
- Underutilized Site
- Not designated as a BOA Site but designated as vacant in the Real Property Database

Note:
All Brownfield, Underutilized, and Vacant Sites utilize current parcel boundaries, EXCEPT, Site 6 (the Former Jamestown City Landfill) whose approximate boundaries were determined and created using a map obtained from the City's Department of Public Works

Sources:
1. City of Jamestown Local Waterfront Revitalization Program Work Plan Map - Edited by LaBella to reflect steering committee revisions
2. Original BOA Shapefile provided by the City of Jamestown - Edited by LaBella to reflect steering committee revisions
3. Brownfield, Underutilized, and Vacant Sites obtained from previous studies, windshield surveys, database and regulatory reviews, Sanborn Map analysis, and steering committee suggestions

0 500 Feet

1:8,500

Figure 10. Brownfield, Underutilized, and/or Vacant Sites BOA Pre-Nomination Map



LABELLA Associates, P.C.

300 STATE STREET
ROCHESTER, NY 14614
P: (585) 454-6110
F: (585) 454-3066

CITY OF JAMESTOWN

LOCAL WATERFRONT REVITALIZATION PROGRAM

N W E S

Brownfield, Underutilized, and/or Vacant Sites within the BOA Nomination and LWRP Study Areas

LWRP Study Area
BOA Nomination Study Area
Sub Area Boundaries

Land Use Category

Potential Brownfield Site
Underutilized Site
Vacant Site
Not designated as a BOA Site but designated as vacant in the Real Property Database

Sources:
1. City of Jamestown Local Waterfront Revitalization Program Work Plan Map - Edited by LaBella to reflect steering committee revisions
2. Original BOA Shapefile provided by the City of Jamestown - Edited by LaBella to reflect steering committee revisions
3. Brownfield, Underutilized, and/or Vacant Sites obtained from previous studies, windshield surveys, database and regulatory reviews, Sanborn Map analysis, and steering committee suggestions

0 1,000 Feet
1:12,000

Figure 11. Brownfield, Underutilized, and/or Vacant Sites BOA Nomination Map

The 12 sites within the **Chadakoin Outlet District** occupy approximately 133 acres and are assessed at over $2.5 million. The **Downtown District** contains 30 sites which combined are assessed at over $8 million and occupy over 52 acres. The **Industrial Heritage Corridor** contains 15 sites assessed at over $1.5 million on 37 acres of land. Finally, the **East End Industrial Corridor** contains only eight (8) sites; however, combined they are assessed at nearly $3 million and occupy 27 acres.

The Waterfront Revitalization Policies in Section III of this Report and Proposed Projects in Section IV discuss potential redevelopment opportunities of brownfield, underutilized, and vacant sites relative to the revitalization of the City of Jamestown's waterfront.

Table 16. Brownfield, Underutilized, and Vacant Properties – Chadakoin Outlet District

Site	Street	Owner	Land Use	Acres	Assessed Value	Zone	Site Use*	Water Access
POTENTIAL BROWNFIELD PROPERTIES								
1a	151 Jones & Gifford Ave	Community Dev. Assoc LLC	Vacant Industrial	3.18	$9,300	L-M	V	No
1b	153 Jones & Gifford Ave 488 Hallock St	Suit Kote Corp	Light Ind. Man., Vac Ind & Detached Row Bldg	5.94	$139,700	L-M	B & P	No
2	55 Jones & Gifford Ave	Wendon Holding Corp	Light Ind. Manufacturing	3.26	$200,000	L-M	B & P	No
3	19 Jones & Gifford Ave	Wendon Holding Corp	Light Ind. Manufacturing	1.24	$200,000	L-M	B & P	No
4a	901 Monroe & Clinton St	City of Jamestown	Vacant Commercial	2.21	$51,000	R-2	V	No
4b	Clinton St	Zakriski, Peter A. Jr.	Warehouse	0.78	$10,000	R-2	B	No
5a	West 10th St	Walden, Daniel R	Vacant Commercial	0.20	$5,000	R-2	V	No
5b	West 10th St	County of Chautauqua	Vacant Commercial	0.11	$3,400	R-2	V	No
5c	1010 Monroe St	Caruso, William	Auto body	0.24	$24,000	R-2	B	No
6a	Isabella Ave	Southern Tier Extension Railroad Authority (STERA)	Past Landfill, Vac RR ROW	4.79	$132	L-C	V	No
6b	Lafayette St	City of Jamestown	Past Landfill, Current Park	100.86	$377,177	L-C, C-M	M	No
7	Washington St	City of Jamestown	Vacant Commercial	1.30	$119,700	C-M	V	No
8	2229 Washington St	Swanson, Gerald	Warehouse	0.21	$15,700	C-M	B	No
9	Washington St	County of Chautauqua	Vacant Commercial	0.24	$30,000	C-M	B & P	No
Total All Brownfield Properties				**124.56**	**$1,185,109**			
UNDERUTILIZED PROPERTIES								
10	217 Fluvanna Ave	High Traverse Prop LLC	Commercial	0.17	$50,000	C-M	B & P	No
11	235 Fluvanna Ave	Jamestown Regional Prop LLC	Restaurant	0.63	$97,500	C-M	B & P	No
12a	255 Fluvanna Ave	Tops PT LLC	Supermarket & Parking	6.38	$950,000	C-M, L-C	B & P	No
12b	245 Fluvanna Ave	Plaza Group 200 LLC	Retail Services	1.40	$250,000	C-M, L-C	B & P	No
Total All Underutilized Properties				**8.58**	**$1,347,500**			
Total All Brownfield, Underutilized and Vacant Properties				**133.14**	**$2,532,609**			

*Site Use Categories V = vacant B = building P = parking M = Municipal Park

Source: Chautauqua County Real Property Tax Service

Table 17. Brownfield, Underutilized, and Vacant Properties – Downtown District and Industrial Heritage and East End Industrial Corridors

Site	Street	Owner	Land Use	Acres	Assessed Value	Zone	Site Use*	Water Access
POTENTIAL BROWNFIELD PROPERTIES								
1a	825 Monroe St; 610, 616, 628, 629 - W 8th St	Web-Jamestown Corp	Junkyard	2.42	$102,000	R-2	B & P	No
1b	929 Monroe St; 0 W 8th St	City of Jamestown	Elec-hydro, Highway Garage & Vac. Ind.	5.03	$96,500	R-2	B & P	Yes
1c	0 Monroe St	White, George	Vacant Industrial	2.13	$23,300	R-2	V	No
1d	935 Monroe St	Fisher, Irving E.	Vacant Commercial	0.26	$20,000	R-2	B & P	No
2	117 Fairmount St	Eagles Nest Partners LLC	Light Ind. Manufacturing	0.80	$58,000	L-M	B & P	Yes
3	0 W 2nd St	Unknown	City Salt Storage & RR	6.34	Unknown	L-M	B	Yes
4	0 W 2nd St	Southern Tier Extension Railroad Authority (STERA)	Railroad & Abandoned Train Car Repair Shed	2.38	Unknown	L-M	B	Yes
5	0 N Main St	Cleaning Tech Group LLC	Light Ind. Man. & Parking	3.21	$308,000	C-4	B & P	Yes
9	406 W 3rd St	Hawley Dev Corp	Mini Mart	0.25	$200,000	C-2	B & P	No
19a	116 E 1st St	Anderson Steven C	Light Ind. Manufacturing	0.47	$65,000	C-3, PE	B	No
19b	106, 118 E 1st St; 0 Institute St	El Greco Woodworking Inc	Light Ind. Man. & Vac. Ind.	2.40	$108,600	C-3, PE	B & P	No
19c	124 E 1st St	Goodwill Shane H &	Light Ind. Manufacturing	0.42	$105,000	C-3, PE	B	No
25	0 Victoria Ave; 0 Foote Ave	Deerview LLC	Vacant Commercial	1.43	$77,400	M	V & P	Yes
26	0 Harrison St	201 Harrison St LLC	Parking Lot	1.52	$27,000	M	P	No
27	0 Harrison St	County of Chautauqua Ida	Vacant Industrial	3.57	$44,100	M	V	No
28	133 Winsor St	Washington, Savitri C.	Vacant Commercial	2.04	$31,300	M	V	Yes
29	92 Water St	Mason Carving Inc	Warehouse	0.13	$10,000	M	B & P	No
30	16-26, 40 Winsor St	Companion Resources Corp	Light Ind. Man. & Vac. Ind.	2.76	$309,600	M	B & P	No
31	571-607 Allen St	Jamestown Allenco Inc	Vacant Industrial	2.31	$10,000	M	V	Yes
32	0 River St	Jamestown Urban Renewal Ag	Urban Renewal	0.78	$65,800	M	P	Yes
33	0 River St	Jamestown Dev Co III LLC	Parking Lot	2.10	$32,800	M	P	No
34	43 River St	Schuver, George B.	Warehouse	3.96	$25,000	M	B & P	No
35	53 River St	Charles Lawson Rev Liv Trust	Light Ind. Manufacturing	0.37	$160,000	M	B	No
36	65 River St	Dyatel, Julia	Warehouse	0.99	$12,000	M	B	No
37	71 River St	Custom Profiling Tool Co Inc	Light Ind. Manufacturing	0.85	$82,000	M	B	No
38a	0 Crescent St	Jamestown Urban Renewal Ag	Vacant Industrial	0.17	$5,200	M	P	No
38b	111 Cheney St	MCA Graphic Solutions Inc	Light Ind. Man. & Vac. Ind.	0.37	$96,500	M	B & P	No
38c	200-218 Crescent St; 0 Cheney St	United Industries Inc	Light Ind. Man. & Vac. Ind.	0.79	$49,400	M	B & P	No
39	113-117 Cheney St; 34 Scott St	D & S Storage LLC	Light Ind. Man, Vac. Ind. & Office Bldg	1.32	$183,400	M	B & P	No
40	220-256 Crescent St	City of Jamestown	Vacant Industrial w/ Imp.	2.71	$25,000	M	B	No
41	300 Crescent St	Ryan, Mark P.	Light Ind. Manufacturing	1.63	$50,000	M	B	No
44a	443-499 Buffalo St; 1-15 Blackstone Ave	Buffalo St Partners LLC	Light Ind. Man. & Vac. Ind.	10.38	$270,500	M, L-M	B & P	Yes
44b	20 Blackstone Ave	Jamestown Metal Products LLC	Warehouse	1.04	$140,000	M	B	Yes
48	147 Blackstone Ave	Custom Production Mfg Inc	Light Ind. Manufacturing	1.42	$112,000	M	B	No
Total All Brownfield Properties				**68.77**	**$2,905,400**			
UNDERUTILIZED PROPERTIES								
6	20 Steele St	Sirianno, James P.	Storage & Parking	1.86	$432,400	C-4	B & P	Near
7	30-34 Harrison St	Chautauqua Brick Co Inc	Lumber Yard/Mill	1.55	$234,900	C-4	B & P	Near
8a	33 Forest Ave; 0 Harrison St	Duke, Larry	Det. Row Bldg & Parking	0.61	$129,300	C-4	B & P	No
8b	0 Forest Ave	Chautauqua Chemicals Co	Vacant Commercial	0.89	$63,600	C-4, PE	V	No
10	318 Washington St	Quick, Robert I. Jr.	Vacant Social Org.	0.15	$90,000	C-3	B	No
11	111 W 2nd St	US Comm Habitat Co	Office Bldg	0.40	$1,240,000	C-3	B	No
12	201 Cherry St	Pearl City Arts Building	Attached Row Bldg	0.37	$125,000	C-3, PE	B	No
13	12-14 W 2nd St	Johnson, Kurt B.	Row Bldg & Vac. Com.	0.12	$43,300	C-3, PE	B	No

Table 17 Continued on Next Page

*Site Use Categories V = vacant B = building P = parking M = Municipal Park

Site	Street	Owner	Land Use	Acres	Assessed Value	Zone	Site Use*	Water Access
UNDERUTILIZED PROPERTIES CONTINUED								
14	326 Cherry St	Tc & Maisano Inc	Det. Row Bldg-Retail	0.22	$100,000	C-3, PE	B	No
15	300 N Main St	Lucille Ball Desi Arnez	Culture Bldg	0.10	$98,000	C-3, PE	B	No
16	2-6-8-10, 12 E 3rd St	Manufacturers, Traders Trust	Bank for Sale	0.20	$650,000	C-3, PE	B	No
17a	8 E 2nd St	Li, Wing Kam	Att. Row Bldg & Apt.	0.02	$40,000	C-3, PE	B	No
17b	10-12 E 2nd St	Schenck, Paul R. III	Att. Row Bldg-Retail	0.06	$9,300	C-3, PE	B	No
18a	36-38 N Main St	Northwest Savings Bank	Attached Row Bldg	0.11	$60,000	C-3, PE	B	No
18b	34 N Main St	Morrison, Todd	Attached Row Bldg	0.02	$12,000	C-3, PE	B	No
18c	26-32 N Main St	DMM Educational Center	Attached Row Bldg	0.22	$25,000	C-3, PE	B	No
18d	24 N Main St	Richter, Rand	Attached Row Bldg	0.10	$24,000	C-3, PE	B	No
20a	201-205, 209, 219, 220 - E 1st St; 8 Institute St	John Galt Holding Co LLC	Vac Ind, Com, & Res, Warehouse, 2 Fam Res	0.51	$144,300	C-3	B & V	No
20b	0 E 1st St	Esquire, Cleaners	Vacant Residential Land	0.07	$300	C-3	V	No
20c	216 E 1st St	Smith, Poppie	2 Family Residential	0.09	$14,000	C-3	B	No
20d	0 Institute St	City of Jamestown	Vacant Residential Land	0.05	$200	C-3	V	No
21	310-322 E 3rd St	U S Postal Service	Government Building	1.50	$1,250,000	C-2	B & P	No
22a	143 Harrison St	Lipari, David	Auto Body	0.09	$40,000	M	B & P	No
22b	141 Harrison St	Elardo, Richard P.	Attached Row Bldg	0.04	$36,000	M	B	No
22c	66 Foote Ave	Jamestown Ice & Storage Inc.	Ice Manufact. & Storage	0.79	$95,000	M	B	No
22d	0 Foote Ave	International, Ordinance	Parking Lot	0.96	$12,200	M	P	No
22e	101 Harrison St	County of Chautauqua	Light Ind. Man. & Parking	2.41	$600,000	M	B & P	No
22f	33 Institute St	FSC Systems LLC	Warehouse	0.22	$60,000	M	B	No
23a	0 Foote Ave	Chaut Reg Ind Dev Corp	Vacant Industrial	0.15	$5,100	M	P	No
23b	106-108, 110, 116 - Harrison St	Schuver, G Barton	Vac. Ind., Vac. Com., Auto Body, & Light Ind. Man.	0.64	$58,400	M	B, P, V	No
23c	112 Harrison St	Oag, Alistair J.	Auto Body	0.11	$72,000	M	B	No
23d	19 Briggs St	Michel, Real Estate Partnp	Warehouse	0.56	$160,000	M	B & P	No
23e	25 Briggs St; 99 Institute St	Scion Members LLC	Warehouse	0.41	$202,000	M	B & P	No
23f	100 Harrison St	Green, Mary E.	Detached Row Bldg	0.10	$54,000	M	B	No
24a	0 Institute St	Toni, Stromdahl's Rest Inc	Vacant Commercial	0.19	$15,800	C-4	P	Yes
24b	96, 100-116 Institute	Hall, Robert-Timothy	Row Bldg & Vac. Ind.	0.20	$53,500	C-4	B & P	Yes
24c	0 Institute	City of Jamestown	Motor Vehicle Services	0.02	$1,500	C-4	V	Yes
43	456 Buffalo St	Buffalo St Partners Llc	Parking Lot	3.48	$39,900	M	P	Yes
45	0 Blackstone Ave	Blackstone, Business	Vacant Industrial	3.62	$30,300	M	P	Yes
46	1372 E 2nd St	King Properties LLC	Warehouse	2.20	$88,000	L-M	B & P	Yes
47	168, 170 Hopkins Ave; 0 Blackstone Ave	Rollform of Jamestown Inc	Vacant Industrial & Parking	0.50	$18,800	M	P	No
49	150 Blackstone Ave	Jamestown Mattress Co Inc	Light Ind. Manufacturing	1.18	$240,000	M	B & P	No
50	0 Blackstone Ave	TitanX Engine Cooling Inc	Parking Lot	2.60	$39,200	M	P	No
51	1061-71 Allen St	Crawford Furn Mfg Corp	Light Ind. Manufacturing	2.50	$500,000	M	B	No
52	1088-1132, 1089 Allen 0 Carolina St	Bush Industries Inc	Light Ind. Man. & Parking	13.31	$1,961,790	C-2, M	B & P	No
53a	107 Institute St	Calimeri, Rosario	Light Ind. Manufacturing	1.65	$560,000	M	B	Yes
53b	10 Briggs St	Scion Members LLC	Vacant Ind. & Parking	0.30	$12,300	M	P	Yes
Total All Underutilized Properties				**47.45**	**$9,741,390**			
VACANT PROPERTIES								
42	0 Allen St	City of Jamestown	Vacant Industrial	1.14	$8,500	M	P	Yes
Total All Vacant Properties				**1.14**	**$8,500**			
Total All Brownfield, Underutilized and Vacant Properties				**117.36**	**$12,655,290**			

*Site Use Categories V = vacant B = building P = parking M = Municipal Park

Source: Chautauqua County Real Property Tax Service

WATER-DEPENDENT AND WATER-ENHANCED USES

Water-dependent uses are defined as activities which can only be conducted on, in, over or adjacent to a water body because such activities require direct access to that water body, and which involve, as an integral part of such activities, the use of the water. Water-enhanced uses are defined as activities that do not require a location on or adjacent to the water to function, but whose location on the waterfront could add to public enjoyment and use of the water's edge, if properly designed and sited.

Currently, the City of Jamestown possesses few water-dependent and water-enhanced uses (see Figure 12). As described previously in the *Community and Waterfront Development History* section of this Report, despite Jamestown's initial development and dependence on and near the Chadakoin River, the community "turned its back" toward the River as the railroad took over as the primary mode of transportation and waterpower was no longer necessary for the operation of industries. Only recently has the City begun to focus on rediscovering and promoting the River as a community asset.

Water-dependent uses include:

1) ***Fishing*** – A variety of formal and informal access points along the Chadakoin River are used by local fisherman. Formal fishing access points include McCrea Point Park, Panzarella Park, Keelboat Landing, and along Riverwalk (informal access points to be discussed in the *Public Access* section of this Report).
2) ***Boat Launches/Docking*** – Informal boat launches are located off of an informal trail leading through the northern portion of Jones Memorial Park and off of Clifton Avenue and both are used for small watercraft like kayaks and canoes. A formal boat launch and dock for larger watercraft is located at McCrea Point Park. A formal boat dock is located at Panzarella Park. (All to be discussed in further detail in the *Marinas, Docks, and Bulkheads* section of this Report).
3) ***Warner Dam*** – The Warner Dam was constructed to mitigate flooding issues in Chautauqua Lake as well as maintain Lake water levels for recreational purposes (to be discussed in further detail in the *Vessel Use and Navigation* section of this Report).
4) ***Fire Training Center*** – Located on the south side of Harrison Street between Foote Avenue and Winsor Avenue, this area is occasionally used by both the Jamestown Fire Department and other fire departments serving rural communities to practice water drafting techniques from the River.

Although the BPU electric generating facility once utilized water from the Chadakoin River for non-contact cooling purposes, this practice no longer occurs. Additionally, none of the industries within the LWRP Study Area utilize water from the River for plant operations.

Water-enhanced uses include:

1) ***McCrea Point Park*** – Located northeast of the intersection of Jones and Gifford Avenue and Fairmount Avenue, this park offers boat launches, scenic views of the River, and fishing opportunities among other non-water related amenities.

2) ***Jones Memorial Park*** – Located on either side of Jones and Gifford Avenue at the western boundary of the City, this park includes an informal path to the River on the north side of Jones and Gifford Avenue among other non-water related amenities.

3) ***Panzarella Park*** – Located adjacent to the BPU Electrical Generation facilities, this park is currently the terminus of the southern portion of Riverwalk, provides scenic views of the River, and provides limited fishing and boat docking opportunities among other non-water related amenities.

4) ***Keelboat Landing*** – Located on the north side of the River and east side of Main Street, this park provides scenic views of the River and limited fishing opportunities among other non-water related amenities.

5) ***Riverwalk Trail*** – Located on the south side of the River from Panzarella Park to Harrison Street and on the north side of the River from Keelboat Landing to several hundred feet beyond the Washington Street Bridge, this trail is greatly enhanced by the scenic views and fishing opportunities provided by the adjacent River (all of the above water-enhanced uses to be discussed in further detail in the *Recreation* section of this Report).

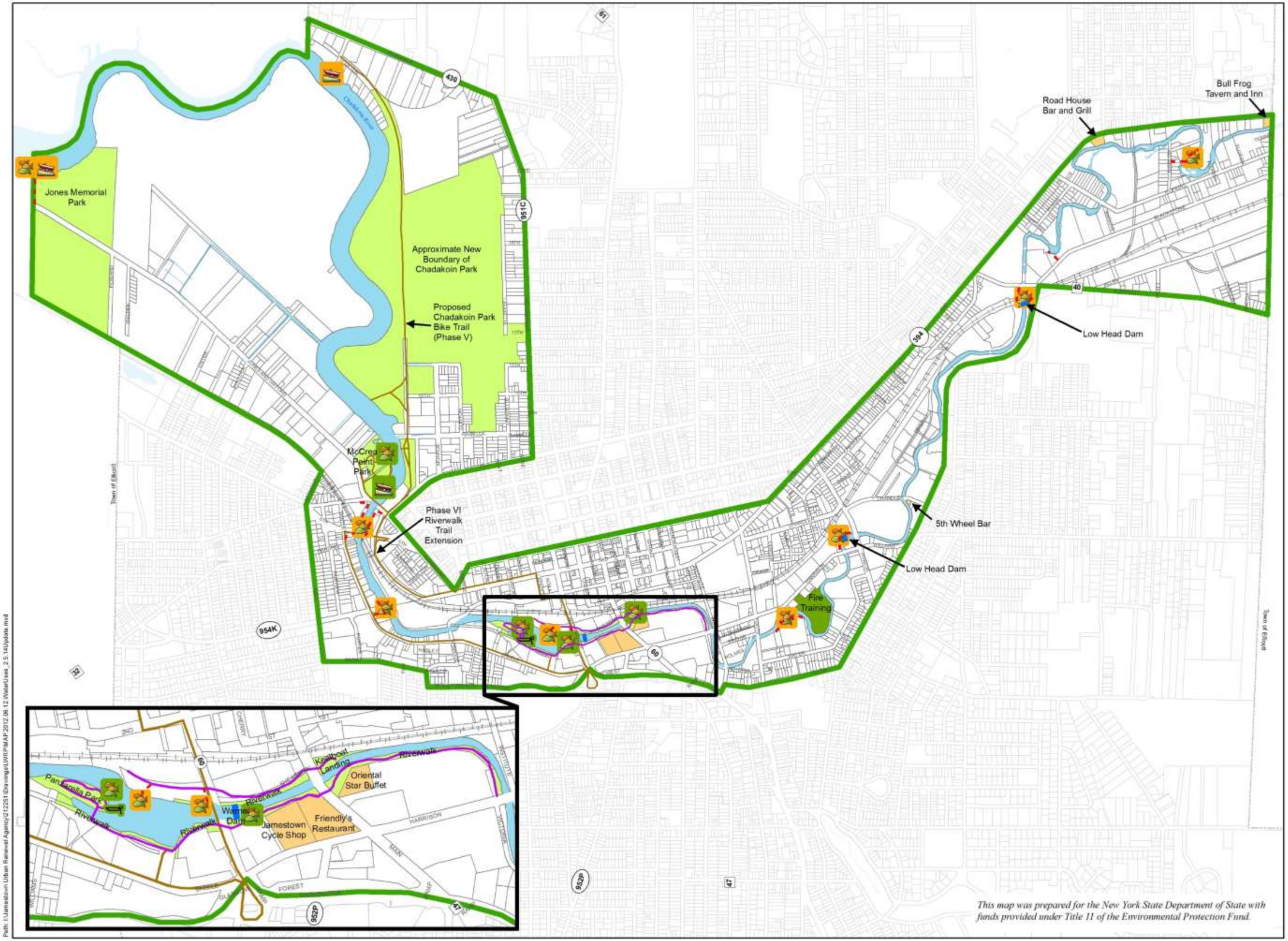
6) ***Chadakoin Park*** – Located to the east of the River, the park boundaries were recently modified and the park now has direct access to the River. Although no amenities have been developed yet following this recent change, the park will likely offer waterfront access in the near future.

Several restaurants and businesses including, but not limited to, the ***Jamestown Cycle Shop***, ***Friendly's Restaurant***, ***Oriental Star Buffet***, ***5th Wheel Bar***, ***Road House Bar and Grill***, and ***Bull Frog Tavern and Inn*** are located adjacent to the River; however, they do not currently take advantage of their waterfront location. These restaurants and businesses could easily become water-enhanced uses with minor improvements.

Two Riverwalk Trail extension projects have been funded and both will augment the overall trail network's status as a water-enhanced use. *Phase V of the Riverwalk Trail* (aka the ***Chadakoin Park Bike Trail***) will travel along a portion of the former Jamestown, Westfield and Northwestern Railroad right-of-way from West 8th Street to Clifton Avenue and potentially provide spurs to the River's edge. The project has been funded, designed, and is awaiting final NYSDEC permit approval. Construction is anticipated to begin in Spring/Summer 2014. *Phase VI of the Riverwalk Trail* was awarded funding in December 2013. Still in the preliminary design phase, this project includes:

- Improvements to Panzarella Park (resurface dock and improve pedestrian bridge)
- Construction of a connector trail from Riverwalk (east of the BPU) to Steele Street
- Creation of a branded and signed trail network loop which utilizes (and where needed removes and replaces) the existing sidewalk network along Steele, Washington, West 2nd, Lafayette, West 3rd, and West 6th Streets
- Construction of a connector trail and scenic vista from the eastern base of the 3rd Street bridge along the eastern edge of an existing guiderail (which provides separation from the Railroad), under the West 6th Street bridge to Fairmount Avenue and the trailhead of the proposed ***Chadakoin Park Bike Trail*** and along Fairmount Avenue to McCrea Point Park
- Construction of a stair system at the West 6th Street bridge (site control will be granted by NYSDOT) to connect the sidewalk trail network loop with the connector trail discussed above
- Creation of two parks along Steele Street at the base of West 3rd Street and West 6th Street which include playground equipment, picnic table, trash cans, scenic vistas, and potentially fishing opportunities
- Creation of a scenic vista along Steele Street several hundred feet west of Sprague Street
- Construction of the ***McCrea Point Trail System*** which will meander throughout the park and includes a 30-foot pedestrian bridge and repairs and upgrades to the existing boat launch and pavilion
- Connection to the County's ***Lucy Trail*** project

Both Riverwalk Trail extension projects will be discussed in further detail in the *Pedestrian and Bicycle Infrastructure* section of this Report.



LABELLA Associates, P.C.

300 STATE STREET
ROCHESTER, NY 14614
P (585) 454-6110
F (585) 454-3066

CITY OF JAMESTOWN

LOCAL WATERFRONT REVITALIZATION PROGRAM

Water Uses

- LWRP Study Area

Water Use Category

- Enhanced
- Dependent
- Site has potential to become Enhanced/Dependent
- Surface Water
- Dam (Dependent)
- Formal Boat Launch (Dependent)
- Formal Fishing Point (Dependent)
- Formal Boat Docking (Dependent)
- Formal Trail (Enhanced)
- Proposed Formal Trail Extension (Enhanced)
- Informal Boat Launch (Dependent)
- Informal Fishing Point (Dependent)
- Informal Trail (Enhanced)

Sources:
1. City of Jamestown Local Waterfront Revitalization Program Work Plan Map - Edited by LaBella to reflect steering committee revisions
2. Water use determined by LaBella based on aerial imagery, site visits, and stakeholder comments - in most cases parcel boundaries were utilized to depict water uses; however, only portions of parcels were utilized to represent Riverwalk and the various boat launches/fishing piers as current parcel boundaries do not accurately portray these uses.

0 1,000 Feet

1:15,000

Path: I:\Jamestown Urban Renewal Agency\212251\Drawings\LWRP\MAP 2012.06.12 WaterUses_2.5.14Update.mxd

Figure 12. Water Dependent and Enhanced Uses Map

2.3 SURFACE WATERS AND SURFACE WATER USES

Surface waters in the City of Jamestown LWRP Study Area include the Chadakoin River, a classified tributary, and numerous non-classified water bodies. The Chadakoin River is classified by the NYSDEC as a Class C stream, which identifies its best usage as supporting fisheries and suitable for non-contact activities. Water flows from Chautauqua Lake (located west of the Study Area) in an eastward direction along the River through the City of Jamestown. The Lake's water level is maintained through a combination of the River's shallow bedrock channel and by the Warner Dam. There is an approximate six-foot difference in surface water elevation above and below the dam.

Between the Lake Outlet and McCrea Point, the Chadakoin River is a broad, slow-moving river with fairly clear water. Once the River begins to narrow after McCrea Point, water clarity becomes poorer, although the River still exhibits the same, slow-moving nature. Once the River passes the Warner Dam it flows more freely and includes riffles and pools. However, the River is generally bound by some form of river walls, severely limited access to its floodplain.

Within the LWRP Study Area, only one tributary to the Chadakoin River is listed as a classified water body (Class C) by the NYSDEC, being a small piped tributary that enters on the right bank between Institute Street and Foote Avenue. Historically, numerous tributaries likely existed within the Study Area, but, based on the amount of industrialization in the River corridor, these tributaries would have been long ago piped and/or incorporated into the stormwater system.

Multiple man-made canals, drainage ditches, and other NYSDEC non-classified water bodies enter the Chadakoin River, mainly within the **Chadakoin Outlet District**.

MARINAS, DOCKS, AND BULKHEADS

The City does not possess a formal marina; however, numerous docks and bulkheads can be found throughout the LWRP Study Area as described below.

DOCKS

Private Docks along Clifton Avenue and Sprague Street – A number of private docks are located on the River above the Warner Dam. Six residences located along Clifton Avenue have installed docks along the northern riverbank. There is one additional private dock for one of the few residential properties located along Sprague Street, which is located along the south bank of the Chadakoin River.



(Left) Water patio at Clifton Avenue public access. (Center) Other docks along Clifton Avenue. (Right) Dock for residence along Sprague Street.

Docks at McCrea Point – McCrea Point is the City's best developed public waterfront access. Although the Riverwalk Trail affords walking and bicycling along the River and has amenities such as benches, tables and lighting, McCrea Point provides opportunities for contact recreation such as boating and fishing. There is one boat launch and dockage for approximately eight boats available for public use. The facility also has parking, playground equipment, a gazebo and restroom facilities. Additionally, the Chautauqua Lake Rowing Association maintains a boathouse at this location to house their racing shells/sculls.

Docks at Panzarella Park – Panzarella Park is an important node on the Riverwalk Trail. The Park is located directly behind the BPU Electrical Generation facility, and while the Park appears to be an island, it is actually an isthmus and is accessed by a single span bridge. The dock at Panzarella Park serves primarily as a platform from which to fish and enjoy the beauty of the Chadakoin River, but could also serve as a place to tie off small watercraft.



(Left) A view of the dock at McCrea Point from the Fairmount Avenue Bridge. (Center) Boat launch at McCrea Point. (Right) A view of the dock at Panzarella Park.

BULKHEADS

A long history of varying industrial uses on the Chadakoin River have led to the development of a heavily armored Riverbank and some dramatic changes in the site topography and associated drainage. Overall, the western portion of the Study Area is relatively flat and contains wetlands on both sides of the River. In this area, bulkheads are generally absent. As the Chadakoin River passes McCrea Point it

enters a highly commercial and industrial area with narrow riparian buffers and varying degrees of river walls. Concrete and stone walls, gabions, bulkheads, and building foundations dominate shorelines in this area. A number of these structures are in disrepair and present significant erosion hazards through potential failure. Several retaining walls were observed that had been undermined and were leaning into the River. There is minimal floodplain interaction within the reach below McCrea Point as the River is channelized in most instances below the adjacent land. Only in small narrow stretches does the River have access to narrow floodplains, with the majority of these areas concentrated in the eastern portion of the Study Area. The Ecological Conditions and Living Infrastructure Framework in Supporting Document 2 and the Inventory and Analysis of Transportation and Municipal Infrastructure Systems in Supporting Document 4 describe the presence and conditions of bulkheads along the River in greater detail.



(Left) Concrete retaining wall below the Warner Dam. (Center) Sheet pile wall below the Institute Street Bridge. (Right) Riprap under the 6th Street Bridge.



(Left) Stone riprap at Clifton Avenue. (Center) Concrete rubble at Buffalo Street. (Right) Stone riprap at the Sprague Street Bridge.



(Left) Riverside Industrial Center below the Foote Avenue Bridge. (Center) Steel pile and railroad tie armor off Allen Street and near River Street. (Right) Natural armor of roots below Hopkins Avenue Bridge.

VESSEL USE AND NAVIGATION

Vessel use along the portion of the Chadakoin River located within the Jamestown LWRP Study Area is dependent on both the navigation channels and the dams as described both below and within the Inventory and Analysis of Transportation and Municipal Infrastructure Systems in Supporting Document 4.

The City of Jamestown does not have local laws pertaining to navigation in the Chadakoin River. However, the boating speed limit within the channel between the lake outlet and McCrea Point is posted at 5 miles per hour by Chautauqua County under authority of the NYS Navigation Law. It is enforced by the Chautauqua County Sheriff's Office Marine Patrol.

NAVIGATION CHANNELS

Navigation within the Study Area is largely segmented into three regions: above McCrea Point, between McCrea Point and the Warner Dam, and below the Warner Dam. The following sections describe these portions of the River.

Above McCrea Point - The Chadakoin River channel or Chautauqua Lake Outlet between Chautauqua Lake and McCrea Point is navigable for most of the watercraft used in Chautauqua Lake today. Although aquatic vegetation can snarl propellers and plug cooling water intakes, all but the largest powerboats and deep keeled sailboats on the Lake can navigate this reach of the River. From a historical perspective, this reach of River was heavily traveled by the steamboats that once carried tourists and goods from McCrea Point to the numerous destinations along the Lake. Although the steamboats were commonly shallow draft vessels, they were driven by sternwheels and sidewheels that kicked up sediments and chopped aquatic vegetation as the steamboats churned their way up and down the River. Today a "5 mile per hour no wake zone" is enforced along this reach of the River in an effort to preserve the sensitive riverine wetland environment. Those that have traveled through this section of the River have enthusiastically described its outstanding scenic quality.





(Left) The Chadakoin River Channel as it enters the LWRP at Clifton Avenue. (Center) The sidewheel driven Colonel Phillips on Chautauqua Lake, circa 1875. (Right) The River channel at McCrea Point.

McCrea Point to the Warner Dam - The Chadakoin River channel between McCrea Point and the Warner Dam is generally navigable for small powerboats and manpowered recreational watercraft such as canoes and kayaks. The dual-arch filled concrete spandrel Fairmount Avenue Bridge is the gateway to this reach of the River. Low bridges along this section of the River significantly limit the height of boats that can navigate the area.

During the Stakeholder interviews it was noted that boating conditions on this reach of the River are strongly influenced by the operation of the Warner Dam. When the Dam is closed or releasing the NYSDEC-required minimum 60 cubic feet per minute of water downstream, the current is slow and the water elevation is stable; however, when the Dam gates are open and releasing greater quantities of water, the current is swift and the elevation of the water above the Dam quickly falls. This condition has the potential to strand boaters and create unforeseen hazards. Because this relatively narrow waterway is the sole conduit for the runoff from the 160-square-mile Chautauqua Lake Watershed, flow can increase significantly during prolonged periods of wet weather. The Warner Dam is a barrier that prohibits any watercraft from passing beyond this reach of the River. No formal portage for kayaks and canoes exists around the Dam.



(Left) The Chadakoin River Channel south of McCrea Point. (Center) The River channel south of the West 3rd Street Bridge. (Right) The River channel above the Warner Dam.

Below the Warner Dam – Below the Warner Dam, the Chadakoin River channel meanders through reticulated bends, under bridges, and over low head dams. Many of these low bridges, the low head dams, and the fact that many stretches of this section of the River are extremely shallow, present challenges to the safety of recreational watercraft and their occupants. Some sections of the River are completely channelized, while other sections, (primarily along the outside of the river bends) are armored with concrete walls, sheet pile walls and riprap. Several stormwater discharges are located along this reach of the River.





(Left) Plunge pool below the Warner Dam. (Center) The River channel above the South Main Street Bridge. (Right) The River channel along the Chadakoin River Trail at Brooklyn Square, where it once passed under the former Art Metal furniture manufacturing complex.

DAMS

Historically, dams were constructed on the Chadakoin River for industries, notably grist mills and sawmills, to harness the power of the water to run their plants. Most of these dams have since been removed, although a few dams are located within the City of Jamestown Waterfront Revitalization Area.

Warner Dam – The first Warner Dam was built to replace an older structure at this location in 1915. The river channel between McCrea Point and Chandler Street was also realigned as a part of this project. Historic engineering drawings archived at the offices of Greenman-Pederson, Inc. in Jamestown depict the design elements of the Dam and the alignment and profile of the new channel. The drawings indicated that sediments excavated from the new channel were deposited in spoil areas along the River and in the floodplain, which was developed with channels and races from the early mills. The map also depicted the channelization of the River under the former Art Metal facility and armor on the outside of the river bend at Institute Street. Interestingly, the drawings indicated that the dam increased the upstream elevation of the River by approximately two feet. This change would have had significant impacts on the wetlands located along the Chautauqua Lake Outlet and the navigability of the channel above the dam.

A new dam at this location was constructed in 1978 as a NYSDEC Flood Control Project. The Jamestown Board of Public Utilities (BPU) owns and maintains this new Warner Dam. The stated purpose of the Dam is to maintain the level of Chautauqua Lake at 1308.25 feet above sea level from May 1st through October 15th for recreational purposes; however, the Dam is ineffective at mitigating flooding around the Lake during periods of high rainfall and runoff due to the restricted River channel below McCrea Point. When wet weather is anticipated, the Dam gates are opened to drop the Lake level 1 to 2 inches per day to increase stormwater storage. When the Dam gates are opened, the water level in the outlet channel drops and the water velocity increases significantly. Small craft such as kayaks are

maneuverable enough to escape most hazards, but larger craft, such as motor boats or a water taxi could be endangered if present near the Dam when first opened.

One of the outcomes of the Stakeholder interviews and public participation process was that significant concern exists over the floating trash and debris which collects above the Warner Dam. The amount of trash can be significant, as 187 square miles of watershed exists above the Dam. This trash is flushed downstream as a result of normal operation of the Dam when the gates are opened to facilitate a drop in Lake levels.



(Left) Immediately upstream of the Warner Dam. (Center) Floating trash accumulation at the center gate. (Right) Floating trash accumulation off of Allen Street.

Former United Lumber Low Head Dam (Winsor Street) – This low head dam is located upstream of the Winsor Street Bridge and is a remnant of a former water powered manufacturing facility that has been demolished. The Dam's gate forms a plunge pool that is a popular fishing spot and is easily accessible by an informal trail that runs between Winsor and Harrison Streets. The Dam is located on a tight bend on the Chadakoin River, between the Harrison and Winsor Street Bridges and poses a hazard to the navigation of the River by small watercraft.



(Left) Plunge pool below the Former United Lumber Dam . (Center) Aerial view of the Dam. (Right) Spillway of the former United Lumber Dam.

Utility Crossing Low Head Dam (Buffalo Street) – This low head dam is located upstream of the Buffalo Street Bridge and is the result of a wastewater utility line crossing that is owned and maintained by the BPU. The Dam forms a plunge pool that is a popular fishing spot, accessible by informal trails that lead from Buffalo and Allen Streets. The Dam poses a hazard to the navigation of the River by small watercraft.



(Left) Plunge pool below the Utility Crossing Dam . (Center) View of the Dam from Buffalo Street. (Right) North riverbank at the plunge pool.

BRIDGES AND BRIDGE ABUTMENTS

Because the City of Jamestown developed on both sides of the Chadakoin River, a number of bridges have been constructed to connect the two sides of the City (for additional details see Supporting Document 4).

Fairmount Avenue Bridge –The Fairmount Avenue Bridge connects McCrea Point (on the River's right bank) to West 8th Street (on the River's left bank). The bridge's low clearance marks the southern limit at which power boats are practical on the Chadakoin River.

West 6th Street (NYS Route 394) and WNY&PA Railroad Bridge – NYS Route 394 is an important east – west transportation corridor in the City that provides linkages to commercial developments in the Village of Lakewood. This Bridge also carries NYS Bicycle Route 17 over the Chadakoin River. This Bridge is essentially a "flyover" with little to offer in terms of formal access with the waterfront, with exception of a good view of the River from the walkway that runs along the eastbound lane. Within the footprint of the West 6th Street Bridge is the WNY&P Railroad Bridge. This structure is a two-span plate girder bridge that formerly carried two sets of tracks, but now carries only one active track. Together, these two structures create an informal sheltered area along the waterfront that is a popular fishing spot.



(Left) Fairmount Avenue Bridge. (Center) WNY&PA Railroad Bridge pier and fishing spot. (Right) Under the West 6th Street Bridge.

West 3rd Street Bridge – An important east - west transportation corridor that links the eastern and western portions of the City together. It spans the Chadakoin River,

the WYN&P Railroad and Sprague Street. This structure is a "flyover" without formal access to the waterfront, with exception of a good view of the River from the walkway that runs along the eastbound lane.

Sprague Street Bridge – The former two span Sprague Street Bridge was demolished and the replacement (a single span bridge) was completed in 2012.





(Left) Aerial view of the West 3rd Street Bridge. (Center) Footprint of the West 3rd Street Bridge. (Right) Construction of the abutments for new Sprague Street Bridge.

Sprague Street Railroad Bridge and BPU Pipe Bridges – There are several structures that span the Chadakoin River in the vicinity of Sprague Street. The Sprague Street Railroad Bridge is an abandoned and unused through truss bridge with a pronounced skew. There has been discussion regarding demolishing the structure or repurposing the structure as a pedestrian bridge; however, it is of interest to the New York State Historic Preservation Office and would be very costly to move and rehabilitate. Its very existence is problematic to the BPU as a security concern and to the City as a public safety concern. There are also two pipe bridges that carry utilities from the BPU Electrical Generation facility to the north side of the River in this area. The first carries a six-inch high pressure natural gas line, which supplies the BPU's 43-megawatt, natural gas-fired cogeneration facility that was constructed in 2012. The second pipe bridge carries superheated hot water feed and return lines across the River to serve the BPU's district heat network. This bridge also carries unused cement-asbestos (Transite) conduits that formerly housed electrical primaries. These unused conduits are also hung along the concrete wall that armors the north side of the River in this location.





(Left) Sprague Street Railroad Bridge. (Center) Pipe Bridge carrying natural gas line. (Right) Pipe bridge carrying district heat and unused electrical conduits.

Panzarella Park Bridge - The City of Jamestown owns and maintains Panzarella Park, a small island park that is located in the Chadakoin River just to the north of the BPU Electrical Generating Station. Panzarella Park is connected to the south shore of the Chadakoin River and the Riverwalk Trail by a single span wood deck pedestrian bridge.

Washington Street Bridge – The recently replaced Bridge carries NYS Route 60 over the Chadakoin River, WNY&PA Railroad and Steele Street. NYS Route 60 is the busiest transportation corridor in Chautauqua County and it provides important linkages to I-86, I-90, and Pennsylvania, as well as an important connection between the northern and southern portions of the City. This structure is essentially a flyover; however, there is a right turn slip ramp that provides a connection with Steel Street, and a well executed pedestrian walkway that links Steel Street with the Riverwalk Trail. The Bridge also provides an excellent view of the River for pedestrians traveling on the walkway that runs along the southbound lane.

South Main Street Bridge - This attractive bridge provides significant aesthetic value to the historic Brooklyn Square area and the Riverwalk Trail. The bridge provides a pedestrian connection between the Riverwalk Trail and Keelboat Landing Park, as well as between the River and the City's downtown business district.





(Left) A view of the pedestrian bridge that links Panzarella Park to the Chadakoin Riverwalk Trail. (Center) Footprint of the Washington Street Bridge. (Right) South Main Street Bridge.

Harrison Street Bridge near Institute Street – The Harrison Street Bridge connects Brooklyn Square with Institute Street. There are two insulated pipes hung from the north side of the Bridge that are a part of the BPU District Heating system. Public access to the waterfront is very good at this location: the Riverwalk Trail begins near the Bridge on the north side of Harrison Street and continues northward along the west side of the Chadakoin River. This Bridge would provide for a natural extension of Riverwalk to the east.

Institute Street Bridge – The Institute Street Bridge is a single-span structure that is located at the apex of a near 180 degree bend in the Chadakoin River.

Foote Avenue Bridge – The Foote Avenue Bridge is a single span structure that carries Foote Avenue over the Chadakoin River. A wastewater pumpstation is located just south of the Bridge and water, wastewater and district heat utility lines are hung on the side of the Bridge.





(Left) BPU District Heat piping hung on the north side of the Harrison Street Bridge near Institute Street. (Center) Institute Street Bridge. (Right) Utility lines hung on the side of the Foote Avenue Bridge.

Harrison Street Bridge near Winsor Street – The Harrison Street Bridge near Winsor Street is a single span structure. Informal access to the waterfront for fishing is gained by a footpath that runs between Harrison and Winsor Streets and the dam/plunge pool located downstream of this location.

Winsor Street Bridge - The Winsor Street Bridge is a single span structure. Informal access to the waterfront for fishing is gained by a footpath that runs between Winsor and Harrison Streets and the dam/plunge pool located upstream of this location.

Chandler Street Bridge and Webber Knapp Pedestrian Bridge - The Chandler Street Bridge spans the Chadakoin River via a two-span structure. Water and wastewater utility lines are hung on the sides of the Bridge. The Webber Knap facility has an enclosed pedestrian bridge between its facility buildings that spans the River in this location. Public access to the waterfront is generally limited in this location by chain link fences that surround the Webber Knapp facility buildings and parking areas; however, access to the south side of waterfront is provided for Webber Knapp employees by a shaded picnic area located along a parking lot.





(Left) Harrison Street Bridge near Winsor Street. (Center) Winsor Street Bridge. (Right) Utility line hung in the north side of the Chandler Street Bridge.

Dawson Metals Bridge - There is a privately owned bridge off of Allen Street that provides access to the Dawson Metals manufacturing facility. This bridge provides vehicular access to one of Jamestown's larger employers; however, fire and emergency services providers are restricted from crossing the structure due to load bearing capacity.

WNY&PA Railroad Bridge Near Buffalo Street – The WNY&PA Railroad Bridge near Buffalo Street is a single span structure. The bridge formerly carried two separate sets of tracks; however, today only one track is used. A popular fishing spot is located south of the Bridge where the Chadakoin River passes over a low-head dam.





(Left) Enclosed pedestrian bridge at the Webber Knap facility. (Center) The privately owned bridge from Allen Street to the Dawson Metals facility. (Right) WNY&PA Railroad Bridge near Buffalo Street.

Buffalo Street Bridge and Dahlstrom Complex – The Buffalo Street Bridge is a single span structure. Utility lines are hung from the Buffalo Street Bridge. The Dahlstrom complex has a privately owned single span steel bridge that spans the River.





(Left) Buffalo Street Bridge – Dahlstrom building in background has recently been demolished. (Center) Channelization of the River as it passes under the remaining support structure of the recently demolished Dahlstrom complex. (Right) Privately owned bridge at the Dahlstrom complex.

Hopkins Avenue Bridge – The Hopkins Avenue Bridge is a two-span structure. There is a wastewater pumpstation located along the west side of Hopkins Avenue, north of the Bridge. Water and sewer forcemain lines are hung from the Bridge.

Tiffany Avenue Bridge – The Tiffany Avenue Bridge is a single span structure. Access to the waterfront could be facilitated in this location by clearing the brush around an existing set of concrete steps located at the northeast abutment of the Bridge.





(Left) Utilities hung on the Hopkins Avenue Bridge. (Center) Aerial view of the Tiffany Avenue Bridge. (Right) Concrete Steps to the River at the north-east abutment of the Tiffany Avenue Bridge.

UNDERWATER CABLES AND PIPELINES

A number of underwater utility crossings are located within the LWRP Study Area. These include:

- Electric
- Fiber Optic Cables
- Sanitary Force Mains
- Gravity Sanitary Sewers
- Water Lines
- District Heat

Figure 13 shows the approximate locations of these underwater utility crossings.

This page intentionally left blank.

GPI Greenman - Pedersen, Inc.
GPI Engineering and Surveying, LLP
200 Harrison Street, Jamestown, NY 14701
Phone: 716-488-2803 Fax: 716-488-2802

CITY OF JAMESTOWN

CHADAKOIN RIVER REVITALIZATION STUDY

PIPELINES AND CABLE RIVER CROSSINGS

Legend

EL = ELECTRIC
FOC = FIBER OPTIC CABLE
FM = SANITARY FORCE MAIN
G SAN = GRAVITY SANITARY SEWER
WL = WATERLINE
DH = DISTRICT HEAT

1 FAIRMOUNT AVE.
EL, 12" G SAN, 16" WL
2 BETWEEN FAIRMOUNT & 8th STREET
18" FM
3 SPRAGUE STREET
EL, FOC, 18" G SAN, 10" WL
4 EAST OF SPRAGUE STREET
8" DH
5 SOUTH MAIN STREET
EL, 10" G SAN, 10" WL
6 HARRISON ST. @ INSTITUTE ST.
EL, 12" DH, 36" G SAN, 16" WATERLINE
7 INSTITUTE STREET
6" WL
8 FOOTE AVENUE
EL, FOC, 5" DH, 18" & 8" G SAN, 6" WL
9 EAST OF FOOTE AVENUE
EL
10 HARRISON ST NEAR WINSOR ST
EL, FOC, 5" DH, 16" WL
11 WINSOR STREET
16" WL
12 CHANDLER STREET
EL, FOC, 24" G SAN, 6" WL
13 RIVER STREET
32" G SAN
14 ALLEN ST @ DAWSON METAL
42" G SAN
15 ALLEN ST SOUTH OF RAILROAD
42" G SAN
16 BUFFALO STREET
EL, FOC, 8" G SAN, 2-16" WL
17 HOPKINS AVENUE
12" FM
18 TIFFANY AVENUE
FOC

0 1,500 Feet
1:18,000

Sources:
1. Original BOA Shapefiles provided by the City of Jamestown - Edited by LaBella to reflect steering committee revisions.
2. City of Jamestown Local Waterfront Revitalization Program Work Plan Maps - Edited by LaBella to reflect steering committee revisions
3. Original BOA Shapefiles provided by the City of Jamestown - Edited by LaBella to reflect steering committee revisions
4. Gravity Main and Force Main sewer layers provided by the BPU

This map was prepared for the City of Jamestown, the Jamestown Urban Renewal Agency, and the New York State Department of State with funds provided through the Brownfield Opportunity Areas Program and under Title II of the Environmental Protection Fund.

Figure 13. Pipelines and Cable River Crossings Map

2.4 PUBLIC ACCESS AND RECREATION

River access in Jamestown is mixed: in certain reaches the banks are gentle and access is reasonable, while in others, steep topography discourages pedestrian access. These conditions make pedestrian/bike linkages between the River and surrounding neighborhoods difficult. As a result, waterfront access is limited throughout the LWRP Study Area as described below.

PUBLIC ACCESS

As described in previous sections, formal access to the River for fishing opportunities and scenic views are afforded by Jones Memorial Park, McCrea Point Park, Panzarella Park, Riverwalk, and Keelboat Landing. Soon, the proposed Phase V (*Chadakoin Park Bike Trail*) and Phase VI Riverwalk Trail extension projects and the new Chadakoin Park boundary (which includes waterfront property) will also provide fishing opportunities and scenic views. McCrea Point Park provides the only formal public boat launch. All of these areas of formal River access are located within the **Chadakoin Outlet District** and the **Downtown District**. No formal River access points are located within the **Industrial Heritage Corridor** or the **East End Industrial Corridor**.

As a response to the limited number of avenues of formal River access, the public has created numerous informal access points throughout the LWRP Study Area (see Figure 12). These informal access points include (by sub-area):

- **Chadakoin Outlet District** – an informal boat launch and fishing opportunities at Jones Memorial Park and an informal boat launch off of Clifton Avenue
- **Downtown District** – informal trails to access fishing opportunities under the shelter of the West 6th Street and WNY&PA Railroad Bridges (three informal trails to this location from Fairmount Avenue along the east side of the River and Old Trolley Building, from Fairmount Avenue along the west side of the River, and from Steele Street along a footpath that begins at a small parking area near the southwestern bridge abutment); along the Third Street Bridge from Steele Street; west of and under the Washington Street bridge on the north side of the River; behind the Gateway Center located on Water Street; and near the former United Lumber low head dam between Harrison Street and Winsor Street
- **Industrial Heritage Corridor** – informal trails to access fishing opportunities near the utility crossing low head dam from Buffalo Street and Allen Street

- **East End Industrial Corridor** – informal and private trails for exercise and to access fishing opportunities located along the River on the north side of Blackstone Avenue behind the Dahlstrom Building; behind the Hope's Windows Complex near the Hopkins Avenue Bridge (private); and through vacant parcels located off the east side of Bigelow Avenue. Access could easily be facilitated by clearing the brush around an existing set of concrete steps located at the northeast abutment of the Tiffany Avenue Bridge.

RECREATION

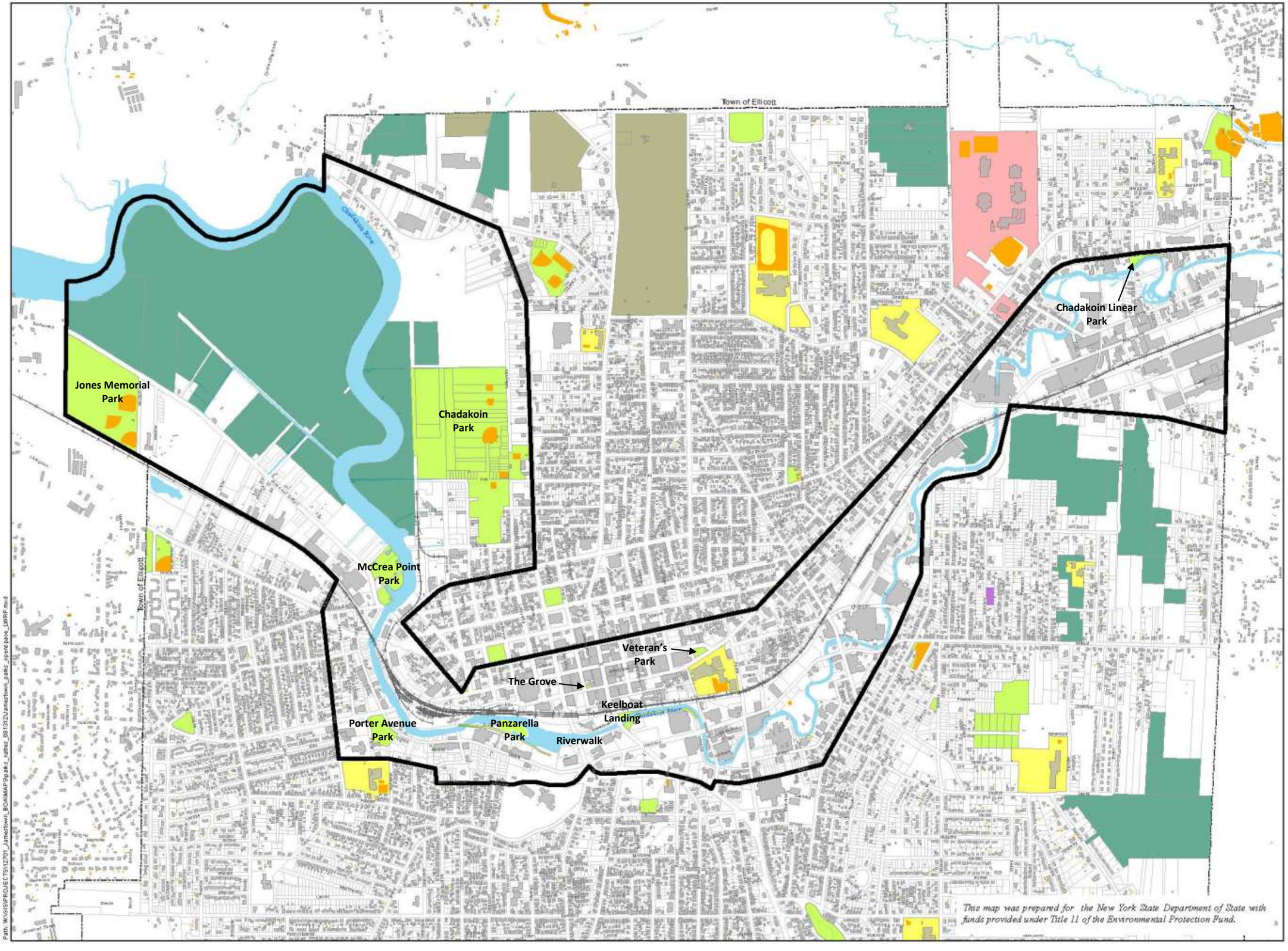
Recreational opportunities for the public are clustered in the **Chadakoin Outlet District** and the **Downtown District**. These public recreational locations are described below and shown in Figure 14:

Jones Memorial Park is a 60-acre park located on both sides of Jones and Gifford Avenue at the western City limits. The section north of Jones and Gifford Avenue is undeveloped, extremely marshy, and largely inaccessible save a small informal trail which connects to the River providing fishing opportunities, an informal location for launching kayaks and canoes, and scenic views. The section south of Jones and Gifford Avenue contains three softball fields and restrooms.

Chadakoin Park is a 152-acre park located off of Washington Street. The park includes a baseball field, softball fields, basketball courts, picnic shelters, playground equipment, a skateboard park, restrooms, and acres of open space. The boundaries of the park recently changed via an alienation process through New York State, which allowed the exchange of a portion of the park (which was being used by the City's Department of Public Works to store demolished construction material) for three parcels along the River, resulting in direct access to the River from the Park.

McCrea Point Park is a 5.6-acre park located northeast of the intersection of Jones and Gifford Avenue and Fairmount Avenue. This park offers boat launches, scenic views of the River, fishing opportunities, picnic pavilions, and playground equipment.

Porter Avenue Park is a 2.9-acre park located on the hillside between Porter Avenue and Steele Street. Historically, this park included a switchback trail system connecting the southern residential neighborhoods located on the hill down to the River. These trails are no longer formally maintained; however the public's continual use has created informal foot paths down to the valley floor. Currently the park is dominated by forested land.



Biohabitats

CITY OF JAMESTOWN

LOCAL WATERFRONT REVITALIZATION PROGRAM

PARKS & OPEN SPACE

- LWRP Study Area
- Recreational Area
- Cemetery
- College/University
- Municipal Park
- Open Space
- Playground
- School

Sources:
1. City of Jamestown Local Waterfront Revitalization Program Work Plan Map - Edited by LaBella to reflect steering committee revisions
2. Open space designations extracted from Parcels data layer
3. Wetland and Surface Water layers provided by Chautauqua County
4. Recreation Area layer provided by the BPU

N

0 1,000 Feet

1:16,000

Figure 14. Parks and Open Space Map

Panzarella Park is a 1.2-acre park located adjacent to the BPU Electrical Generation facilities. This park is currently the western terminus of the southern portion of Riverwalk and provides scenic views of the River, limited fishing opportunities, limited docking opportunities, and picnic facilities.

Keelboat Landing is a 0.4-acre park located on the north side of the River and east side of Main Street. This park is the eastern terminus of the northern portion of Riverwalk and provides scenic views of the River, limited fishing opportunities, and picnic facilities.

Riverwalk is a linear trail located on the south side of the River from Panzarella Park to Harrison Street (0.7 mile) and on the north side of the River from Keelboat Landing to several hundred feet beyond the Washington Street bridge (0.4 mile). This trail provides scenic views of the River, fishing opportunities, and opportunities for active forms of transportation (including walking, jogging, skating, and biking).

The Grove is a 0.08-acre pocket park located at East 2nd Street and Cherry Street. The park includes a picnic area and game tables.

Veteran's Park is a 0.4-acres park located at the intersection of East 2nd Street and East 3rd Street. The park includes the Veteran's Memorial.

Chadakoin Linear Park is a 0.7-acre site located between East 2nd Street and the River across from Wendy's. It is the only formal parkland located within the LWRP Study Area yet outside of the **Chadakoin Outlet District** and the **Downtown District**; however, the site is heavily wooded, extremely steep, and public use of the park is minimal.

2.5 HISTORIC AND CULTURAL RESOURCES

Despite its rich history, the City of Jamestown only contains six sites listed in the National Register of Historic Places. Of these, three are within the LWRP Study Area as shown in Figure 15.

- ***The Wellman Building***, located at 101-103 West Third Street, is currently in the final stages of restoration and will hold commercial space on the ground floor with a mixture of apartment styles in the upper floors. It was originally built in 1897 with a masonry bearing wall structure. An addition was built in 1910 with a steel frame structure. Both the original building and the addition were built in the Renaissance Revival style and were designed by Aaron Hall & Son of Jamestown, NY. The building was added to the National

Register of Historic Places in 2009 as its architecture embodies the distinctive characteristics of the time period it was built and as it is a rare and surviving example from a prominent and locally significant architect.

- ***The Erie Railroad Station***, located at 211-217 West Second Street, was recently restored and includes public spaces (including a visitor center) and commercial/retail space that are currently available for lease. The station was constructed in 1931-1932 for the Erie Railroad in a modern / art deco style. In 1960, it was passed on to Erie Lackawanna and served as a station for the railroad's long distance trains. The station has not been utilized by a train since 1970. The building was added to the National Register of Historic Places in 2009 as its architecture embodies the distinctive characteristics of the time period it was built and as its association with railroad transportation played such an important role in the growth and development of the City.

  The City, in collaboration with the Lucy Desi Center for Comedy, has recently begun preliminary plans and designs to use ***the Erie Railroad Station*** and several adjoining parcels to create the *National Comedy Center*. The *Comedy Center* would include exhibits to learn about comedians from the past and both indoor and outdoor performance space to watch current and up-and-coming comedians. The *National Comedy Center* would greatly promote Jamestown's tourism industry and act as a catalyst for the redevelopment of Jamestown's waterfront (to be discussed in further detail in the *Proposed Projects* section of this Report).

- ***The Jamestown Armory***, located at 34 Porter Avenue, is currently occupied by Troop B, 2nd Squadron 101st Cavalry. It was built in 1932 in the Tudor Revival-style for Company E, 174th Infantry Brigade. It was designed by State architect William Haugaard. The building was added to the National Register of Historic Places in 1995 as it is architecturally and historically significant as a representative example of an early twentieth century armory built to house a local unit of the New York Army National Guard.

The Fenton History Museum and Research Center (registered as the Governor Reuben Fenton Mansion in the National Register of Historic Places) is located just outside of the LWRP Study Area. Many other important historic buildings, not included in the National Register of Historic Places, are protected through the City's Historic Preservation Overlay District as discussed previously in the *Zoning and Other Land Use Regulations* section of this Report and depicted on Figure 7.

Additionally, the City of Jamestown has a Historical Marker Program. Nearly 50 Historic Markers are located at important sites throughout the City and explain

Jamestown's unique local history. Over 30 of these Historic Markers are located in the LWRP Study Area.

The Fenton History Museum and Research Center also created a self-guided walking tour brochure which provides a map and route to explore Jamestown's architecture, museums, outdoor sculptures, and public art. Twenty-three culturally and historically important sites are included on the tour. Sixteen of these sites are located within the LWRP Study Area.

Also shown in Figure 15, are Archeological Sensitivity Areas identified by the NYS Office of Parks, Recreation, and Historic Preservation indicating where the discovery of archeological sites is predicted. These areas include the northern and southern portions of the **Chadakoin Outlet District**, the western portion of the **Downtown District**, the eastern portion of the **Industrial Heritage Corridor**, and the entire **East End Industrial Corridor**. Archaeologically Sensitive Areas are defined as the location of past focused human activities, defined in close proximity of continuous distribution of artifacts. The State Historic Preservation Office (SHPO) should be consulted prior to any ground disturbing or excavation within these sensitive areas.

SCENIC RESOURCES

In many places, the view of the River is limited due to vegetation and/or topography. However, certain segments of the River offer fabulous views. The following sections describe notable scenic locations along the various reaches of the River and are depicted in Figure 16:

- **Chadakoin Outlet District** – This area is characterized by areas open in nature with views of the wetland and some detrimental views of post industrial lands. Typical viewers are boaters, public park (McCrea Boat Landing) users, and motorists. Notable scenic locations include:
    - Within the channel between the outlet and McCrea Point Park (boaters only)
    - From McCrea Point Park and the Fairmount Avenue Bridge
- **Downtown District** – The western portion of the area has only limited views due to the steep topography, while the more westerly portions offer better views owing to a broader, flatter, flood plain. There are several good opportunities in the public domain to gain a sweeping view of this area.
    - Under the West 3rd Street Bridge
    - Panzarella Park

- Along the Riverwalk
- Washington Street Bridge
- Main Street Bridge
- Keelboat Landing Park
- Harrison Street Bridge and along Institute Street
- Institute Street Bridge

- **Industrial Heritage Corridor** – Access to the River is limited due to the presence of a number of privately owned properties, steep topography, the railroad, and dense vegetation. In this area, views of the River are essentially limited to the following bridges:
  - Winsor Street Bridge
  - Chandler Street Bridge
  - Buffalo Street Bridge

- **East End Industrial Corridor** – As with the Industrial Heritage Corridor, access to the River in this area is limited due to the presence of a number of privately owned properties, steep topography, the railroad, and dense vegetation. In this area, views of the River are essentially limited to the Hopkins and Tiffany Avenue Bridges.



(Left) View south from the Fairmount Avenue Bridge. (Center) View from under the West 3rd Street Bridge. (Right) View from the Riverwalk Trail towards the South Main Street Bridge.



(Left) View north from the Harrison Street Bridge near Institute Street. (Center) View north from the Harrison Street Bridge near Winsor Street. (Right) View east from the Winsor Street Bridge.





(Left) View south from under the WNY&PA Railroad Bridge near Buffalo Street. (Center) View south from the Buffalo Street Bridge. (Right) View west from the Tiffany Avenue Bridge.

In general, the City possesses many unsightly industrial, commercial, and abandoned properties along and/or near the waterfront. Scenic views of the River would improve if these sites were properly screened and/or cleaned up. The following list includes *examples of sites* which, if properly screened and/or cleaned up, would improve the overall aesthetics of the waterfront (see Figure 16):

- **Chadakoin Outlet District** –
    - Properties near Chadakoin Park, primarily along Monroe and Clinton Streets, that are prone to illegal dumping should be cleaned up and access should be limited
- **Downtown District –**
    - The Weitsman Scrap Yard should be properly screened from the River and the Chadakoin Park Bike Trail
    - The Trolley Building should be demolished and the site cleaned up
    - Portions of the Lennox property near the River should be cleaned up
- **Industrial Heritage Corridor –**
    - Abandoned / highly underutilized properties along River Street should be cleaned up and/or demolished and prepared for shovel ready sites
    - The vacant parking lot on Allen Street (which is often used by the City for dumping lawn and other landscaping debris) should be cleaned up
- **East End Industrial Corridor** – Most properties in this sub area are well maintained. The limited amount of scenic views results from the presence of a number of privately owned properties, steep topography, and dense vegetation along the length of the River rather than from an abundance of unattractive and derelict sites. Increasing the number of scenic views along

this stretch of the River will most likely only occur through agreements between private property owners and the City to allow public access along the waterfront at appropriate locations such as:

- Through the Dahlstrom Complex
- Behind the Hope's Window Complex (near Hopkins Avenue)
- Vacant parcels located off the east side of Bigelow Avenue

LABELLA Associates, P.C.

CITY OF JAMESTOWN

LOCAL WATERFRONT REVITALIZATION PROGRAM

Historic and Archeologic Resources

LWRP Study Area

Historic & Archeologic Resources

National Register Historic Place

Archeological Sensitive Area

Sources:
1. City of Jamestown Local Waterfront Revitalization Program Work Plan Map - Edited by LaBella to reflect steering committee revisions
2. National Register of Historic Places and Archeological Sensitive Areas digitized from NYS Historic Preservation Office online mapping tool

0 1,000 Feet

1:15,000

Euclid Avenue School

The Wellman Building

The Erie Railroad Station

The Jamestown Armory

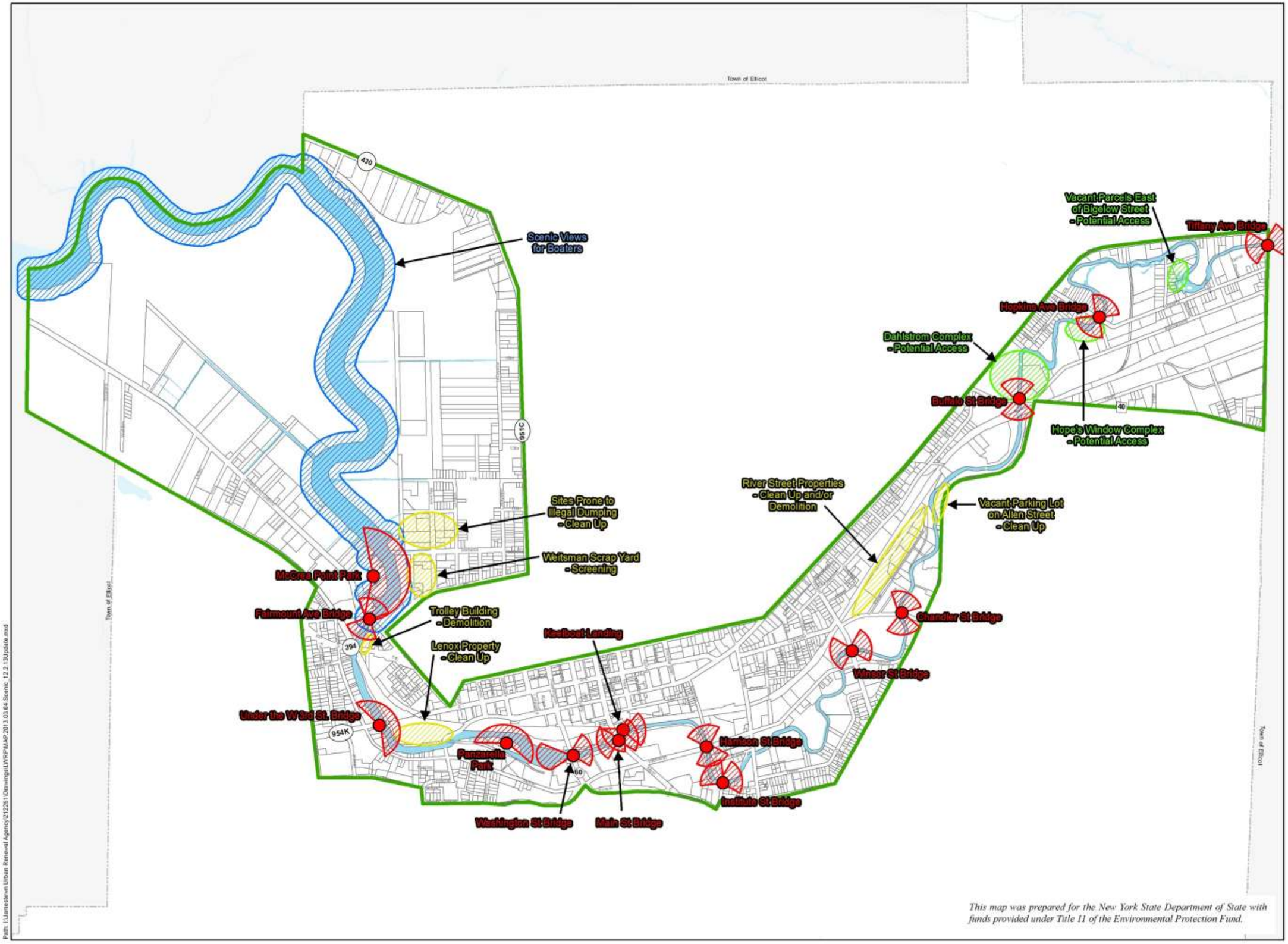
Governor Reuben Fenton Mansion

Partridge-Sheldon House

Town of Ellicott

This map was prepared for the New York State Department of State with funds provided under Title 11 of the Environmental Protection Fund.

Figure 15. Historic and Archeologic Resources Map



This map was prepared for the New York State Department of State with funds provided under Title 11 of the Environmental Protection Fund.

LABELLA Associates, P.C.

300 STATE STREET
ROCHESTER, NY 14614
P (585) 454-6110
F (585)454-3066
www.labellapc.com

CITY OF JAMESTOWN

LOCAL WATERFRONT REVITALIZATION PROGRAM

Scenic Resources

LWRP Study Area

Scenic Views

- Views Afforded by Boats Only
- Views Afforded by Vehicles and Pedestrians
- Unattractive and/or Derelict Sites which Detract from Scenic Views
- Private properties which should be approached by the City regarding the possibility of allowing public access to the waterfront

Sources:
1. City of Jamestown Local Waterfront Revitalization Program Work Plan Map - Edited by LaBella to reflect steering committee revisions
2. Scenic Views determined through field work and consultation with the City.

0 1,000 Feet

1:15,000

Figure 16. Scenic Resources Map

2.6 PUBLIC INFRASTRUCTURE

The City of Jamestown's early development and rich industrial heritage has resulted in the creation of a complete infrastructure system that services the entire LWRP Study Area. As described below (and in further detail in Supporting Document 4: Inventory and Analysis of Transportation and Municipal Infrastructure Systems), the infrastructure is in good shape although it is underutilized due to population and employment losses that have occurred over the past few decades.

WATER SUPPLY

The Board of Public Utilities (BPU) was created in 1923 to own and operate the City's potable water infrastructure. Currently, the BPU provides potable water to approximately 48,000 people in the City of Jamestown and the Villages of Falconer, Lakewood and Celoron, along with parts of the Towns of Ellicott, Busti and North Harmony. The potable water system is supplied from raw water pumped from aquifers in Cassadaga and Levant. There are two water storage reservoirs in the City: the 10-million gallon capacity English Hill Reservoir and the 1.5-million gallon capacity Buffalo Street Reservoir. Water is provided throughout the LWRP Study Area by an extensive water distribution network. The system is relatively old but has been well maintained. Waterline breaks occur occasionally, but not at a higher frequency than expected for a system of its age and type of construction. Because the water system was designed to serve a larger population than what exists today in the City, there is additional capacity for new development in the Study Area; however, proposed developments that may require unusually high volumes of potable water should be evaluated on a case by case basis. The potable water distribution system within the LWRP Study Area is shown on Figure 17.

WASTEWATER DISPOSAL

Like many communities that had busy waterfronts in the 1800s, Jamestown's wastewater and stormwater simply flowed back to the waterfront. The earliest reference to a sanitary sewer system within the City indicates that the use of a formal wastewater disposal system began at the corner of Sprague and West Second Streets in April, 1893.

The original system discharged into the Chadakoin River approximately three miles east of the City line. By the 1920s, Jamestown had its first wastewater treatment plant. The original plant was replaced by a more advanced facility located in Falconer, New York in 1956. The plant was expanded in 1966 to provide secondary

treatment, and again in 1983 when tertiary treatment capabilities were constructed. The plant is currently permitted to discharge 12,000,000 gallons per day into Cassadaga Creek, which flows into the Chadakoin River downstream of Jamestown. As with the potable water system, the wastewater collection and treatment system is old but has been well maintained. Because the wastewater collection and treatment facilities were designed and constructed to serve a larger population than what exists today in the City, there is additional capacity for new development in the LWRP Study Area: however, proposed developments that may require pretreatment or unusually large loadings at the wastewater treatment plant should be evaluated on a case by case basis.

STORMWATER RUNOFF AND STORM DRAINAGE

The City of Jamestown is too small to meet the State threshold for a Municipal Separate Storm Sewer System (MS4) so therefore MS4 regulations do not apply. Additionally, the vast majority of the existing development predates current stormwater regulations. Although current NYSDEC and USEPA stormwater regulations and design criteria are incorporated into the City's site plan review process, there is very little new development in Jamestown in which these regulations and criteria are implemented. As a result, the majority of stormwater is discharged to the LWRP Study Area with little or no treatment. Jamestown is largely "built-out" with a high percentage of impervious surfaces. When rain is not allowed to infiltrate into the ground two problems are created. The first is a high flow of stormwater runoff into street storm sewers and ultimately nearby streams, often overwhelming collection facilities and resulting in accelerated erosion and flooding. The second is a phenomenon called first flush, which refers to the idea that the stormwater which initially runs off an area will contain higher pollutant loads/concentrations than subsequent stormwater generated for a prolonged rain event. This can be important for stormwater management as first flush collection systems can be employed to capture and isolate this most polluted runoff, with subsequent runoff being diverted directly to the stormwater system.

Stormwater was once combined with wastewater, but today is separate. Stormwater is collected from the streets, basement drains and roof gutters by laterals and trunk lines, which in turn discharge into the Chadakoin River or associated wetlands. In some cases, open channels have been excavated in the wetland areas beyond the outfalls to facilitate drainage. Although the City's stormwater collection system is old and not completely mapped, it is fairly well understood.

GPI Greenman - Pedersen, Inc.
GPI Engineering and Surveying, LLP
200 Harrison Street, Jamestown, NY 14701
Phone: 716-488-2803 Fax: 716-488-2802

CITY OF JAMESTOWN

CHADAKOIN RIVER REVITALIZATION STUDY

WATER MAINS WITHIN LWRP STUDY AREA

Legend

PIPEDIAMET, Material

- 1, Copper
- 1, Iron
- 1, Galvanized
- 1.25, Copper
- 1.5, Copper
- 1.5, Unknown
- 1.5, Iron
- 2, Galvanized
- 2, Cast
- 2, Copper
- 2, Unknown
- 2, Iron
- 3, Cast
- 3, Iron
- 4, Plastic
- 4, Cast
- 4, Ductile
- 4, Unknown
- 6, Ductile
- 6, Cast
- 6, Unknown
- 6, Iron
- 8, Unkown
- 8, Cast
- 8, Ductile
- 8, Iron
- 10, Ductile
- 10, Cast
- 12, Cast
- 12, Ductile
- 14, Cast
- 16, Ductile
- 16, Iron
- 16, Cast
- 24, Cast

0 1,000 Feet
1:15,000

Sources:
1. Original BOA Shapefiles provided by the City of Jamestown - Edited by LaBella to reflect steering committee revisions.
2. City of Jamestown Local Waterfront Revitalization Program Work Plan Maps - Edited by LaBella to reflect steering committee revisions
3. Original BOA Shapefiles provided by the City of Jamestown - Edited by LaBella to reflect steering committee revisions
4. Water Main layer provided by the BPU

This map was prepared for the City of Jamestown, the Jamestown Urban Renewal Agency, and the New York State Department of State with funds provided through the Brownfield Opportunity Areas Program and under Title II of the Environmental Protection Fund.

Figure 17. Water Mains Map

The City uses a variety of stormwater inlets; however, the City standard is a cast in place design with a large sump for collecting gravel, silt and debris. The design features a cast iron cover that provides easy access for cleaning by City DPW crews. Below are photographs of some of the different stormwater inlets that are observed in the Study Area.





(Left) Stormwater inlet in the Dahlstrom parking lot. (Center) City of Jamestown standard stormwater inlet at parking lot along Harrison Street. (Right) Cast iron stormwater inlet on Institute Street.

The stormwater collection and piping system as well as the stormwater outlets are constructed from a variety of materials. The materials and applications vary greatly, depending upon the age of the piping. Below are photographs of some of the different stormwater outlets that are observed in the Study Area.





(Left) Stormwater discharge near Allen St. (Center) Stormwater discharge from Steele St. (Right) Stormwater discharge above Foote Ave.





(Left) Stormwater outlet at Foote Ave. (Center) Stormwater outlet at Institute St. (Right) Dual stormwater outlets near the Washington St.

SOLID WASTE DISPOSAL

The BPU's Solid Waste Division collects solid waste throughout the LWRP Study Area.

The BPU has an established recycling program for glass, metals, plastic, paper and cardboard. There is also a household hazardous waste disposal program offered to BPU customers sponsored by Chautauqua County twice per year.

The solid waste is in turn taken to the Ellery Landfill, located at 3889 Towerville Road in Ellery, New York, approximately 12 miles from the Study Area. Chautauqua County owns and operates this solid waste disposal facility, which also accepts solid waste from other municipalities outside of the County at a higher rate. This preferential rate structure provides an economic advantage to businesses that are located within Chautauqua County and the City of Jamestown.

TRANSPORTATION SYSTEMS

The Study Area and City of Jamestown as a whole are served by multiple transportation systems. These include water (as previously discussed in the *Vessel Use and Navigation* section of this Report), vehicular, transit, rail, pedestrian/bicycle, and parking systems as described below.

VEHICULAR

The Study Area is served with a well-developed network of roadways as described below and depicted in Figure 18.

There are two primary routes (consisting of multiple roadways) that traverse the Study Area and are generally parallel to the Chadakoin River. On the north side of the Chadakoin River, the Study Area can be traversed in an east to west direction by traveling segments of NYS Route 394 (East 2nd Street), East and West 3rd Streets, Fairmount Avenue, West 8th Street, Washington Street and NYS Route 430 (Fluvanna Avenue). Each roadway segment and its NYSDOT Functional Classification are identified below (Table 18).

GPI Greenman - Pedersen, Inc.
GPI Engineering and Surveying, LLP
200 Harrison Street, Jamestown, NY 14701
Phone: 716-488-2803 Fax: 716-488-2802

CITY OF JAMESTOWN

CHADAKOIN RIVER REVITALIZATION STUDY

VEHICLE CIRCULATION SYSTEM WITHIN LWRP STUDY AREA

Legend

- CONNECTORS & FLY OVERS
- NORTH SIDE VEHICULAR CORRIDOR
- SOUTH SIDE VEHICULAR CORRIDOR

0 1,500 Feet

1:18,000

Sources:
1. Original BOA Shapefiles provided by the City of Jamestown - Edited by LaBella to reflect steering committee revisions.
2. City of Jamestown Local Waterfront Revitalization Program Work Plan Maps - Edited by LaBella to reflect steering committee revisions
3. Original BOA Shapefiles provided by the City of Jamestown - Edited by LaBella to reflect steering committee revisions

This map was prepared for the City of Jamestown, the Jamestown Urban Renewal Agency, and the New York State Department of State with funds provided through the Brownfield Opportunity Areas Program and under Title II of the Environmental Protection Fund.

Figure 18. Vehicle Circulation Map

Table 18. Functional Classification of Roads North of the River

Street Name	NYSDOT Functional Classification
NYS Route 394 (West 2nd Street)	Principal Arterial
East 3rd Street	Local Street
West 3rd Street	Minor Arterial
Fairmount Avenue	Local Street and Minor Arterial
West 8th Street	Local Street
Washington Street	Minor Arterial
NYS Route 430 (Fluvanna Avenue)	Minor Arterial

Source: New York State Department of Transportation

On the south side of the Chadakoin River, the Study Area can be traversed by traveling in a west to east direction on Jones and Gifford Avenue, Fairmount Avenue, West 6th Street, Steel Street, Harrison Street and Allen Street. This southern route through the Study Area briefly crosses to the northern side of the Chadakoin River via the Fairmount Avenue Bridge and back to the southern side via the West 3rd Street Bridge. The route again crosses to the northern side and back to the southern side of the Chadakoin River via two bridges on Harrison Street. Each roadway segment and its NYSDOT Functional Classification are identified below (Table 19).

Table 19. Functional Classification of Roads Primarily South of the River

Street Name	NYSDOT Functional Classification
Jones and Gifford Avenue	Urban Minor Arterial
Fairmount Avenue	Urban Principal Arterial
West 6th Street	Urban Minor Arterial
Steele Street	Urban Collector
Harrison Street	Urban Minor Arterial and Urban Collector
Allen Street	Urban Collector

Source: New York State Department of Transportation

There are twelve routes that traverse the Study Area that are generally oriented in a perpendicular manner to the Chadakoin River. By their perpendicular nature, these routes have bridges, both large and small scale, which cross the Chadakoin River, the WNY&PA railroad, and (in some cases) additional roads (as previously described in the *Bridges and Bridge Abutments* section of this Report).

Of these twelve routes that traverse the Study Area, three routes include large scale, multi-span bridges and approaches that carry traffic over the Chadakoin River, the WNY&PA railroad and local streets, but do not provide a direct connection to

the waterfront. The term "flyover" is frequently used to describe structures of this nature. These three routes include:

- **Washington Street (NYS Route 60)** – The busiest transportation corridor in Chautauqua County links I-86 and I-90 to the north and Pennsylvania to the south and provides an important connection between the northern and southern portions of the City. This highway has the NYSDOT Functional Classification of Urban Principal Arterial.

- **West 6th Street (NYS Route 394)** – An important east-west transportation corridor in Jamestown that provides linkages to commercial developments in the Village of Lakewood and the western portion of the City. This highway has the NYSDOT Functional Classification of Urban Principal Arterial.

- **West 3rd Street (NYS Route 954K)** – An important east - west transportation corridor that links the eastern and western portions of the City together. This highway has the NYSDOT Functional Classification of Urban Minor Arterial.



(Left) A comparison of the footprints of the West 6th Street Bridge, (Center) West 3rd Street Bridge, (Right) and the Washington Street Bridge.

The remaining nine perpendicular secondary routes provide real access and connectivity between the east/west primary routes that run parallel to the River and the public spaces, residential, commercial and industrial properties that comprise the Study Area. These routes are a mixture of Urban Minor Arterials, Urban Major Collectors and Urban Local Streets. The bridges and approaches associated with these routes are smaller in scale and they offer opportunities for pedestrian circulation and formal and informal public waterfront access. These routes are summarized in Table 20 below:

Table 20. Secondary Routes Perpendicular to the Chadakoin River

Street(s)	NYSDOT Class	Zoning District(s)	Lanes	Signalized Intersections	Non-Signalized Intersections	Restrictions
Sprague Street	Urban Minor Arterial	LM	2-lane	Steele St.	Jefferson St.	* The Sprague St Bridge was recently replaced * Twin WNY&PA Railroad overpasses have an 11-foot vertical clearance
North & South Main Streets	Urban Minor Arterial	C3, C4, & HO	3-lane and parallel parking on both sides * turn lanes at some intersections	Harrison, East/West 2nd, East/West 3rd, and East/West 4th Streets	East/West 1st Streets	*North Main St descends at a steep grade between East/West 4th and the railroad * WNY&PA Railroad overpass has a 12-foot vertical clearance
Institute Street	Urban Local Street	M & C4	2-lane	none	NYS Route 60 Arterial, Victoria Ave, Briggs St, Yorkshire Alley & Harrison St	* Bisected by the WNY&PA Railroad - no through traffic
Foote Avenue	Urban Minor Arterial	C2, R2, & M	2-lane * turn lanes at some intersections	West 2nd St, Harrison St, & Allen St	Chandler St, Crane St, Briggs St, Water St, Victoria Ave, & Yorkshire Alley	* Foote Ave descends at a steep grade between East 2nd and Harrison Streets * WNY&PA Railroad overpass has a 11-foot vertical clearance
Winsor Street	Urban Minor Arterial	C2, CM, R2, & M	2-lane * turn lanes at some intersections	East 2nd St, Crescent St, & Harrison St	Scott St & Chandler St	* WNY&PA Railroad overpass has a 12-foot vertical clearance
Chandler Street	Urban Local Street	M	2-lane * turn lanes at some intersections	none	Winsor St, River St, & Allen St	* Road lanes are not striped (except at intersection with Winsor)
Buffalo Street	Urban Collector	M	2-lane * turn lanes at some intersections	5-way intersection of Buffalo, East 2nd, and Crescent Streets & Allen St	Blackstone Ave	* WNY&PA Railroad overpass has a 12-foot vertical clearance * 5-way intersection (at Buffalo, East 2nd, and Crescent) and skewed intersection (at Buffalo and Allen)
Hopkins Avenue	Urban Local Street	LM & M	2-lane	none	East 2nd St, Flagg Ave, Bigelow St, Minske St, & Tiffany Ave	* Large segments of Hopkins Avenue are brick roadway
Tiffany Avenue	Urban Local Street	M	2-lane * turn lanes at some intersections	East 2nd St & Allen St	Hopkins Ave, Blackstone Ave, & Buffalo St	* Signalized at-grade crossing for the WNY&PA Railroad * TitanX facility enclosed pedestrian bridge overpass

Source: New York State Department of Transportation, City of Jamestown, and GPI





(Left) Sprague Street was temporarily closed due to bridge replacement – It is now open totraffic. (Center) WNY&PA twin overpasses at Sprague Street. (Right) Steep grade at Main Street.





(Left) WNY&PA overpass at Main Street. (Center) Institute Street bisected by the WNY&PA Railroad – no through traffic. (Right) WNY&PA overpass at Foote Avenue.





(Left) Intersection of Chandler and Winsor Streets – WNY&PA overpass at Winsor Street. (Center) Non-striped lanes on Chandler Street. (Right)WNY&PA Railroad overpass at Buffalo Street.





(Left) 5-way intersection of Buffalo, East 2nd and Crescent Streets. (Center) Hopkins Avenue – Brick roadway. (Right) TitanX facility enclosed pedestrian bridge overpass and at-grade WNY&PA Railroad crossing along Tiffany Avenue.

PUBLIC TRANSIT

The Chautauqua Area Regional Transit System (CARTS) is the sole provider of low cost public transportation for any person living, working or visiting Chautauqua County. The system originated in the late 1970s as mostly a rural service. In 1997, CARTS took over the City of Jamestown's public (busing) transportation system and now maintains daily weekday service in Jamestown, Falconer, Celoron, Lakewood and other surrounding communities, including rural service into the Towns. CARTS is managed from their Jamestown offices and maintenance facility located on Hopkins Avenue. In total, there are 26 routes throughout the County, of which seven originate in downtown Jamestown and not only serve the immediate downtown area but the populated areas along its perimeter. Route runs begin at 6:00 a.m. and end by 4:30 p.m. There is no weekend service.

Funding for this service is primarily from two sources: 1) the New York State of Transportation, which distributes about $3.0 billion annually in Statewide Mass Transportation Operating Assistance (STOA), and 2) the Federal Transit Administration (FTA). Other lesser sources of revenue are from rider fares, local agencies and County funds.

CARTS historically has mostly served low income and disabled individuals, seniors, Jamestown Community College and Jamestown Business College students and others who have limited means of transportation to get them to and from work, shopping trips, and non-emergency medical appointments. CARTS also coordinates, schedules, supplies drivers and provides bus maintenance for the County's Veterans Bus Service and coordinates their services County-wide with the Department of the Ageing.

2011 records indicate a ridership total of 195,000 one-way trips county-wide, of which about 55,400 or 28 percent are attributed to trips made within Jamestown and the immediate surrounding area. While CARTS does mostly serve disabled individuals and seniors, yearly statistics show that ridership fluctuates with fuel prices. During calendar year, 2011 CARTS experienced a County-wide increase of approximately 11,000 riders over the previous year, of which approximately 20 percent were within the immediate Jamestown service area. This increase in ridership continued into the first six months of 2012.

RAILROADS

An active railroad traverses the City of Jamestown in an east–west direction. Jamestown railroad's earliest beginnings go back to the mid-1800s and, for the next 100 years railroads served as a primary transportation provider for both the public and for goods and services. As a result, the regional economy was centered on the railroads.

The primary east-west rail route was initially constructed and operated by the Atlantic and Great Western, which later became part of the Erie Railroad Company. The Erie Railroad was a major player across the southern half of New York State and into Pennsylvania, bringing the travelling public and bulk materials to Jamestown. The line was originally constructed at-grade, but in the late 1920s, the Erie Railroad Company elevated the railroad through the City to eliminate several at grade crossings within the City's core. From east to west, the intersections with Buffalo Street, Winsor Street, Foote Avenue, Main Street and Second Street were altered by this very large improvement project. The elimination of at-grade crossings significantly increased the level of safety as well as the convenience to the City's residents.

Records and maps show numerous areas within the City where single or multiple sidings were constructed to serve particular businesses. One particular area where numerous track sidings were found, and in some instances remain, is within the **Industrial Heritage Corridor** along River Street. Several of the buildings that still remain along River Street were constructed with loading docks for loading and unloading railroad cars. The River Street area still offers the potential of rail service. Within the **Chadakoin Outlet District**, rail sidings were also found along the rear of business fronting Jones and Gifford Avenue. This area also offers the potential for rail service.

Other areas that railroad sidings or rail yards were found were in the **Downtown District**, immediately west of Brooklyn Square, located at the ends of Cherry Street, Washington Street and Lafayette Street just north of the Chadakoin River; however these areas have been redeveloped for other purposes. Another former rail yard was located immediately west of Sprague Street along the north side of the Chadakoin River. This area remains largely vacant and is overgrown with brush.

Another benefit related to the new elevated railroad was the construction of the present and recently rehabilitated Erie Railroad Station located on West Second Street. The Erie Railroad Station is listed in the National Register of Historic Places (as previously described in the *Historic and Cultural Resources* section of this Report).

Today the railroad property through the City of Jamestown is owned by the Norfolk Southern Railroad Company, and its current leaseholder is the Western New York & Pennsylvania Railroad, LLC. The WNY&P main line extends from Hornell, New York westerly and southerly to Meadville, Pennsylvania. The WNY&P is always looking for new customers and is willing to work with business along the present route to expand their involvement in the community. Presently the current system is limited to freight (no passenger service). The WNY&P typically moves four to six trains per week through the City.

In 2013, the Western New York Railway Historical Society, Inc., in partnership with the City of Jamestown, applied for a TIGER V grant to bring passenger rail service back to the City of Jamestown, ultimately connecting the City with Buffalo/Niagara Falls. The project consisted of two components. The first was the development of a 14-car excursion train (including the assembling and upgrading of a streamliner passenger train) to promote tourism within the City of Jamestown. The second project component consisted of the rehabilitation of 15.9 miles of the New York & Lake Erie Railroad (NYLERR) between South Dayton and Waterboro, New York, a key component of the rail excursion train plan as it provides the shortest route available between Jamestown and Buffalo/Niagara Falls. Although the City was not awarded the grant, they plan to continue searching for funding to make this idea a reality.

Other key railroad infrastructure of interest is associated with the former Jamestown, Westfield & Northwestern R.R. Co. Railroad sidings and property for this privately owned company could be found as far east as the Harrison Street, Barrett Avenue, and Steele Street intersection. An iron through-truss railroad bridge which still exists today near Sprague Street spanned the Chadakoin River to allow for access to many of the businesses that once fronted Steele Street. The J.W. & N.W. Railroad also served many businesses along West Eight Street and Outlet Street. Today the bed for this former railroad is the location for the proposed *Phase V of the Riverwalk Trail* (aka the ***Chadakoin Park Bike Trail***).

An electric interurban railroad—Jamestown, Westfield and Northwestern Railroad (JW&NW)—connected the three towns of Jamestown, Mayville, and Westfield and ran along the north side of Chautauqua Lake. The JW&NW ended passenger operation in 1947, continued with freight, then quit entirely in 1950. Its rails and right-of-way have slowly disappeared.

PEDESTRIAN AND BICYCLE INFRASTRUCTURE

The City's existing sidewalk network within the Downtown is generally complete (sidewalks on both sides of the street) and in good condition. Beyond the Downtown, not all streets possess a complete sidewalk network, but generally the network is adequate for existing pedestrian demands. Sidewalk conditions beyond the Downtown vary greatly. Poor sidewalk conditions are an obstacle for pedestrians. The City's steep topography, especially within the Downtown Core on the north side of the River poses another serious obstacle for pedestrians. Improvements to the existing sidewalk network and other pedestrian amenities (such as curb ramps, cross walks, pedestrian timers, etc.) are outlined in the *Jamestown Bicycle and Pedestrian Plan*, the *Jamestown Riverfront Reclamation and Development Study, Addendum #1, 1991*, and the *City of Jamestown Traffic and Streetscape Enhancement Plan, September 2008*.

The City's existing bicycle network is nearly non-existent. With the exception of the signed New York State Bike Route 17, which travels along the shoulder (no designated bike lane) of NYS Route 394 and NY State Route 430, there are no other designated, signed, or striped bicycle lanes. Significant improvements to the existing bicycle network and other bicycle amenities (such as bike boxes and bike racks) are outlined in the *Jamestown Bicycle and Pedestrian Plan*.

One sidewalk and on-road bicycle network improvement project was recently funded. Chautauqua County was awarded a $965,200 Transportation Enhancement Program grant to complete bicycle and pedestrian improvements along 1.8 miles of County Road 67 (Jones and Gifford / Boulevard Avenue) from McCrea Point Park in the City of Jamestown to the Lucille Ball Memorial Park in the Village of Celoron. The project (known as the ***Lucy Trail***) will include restriping and signing the existing 5-foot wide paved shoulders of the road as designated bike lanes and installation of a 6-inch wide concrete curb and a 5-foot wide sidewalk along one side of the road. ADA accessible ramps and crosswalks will be utilized at all intersections. Based on preliminary engineering investigations of the proposed project, the concrete curb and sidewalk would be located along the south side of County Road 67; however, all options will be considered and analyzed during the detailed engineering design.

The City's off-road pedestrian trail network, known as the Chadakoin Riverwalk Trail, is a growing source of pride for the City. The *Jamestown Riverfront Reclamation and Development Study, Addendum #1, 1991* promoted the concept of a continuous Riverwalk and bicycle trail from Falconer to Celoron as a key component of the strategy to revitalize Jamestown's waterfront. The focus area of this study encompasses the City of Jamestown Waterfront Revitalization Area and beyond to the Village of Falconer. The development of a continuous trail was identified as a long-term goal, but the study recognized that such a trail cannot, nor

should be located on the riverbank in all areas. The study divided the waterfront area in to five discrete areas, each of which had proposed walking and bicycling trail alignments identified.

In the 1970's the first segment of the Chadakoin Riverwalk Trail was constructed along the south bank of the Chadakoin River from Main Street to the front side of the then Hills Department Store (now the Jamestown Area Medical Associates). That portion of the trail was reconstructed, improved and extended to Harrison Street in 2006 (*Phase I of the Riverwalk Trail*). In 2007, the Riverwalk Trail was extended along the southern bank of the River from Main Street to Washington Street and along the northern bank of the River from Main Street to slightly before the Warner Dam (*Phase II of the Riverwalk Trail*). Improvements were made to the Main Street Bridge and Keelboat Landing (a pocket park on the north bank of the River, east of Main Street) to encourage connection between the northern and southern portions of the Riverwalk Trail (also part of *Phase II of the Riverwalk Trail*). In 2011, the Riverwalk Trail was extended along the southern bank of the River from Washington Street to Panzarella Park and included a promenade under the newly built flyover Washington Street Bridge and a small amphitheater for public gatherings (*Phase III of the Riverwalk Trail*). In 2013, *Phase II of the Riverwalk Trail* was completed by extending the northern trail past the Warner Dam to Washington Street (it was held up due to permitting issues). Finally, in 2013, the Riverwalk Trail was extended several hundred feet to the west along the northern bank of the River from Washington Street (*Phase IV of the Riverwalk Trail*). The existing trail is paved and ADA-compliant, landscaped with trees and shrubs, includes benches, picnic tables, and trash receptacles, and is well illuminated. The trail is used by many residents for active transportation and recreational purposes. It provides scenic views of the River, opportunities for fishing, and a strong base to build upon as the Riverwalk Trail is extended in the future.

Two Riverwalk Trail extension projects have recently been funded. *Phase V of the Riverwalk Trail* (aka the ***Chadakoin Park Bike Trail***) has been funded, designed, and is awaiting final NYSDEC permit approval. Construction is anticipated to begin in Spring/Summer 2014. Funded by a $263,000 grant through the Department of State with funding under Title 11 of the NYS Environmental Protection Fund, the ***Chadakoin Park Bike Trail*** will connect Clifton Avenue to 8th Street near the Fairmount Avenue Bridge along the former Jamestown, Westfield and Northwestern Railroad right of way. The main portion of this segment will be 1.3 miles long and will consist of asphalt pavement. At points along the trail, there will be stone nature trails that will provide walkable access to the riverbank. Another feature is an observation tower that will be constructed atop an old building foundation. Both ends of the trail will be illuminated; however, the rest of trail will not be lit.

In December 2013, the City of Jamestown was awarded a $499,955 grant through the NYS Office of Parks, Recreation, and Historic Preservation within funding under the NYS Environmental Protection Fund to construct *Phase VI of the Riverwalk Trail*. Still in the preliminary design phase, this project includes:

- Improvements to Panzarella Park (resurface dock, improve pedestrian bridge)
- Construction of a connector trail from Riverwalk (east of the BPU) to Steele St
- Creation of a branded and signed trail network loop which utilizes (and where needed removes and replaces) the existing sidewalk network along Steele, Washington, West 2nd, Lafayette, West 3rd, and West 6th Streets
- Construction of a connector trail and scenic vista from the eastern base of the 3rd Street bridge along the eastern edge of an existing guiderail (which provides separation from the Railroad), under the West 6th Street bridge to Fairmount Avenue and the trailhead of the proposed ***Chadakoin Park Bike Trail*** and along Fairmount Avenue to McCrea Point Park
- Construction of a stair system at the West 6th Street bridge (site control will be granted by NYSDOT) to connect the sidewalk trail network loop with the connector trail discussed above
- Creation of two parks along Steele Street at the base of West 3rd Street and West 6th Street which include playground equipment, picnic table, trash cans, scenic vistas, and potentially fishing opportunities
- Creation of a scenic vista along Steele Street several hundred feet west of Sprague Street
- Construction of the ***McCrea Point Trail System*** which will meander throughout the park and includes a 30-foot pedestrian bridge and repairs and upgrades to the existing boat launch and pavilion
- Connection to the County's ***Lucy Trail*** project

Figure 19 depicts the existing Riverwalk Trail System (by Phase), portions of the proposed ***Lucy Trail*** and *Phase V of the Riverwalk Trail* (aka the ***Chadakoin Park Bike Trail***), and the preliminary Site Plan for the proposed *Phase VI of the Riverwalk Trail* in its entirety. Other proposed Riverwalk Trail extension projects not yet funded will be discussed in the *Proposed Projects* section of this Report.



(Left) Looking west along the Trail (south bank) from below the Washington St Bridge towards the BPU. (Center) Looking east along Trail (south bank) near JAMA. (Right) Looking east along the Trail (north bank) toward the Main St Bridge.

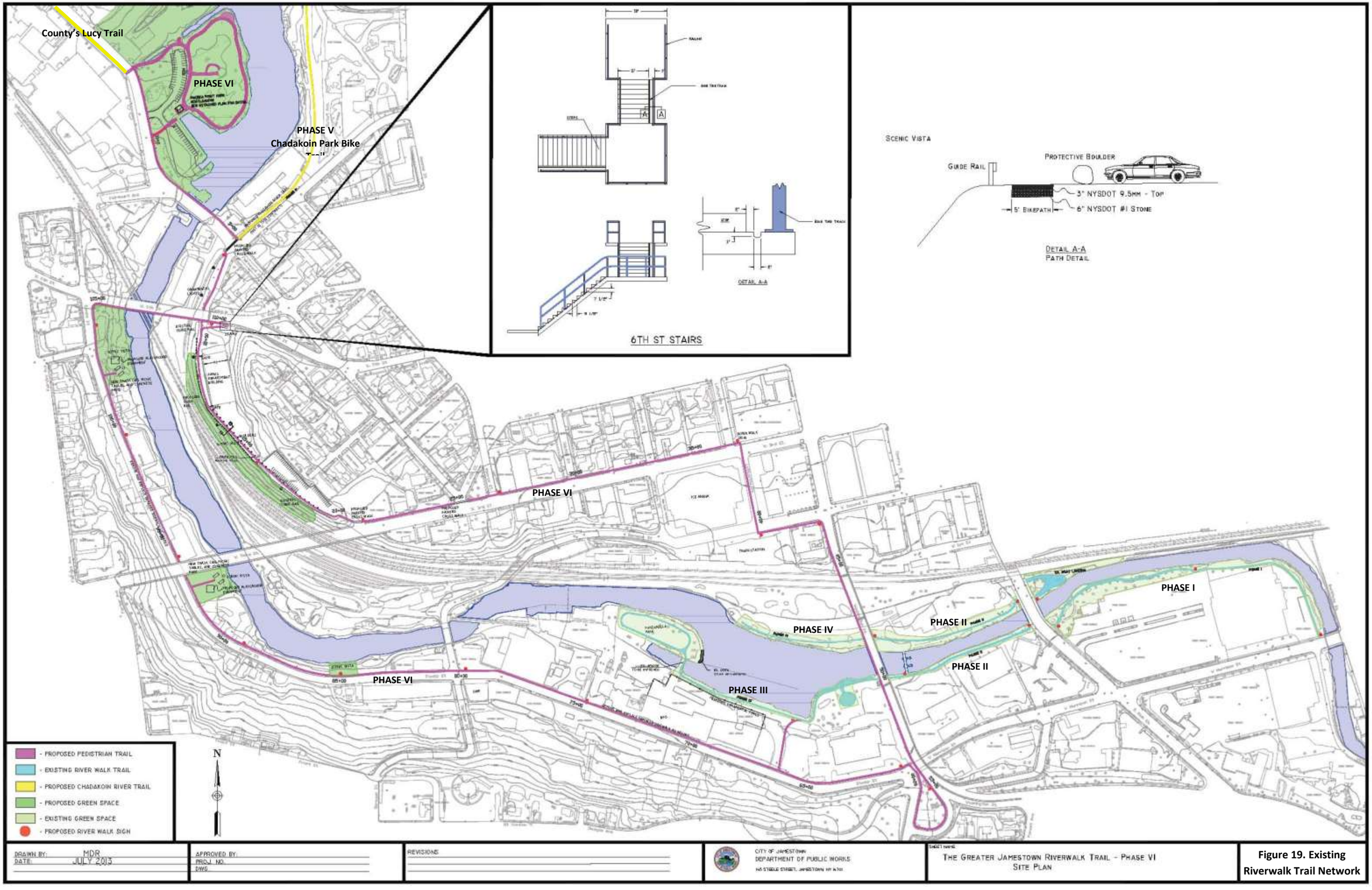


Figure 19. Existing Riverwalk Trail Network

PARKING

Business and community leaders and members of the public in the City of Jamestown have had long standing issues and concerns about parking. The City's geography and compact land development combine to make convenient parking a challenge in some areas of the City. As a result, the City has created focus groups, commissioned parking studies and made substantial investments in parking infrastructure, all of which have focused on the Central Business District and the West End developments.

- *Center City Project Parking Study by Saratoga Associates, July 31, 2000.* This study examined the City's parking needs in response to a proposed development in the west side of the central business district. The project was to include an ice arena, cinema, hotel, medical offices and a parking garage to be located in an area bounded by West 4th Street, Washington Street, West 2nd Street and Jefferson Street. Although some, but not all of the development scenarios envisioned were constructed, the study concluded that approximately 1,400 to 1,816 parking spaces would be required to serve the project area and an additional one-half block surrounding the project area.

- *Downtown Parking Discussion Group, February 12, 2002.* This focus group was composed of City and community leaders, economic development officials and members of the business community. The outcome of their discussions included the following recommendations:

    - Replacement of the then closed Cherry Street Parking Ramp at an estimated cost of $4,290,000, which would create an additional 280 parking spaces and satisfy commitments to local businesses.

    - Redevelop the Main Street Ramp at an estimated cost of $1,650,000, for a net gain of 149 metered and leased spaces that would help to reduce increasing parking pressure associated with West End developments and North Main Street parking needs.

    - Additional Surface Lots and On-Street Spaces would create an additional 322 spaces in the West End.

    - Additional surface lots parking in the vicinity of Baker Park would create 68 new long-term metered spaces, for an overall increase of 839 new parking spaces that were not previously available.

- *Comprehensive Parking Plan, Phase III by ALLPRO, January, 2007*. This study noted that Phase I of the City's Parking Plan had been completed by the

construction of the 296-space Cherry Street Ramp in 2006, which was a response to additional parking needs associated with the new ice arena and hotel projects. Between the North Main Street Ramp and the Cherry Street Ramp, a total of 416 off-street parking spaces and 254 metered spaces, for a total of 670 new spaces were added in connection with Phase I. ALLPRO's study noted that Jamestown now had a total of 1,957 municipal parking spaces, of which 892 were metered. Phase II of the Parking Plan centered on enforcement, where ALLPRO became responsible for collecting meter money and collecting fines for violations. Hand-held computerized ticket issuing equipment provided greater efficiency for enforcement personnel and better tracking of vehicles. Phase III of the Plan involved standardizing meters, restructuring parking rates and meter timing periods to best suit the available parking infrastructure and demand.

GPI's reconnaissance of the LWRP Study Area on July 23, 2012 indicated the presence of numerous public parking locations scattered throughout the downtown business area. The three public parking ramp structures located within the Study Area are attractive, well illuminated and generally well maintained (see Table 21). Metered off street parking facilities and designated leased spaces can also be found at numerous surface lots (see Table 21). Most of these surface lots are landscaped, well illuminated and generally well maintained; however, some are not well illuminated.

Table 21. Public Parking Ramps and Surface Lots

Location	Spaces	Users
Parking Ramps		
Cherry Street Ramp	280 leased & metered	Jamestown Ramada Inn, Jamestown Housing Authority, and other nearby buildings
Main Street Ramp	20 metered 51 leased 65 designated	Employees and patrons of downtown businesses 65 designated spaces are for employees of Jamestown's Post Journal
Spring Street Ramp	340 leased & metered	Employees and patrons of downtown businesses
Surface Lots		
West 3rd St & Clinton St	24	Long term off-street parking for West End businesses and attractions
West 4th St & Lafayette St	34	Long term off-street parking for West End businesses and attractions
East 3rd St near East 2nd St	37	Long term off-street parking for the central business district & the high school Note: ALLPRO has placed a sign that advertises the availability of leased spaces
East 4th St near Predergast Ave	30	Long term off-street parking for the central business district Note: ALLPRO has placed a sign that states all of the spaces have been leased
East 2nd St & Pine St	28	Convenient off-street parking for the central business district

Source: GPI

Metered parking is mostly found along the public streets within the core of the downtown. There are, however, many non-metered locations along Third Street from the Federal Building westerly to Washington Street. These parking spaces are mostly designated 15-minute to 2-hour locations and are for the convenience of patrons and customers to business and public buildings fronting Third Street.

Unfortunately all of the public parking locations described thus far are north of the elevated railroad and due to the characteristically steep slopes of the north/south downtown streets, not one of the mentioned locations (other than the Main Street Parking Ramp) is convenient for immediate access to the Chadakoin Riverwalk Trail or the waterfront.

South of the railroad the terrain becomes relatively flat, theoretically making it much easier to place public parking within accessible distance of the Riverwalk Trail and waterfront. A public parking lot exists on the south side of the River behind the Board of Public Utilities Offices on Steele Street and provides convenient access to Panzarella Park, the Riverwalk Trail, and the waterfront. Additionally, a gravel un-lined public parking area exists at McCrea Point Park and is large enough to serve existing park/boat launch users and future ***Chadakoin Park Bike Trail*** users (McCrea Point Park and its parking advantages is one of the few locations throughout the City that allows unobstructed access to the River). Lastly, a small gravel public pull-off parking area owned by the City along Allen Street provides limited access to the River. In order to provide additional and better parking options may require partnerships between the City and private property owners.

For example, within the immediate proximity of North Main Street, Harrison Street and the River is a historic section of the City known as “Brooklyn Square”, which today is comprised of several drug stores, restaurants, the Jamestown Area Medical Associates (aka the Riverside Medical Center), a bank, and a moving and storage business. Adjacent to these businesses along Harrison Street is a small plaza and a retail sporting goods business. Each of these locations (particularly JAMA, the CVS drug store, Friendly’s Restaurant, and the Plaza on the south side of Harrison Street) have extremely large parking areas that were likely constructed because of zoning requirements. In most instances these private parking lots are underutilized and overly constructed. The City could potentially create partnerships with the landowners and enter into access and parking agreements to provide additional public parking for access to the Riverwalk Trail and the waterfront.

Beyond the “Brooklyn Square” area, one moderately sized parking lot located at the southwest corner of Harrison Street and Foote Avenue and a much larger parking lot located at the northeast corner of Harrison Street and Foote Avenue are located near the Chadakoin River. These lots, however, are both owned by Chautauqua County and are designated for use by their tenants in the Riverside Industrial

Center. Other privately owned parking locations found along and near the River as it traverses through the City include: a large unused parking lot on Blackstone Avenue (opposite the Blackstone Business Company and east of the Dahlstrom Complex) and underutilized parking lots located at the intersection of Chandler Street and River Street and near the intersection of Tiffany Avenue and Hopkins Avenue. These privately owned lots could provide pedestrian and vehicular access to the River for recreational opportunities. The City would need to create partnerships with the owners and enter into access and parking agreements.



Current parking area at McCrea Point

2.7 WATER QUALITY

As previously discussed in Section 2.3 Surface Waters and Surface Water Uses, surface waters in the Jamestown LWRP include the Chadakoin River, a classified tributary, and numerous non-classified water bodies. The Chadakoin River and the classified tributary are classified by the NYSDEC as a Class C stream, which identifies its best usage as supporting fisheries and suitable for non-contact activities.

The number and extent of studies to evaluate the quality of the water in the Chadakoin River are limited. However, these studies have found that the quality of the River is impaired and continues to be threatened. These threats to water quality include non-point source pollution stemming mainly from urban runoff via roadways, parking lots, and other impervious areas. Threats also include point sources such as waterfront brownfields and historically developed industrial facilities through which groundwater flows, picking up contaminants in areas in which filling or spills occurred, and discharging these contaminants into the River dissolved within the groundwater.

An NYSDEC water quality assessment based on resident macroinvertebrates were performed on the Chadakoin River in Jamestown in three locations in 1995 and two locations in Falconer from 1989 to 2002. All three sampling locations in Jamestown were listed as moderately impacted with elevated levels of metals and Polycyclic Aromatic Hydrocarbons (PAHs) identified in river sediments and invertebrate tissues.

The Chadakoin also appears on the Draft 2012 Section 303(d) List of Impaired Waters Requiring a Total Maximum Daily Load (TMDL)/Other Strategy based on phosphorus from municipal/industrial urban runoff and aquatic toxicity from agriculture.

The Ecological Conditions and Living Infrastructure Framework document in Supporting Document 2 discusses conditions in the River in more detail.

2.8 NATURAL RESOURCES

Natural Resources were characterized and evaluated during the performance of this LWRP, and the Ecological Conditions and Living Infrastructure Framework document in Supporting Document 2 discusses conditions in the River in more detail. As noted in this document and illustrated in Figure 21, despite the City's rich industrial heritage, the Chadakoin River contains some incredible natural resources.

WETLANDS

The rich natural resources, notably the very large, high quality wetlands, of the LWRP Study Area pose an excellent opportunity to foster ecological revitalization (Figure 21). Two portions of the LWRP Study Area are classified wetlands and are under both federal (U.S. Army Corps of Engineers) and state (NYSDEC) jurisdiction. Both of these wetlands are located within the **Chadakoin Outlet District**. The largest wetland (LW-10) encompasses 308.6 acres and is located on the right bank of the Chadakoin from the Chautauqua Lake outlet downstream to approximately McCrea Point and is bordered to the south by Jones and Gifford Avenue. This wetland is classified as "Class I", which is the highest rank in New York State's four class ranking system. The U.S. Fish and Wild Service identifies the wetland as palustrine, freshwater forested/shrub wetland, broadleaved deciduous, that is seasonally flooded/saturated.

Field assessments reveal the wetland is palustrine in nature and classifiable as a deciduous hardwood swamp with a tree canopy dominated by silver maple, black willow, elm species, and ash species and an understory dominated by highbush

blueberry, winterberry, royal fern, sensitive fern, and skunk cabbage. Minimal instances of invasive plant species were found and only included a small patch of Japanese knotweed and the random barberry and multiflora rose along the Chadakoin itself where there was an opening in the canopy. Wildlife observed included frogs, mallards, and an osprey with its prey.

The second and smaller wetland (LW-4) is straddled between the Chadakoin River and Chadakoin Park. This 41.5-acre wetland is also classified as "Class I." Field assessments reveal the canopy species within the park, rail trail corridor and marsh complex include willows, spruce, maples, walnuts (in wetter areas), catalpa, oaks, elms, and several groves of aspen scattered across the open space. Understory and open field species observed include redtwig dogwood, viburnum, sumac, equisetum, sedges, juncus, alder, phlox, Virginia creeper, riverbank grape, and milkweed. Skunk cabbage and ferns inhabit the spaces nearer the wetland fringe of the River on the western edge and a small grouping of sagitaria inhabits the canal.

These wetlands are protected by NYSDEC and USACE wetland regulations and serve an important role in absorbing and holding floodwaters from downstream populated areas as well as providing fish and wildlife habitat.

FISH AND WILDLIFE

The following sections discuss the diversity of fish and wildlife found within the Jamestown Waterfront Revitalization Area. Additional discussion is included in the Ecological Conditions and Living Infrastructure Framework in Supporting Document 2.

FISH

Recent fisheries reports for the Chadakoin River are not available; however, it can be assumed that common species in Chautauqua Lake would also be present in the downstream Chadakoin River (which has a very similar habitat to the Lake in areas upstream from the Warner Dam). Chautauqua Lake is noted as supporting a coolwater fishery since it contains a mix of both warmwater (e.g. bass and sunfish) and coolwater species (e.g. walleye and yellow perch). Walleye and muskellunge are both stocked annually to support an active recreational fishery in the Lake.

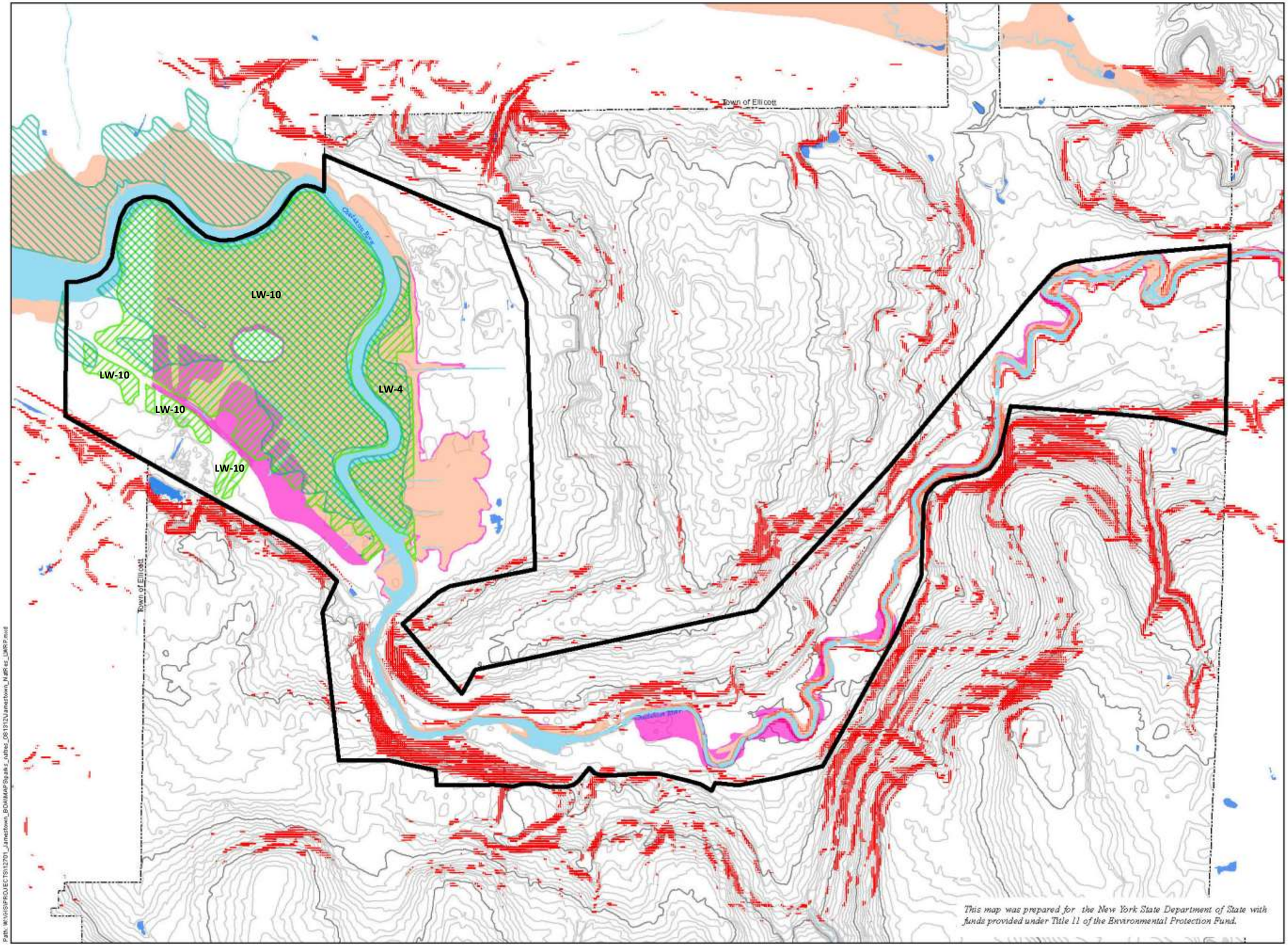
During the field assessment of the River corridor, fishermen above and below the Warner Dam reported commonly catching walleye and smallmouth bass from the stream. One fisherman angling under the Fairmount Avenue Bridge proudly displayed a bucket containing a combination of crappie and bluegill. A single

Biohabitats

CITY OF JAMESTOWN

LOCAL WATERFRONT REVITALIZATION PROGRAM

NATURAL RESOURCES



- LWRP Study Area
- River
- Freshwater Pond
- State Mapped Wetlands
- Federal Mapped Wetlands
- FEMA 100 Year Floodplain
- FEMA 500 Year Floodplain
- 5 ft contour
- 50 ft contour
- >20% Slope

Note: Locally significant fish and wildlife habitats include all areas depicted as the "River" and as "State and Federal Mapped Wetlands"

Sources:
1. City of Jamestown Local Waterfront Revitalization Program Work Plan Map - Edited by LaBella to reflect steering committee revisions.
2. Surface Water layer provided by Chautauqua County
3. Federal Wetlands layer provided by National Wetland Survey - US Fish & Wildlife Service.
4. State Wetlands layer provided by CUGIR.
5. FEMA Floodzone layers provided by NYS GIS Clearinghouse.
6. Contour data generated by Bergmann Associates
7. Slope data generated by Biohabitats using contour data as source

N

0 1,000 Feet

1:16,000

Figure 20. Natural Resources Map

longnose gar was observed cruising the shallows near Panzarella Park and common carp and white sucker were observed in the River near Harrison Street. While no other fish data is available for the Study Area; it is likely that the River also supports a number of non-game fish including, other suckers such as redhorse, or the northern hogsucker as well as chubs, dace, and other minnows.

Strong, turbulent flow at the outlet of the Warner Dam appears to preclude upstream fish passage at this structure. Downstream beyond the Warner Dam there is one barrier to local fish passage and migration at the Dahlstrom Dam, near Buffalo Street and another potential blockage below the Dow Street bridge in Falconer. The elevation drop across the Dahlstrom Dam is approximately four feet, while the potential obstruction near Dow Street is a low head structure that may only act as a fish barrier during low flow conditions. Given these barriers, fish passage is limited to only downstream passage in the area between the Warner and Dahlstrom Dams. These structures prevent two-way passage for fish that reside in the Chadakoin (and other streams in the larger Conewango Creek watershed) and Chautauqua Lake.

Related to fish passage are the migration and proliferation of freshwater mussels. Freshwater mussels have been identified by the United States Fish and Wildlife Service as being the most endangered group of organisms in North America as they are highly sensitive to channelization, sedimentation and hydromodification. Their unique life cycle requires a fish host to transport mussel larvae (glochidia) to new stream reaches, ensuring that mussel populations are continually transported to upstream areas. The Allegheny River and portions of the watershed are known to support globally significant populations of federally endangered freshwater mussels. Sixteen species of mussels, including one endangered species, were identified in Conewango Creek in 2005 (Pennsylvania Fish and Boat Commission, 2005). It is conceivable that these species could repopulate the Chadakoin if migration barriers are removed.

WILDLIFE

The City of Jamestown Waterfront Revitalization Area does not contain Chautauqua Lake, but its proximity to the Lake suggests that much of the wildlife found in and around the Lake can also be found in the Study Area.

Chautauqua Lake has been designated as a State Important Bird Area by a consortium of conservation and nature organizations, including the National Audubon Society of New York, as a major stopover for migration of waterfowl along the Atlantic Flyway. This site falls within the Lower Great Lakes/St. Lawrence Plain

Bird Conservation Region and includes the State-owned 16 mile-long Chautauqua Lake. More than 270 species of birds have been documented over the past 20 years. Additionally, the site has typically supported over 1% of the estimated State wintering population of pied-billed grebes. The site is also listed in the 2002 New York State Open Space Conservation Plan as a priority site under the project name Chautauqua Lake Access, Shore Lands, and Vistas.

The Lake and surrounding area also have a number of wildlife management areas including *Tom's Point*, *Stow Farm*, *Cheney Farm*, *Dobbins Woods*, *Elm Flats Wetland Preserve*, *Hartson Swamp*, and *Clay Pond*. There are also a number of significant natural resources further afield, providing habitat patches within the region, and which may provide further reference for the ecological diversity and the value of improved habitat along the Chadakoin River. In general, the Chadakoin River Watershed is within the Cattaraugus Highlands ecological zone, which is dominated by northern hardwoods (primarily oaks) and supports a variety of mammals, birds, reptiles, and amphibians, many of which may be found within the Study Area.

The Chadakoin River plays a significant role in habitat connectivity between the Lake, many of the wildlife management areas, and several other natural resources further afield. The quality of the River and the health of its riparian habitat can drastically impact the regional wildlife's ability to safely travel to find food, reproduce, and migrate.

Within the wetland complexes of the **Chadakoin Outlet District**, in general, the shorelines are gentle sloping, thus exposing them to seasonal and episodic inundation. These inundations, sheer size, and limited human encroachment and visitation make these wetlands important areas for amphibians and birds. In addition, the nature of the river and shoreline interaction lends itself to large concentrations of submerged and floating aquatic vegetation, also ideal habitat for resident fish species. During field assessments, wildlife observed within the wetland complexes included frogs, mallards, and an osprey with its prey.

Wildlife habitats within the **Downtown District**, **Industrial Heritage Corridor**, and **East End Industrial Corridor** are limited due to the highly urbanized nature of the sub-areas combined with the many "armored" and high walled shorelines along the River. There are a few points where the natural shoreline still exists within these sub-areas including, but not limited to, areas behind the Gateway Center and areas east of Bigelow Avenue.

Additional discussion is included in the Ecological Conditions and Living Infrastructure Framework document in Supporting Document 2.

PROTECTED ANIMALS AND PLANT SPECIES

Protected animal and plant species are located within the LWRP Study Area. Records from the New York State Natural Heritage Program reveal that one species of State Special Concern, the Eastern spiny softshell turtle, was found in the City of Jamestown Waterfront Revitalization Area. During fieldwork, evidence of turtle nesting grounds was found in several of the canals which empty into the Chadakoin River within the **Chadakoin Outlet District**. Additionally, a female Eastern spiny softshell turtle was observed near the Riverwalk Center along the Riverwalk Trail laying eggs in a landscaped mulch area within the **Downtown District**. Turtle nesting is evidence for the need of integrated green infrastructure within a riparian treatment zone in key locations along the Chadakoin. Several additional turtles were observed on the downstream end of the Warner Dam and further downstream in the Chadakoin River (within the **Downtown District**). Anecdotal accounts from employees at the Gateway Center describe how several turtles were observed behind the Gateway Center trying to nest in the asphalt upland of the river. Throughout much of the LWRP Study Area, especially downstream of the Warner Dam where the River approaches the downtown and industrial environments, shoreline and buffer access is fairly limited, thus turtles are forced to nest in less than ideal locations or congregate in areas with easier floodplain access although nesting substrate may not be ideal.

In addition, historical records found through the New York State Department of Environmental Conservation's Environmental Mapper website suggest that a New York State Endangered plant, Burdick's wild leek, was identified in the wetland complexes which encompass the bulk of the **Chadakoin Outlet District**. Burdick's wild leek is known only to occur in Chautauqua County and any harvesting or removal is prohibited.

The US Fish and Wildlife Service maintains information regarding occurrences of Federally listed or proposed threatened and endangered species. Species lists are available at a County-wide scale: species lists for a smaller scale (such as the City of Jamestown or the LWRP Study Area) are not available. The Chautauqua County Federally listed endangered and threatened species list suggests the Clubshell and Rayed bean (both species of mussel that are Federally endangered) are known or are likely to occur in the County, and may or may not occur within the Chadakoin River. Further study would be required to determine if these species are present in the River.

LOCAL SIGNIFICANT FISH AND WILDLIFE HABITAT

Jamestown does not possess any State-designated Significant Coastal Fish and Wildlife Habitats; however there are many areas of the City that are locally significant. Locally significant fish and wildlife habitats include the River, several man-made canals, and all State and Federal wetlands as depicted in Figure 20.

2.9 TOPOGRAPHY, GEOLOGY AND SOILS

Located in the Appalachian Uplands physiographic province, the LWRP Study Area is composed of siltstone and shale with numerous exposed areas of bedrock. The Chadakoin River at the Chautauqua Lake outlet is kept broad and shallow by this bedrock.

The ***upland*** topography of the LWRP Study Area varies by sub-area (Figure 20). The **Chadakoin Outlet District** is relatively flat with steep upwards slopes just to the south of the southern boundary (railroad) and north of Fluvanna Avenue. Within the **Downtown District** most areas contain steep upward slopes away from the River. The only relatively flat areas are located between the south side of the River and Steele/Washington/Harrison Streets and between the BPU Electrical Generation facility and Winsor Avenue. The **Industrial Heritage Corridor** is also mainly composed of steep upward slopes away from the River with the only relatively flat land located on the north side of the River in the vicinity of River Street. Finally, the **East End Industrial Corridor** is relatively flat except along its southern boundary (Buffalo Street). The topography of the River and its immediate vicinity is also discussed in the Flooding and Erosion section of this report.

Five major soils are identified within the Study Area based on the USDA NRCS Web Soil Survey. The **Chadakoin Outlet District** is dominated by *Carlisle muck* in wetlands LW-10 and *Udorthents* (landfill) in the area of Chadakoin Park. The unstable *Carlisle muck* soil type makes any sort of substantial development extremely difficult and expensive while the *Udorthents* (landfill) soil type, because of the unknown fill components and potential for contaminants, could potentially influence ecological restoration and/or green infrastructure initiatives if excavation is required.

Soil types in the **Downtown District** are composed almost entirely of *urban land*. The **Industrial Heritage Corridor** is composed primarily of *urban land* and two types of *Chenango gravelly loam*. Finally, the **East End Industrial Corridor** includes one type of *Chenango gravelly loam* with a small ribbon of *Hamlin silt loam* along the Chadakoin River. These soil types are typically well drained as they were formed in morainic glacial till and gravelly outwash deposits.

2.10 FLOODING AND EROSION

The following sections describe flooding and erosion potential within the LWRP Study Area.

FLOODING, FLOOD PLAINS, AND SHORELINE TOPOGRAPHY

A long history of varying industrial uses on the Chadakoin River have led to some dramatic changes in the nearby River topography and associated drainage (Figure 20). Overall, within the **Chadakoin Outlet District**, the shoreline is relatively flat leading to the River. As a result, large sections of the sub-area are federal and state classified wetlands. These wetlands are protected by NYSDEC and USACE wetland regulations and serve an important role in absorbing and holding floodwaters from downstream populated areas. These wetland complexes represent the majority of accessible floodplain areas within the City of Jamestown as a large portion of the Chadakoin downstream of McCrea Point has been channelized by retaining walls, rip-rap, bulkheads, and building foundations.

As the Chadakoin River passes McCrea Point it begins to change from a broad, wide river and floodplain, to a narrower river and corridor until it reaches Sprague Street. Historically the Chadakoin then entered a much broader floodplain extending the length of the Study Area, but industrial and commercial activities have essentially cut-off the Chadakoin from much of its floodplain. Only in small narrow stretches throughout the **Downtown District**, **Industrial Heritage Corridor**, and **East End Industrial Corridor** does the River have access to narrow floodplains, with the majority of these areas concentrated in the **East End Industrial Corridor**. Throughout most of these three easternmost sub-areas various retaining walls, bulkheads, and buildings now form extensive stretches of riverbanks, thus removing traditional floodplain-river interaction. On the north side of the Chadakoin River, the Western NY and PA Railroad bed has also changed the topography of the corridor and created a physical barrier to the River.

Despite the removal of traditional floodplain access downstream of McCrea Point, flooding has been mostly eliminated by means of regulating water levels via the Warner Dam, the large upstream wetlands complex, and the building of river walls throughout large stretches of the river corridor. Most areas located within the 100-year flood plain are currently undeveloped. Most areas located within the 500-year flood plain are also undeveloped; however, the Jamestown Area Medical Associates, portions of the Gateway Center, and portions of the Weber Knapp complex are all located within the 500-year flood plain.

NATURAL PROTECTIVE FEATURES AND EROSION

As discussed previously, the banks of the Chadakoin in the **Chadakoin Outlet District** are lined by wetlands that act as natural protective features. However, the banks of the remainder of the River throughout the Study Area are occupied by various man-made structures including retaining walls, bulkheads, and buildings, thus eliminating traditional floodplain-river interaction. A number of these structures are in disrepair and present significant erosion hazards through potential failure. Several retaining walls were observed that had been undermined and leaning into the River.

Notable examples of areas in which erosion is occurring include:

- Eroding, mown banks within McCrea Point Park
- Discrete areas of Riverbank along Harrison, Allen, Buffalo, and Blackstone Streets
- The vacant area west of Blackstone Fabrication
- The shoreline between the Riverwalk and the Chadakoin River, just downstream of Panzarella Park

As discussed in the *Proposed Projects* section of this Report as well as in the Ecological Conditions and Living Infrastructure Framework document in Supporting Document 2, the development of a living infrastructure framework will help to prevent future erosion issues throughout the City.

2.11 SUMMARY AND DISCUSSION

The following summarizes the inventory presented above, discusses constraints to development, and identifies key opportunities for revitalization.

Community Characteristics

- The Jamestown Waterfront Revitalization Area has a rich industrial history.
- The City of Jamestown's population is 31,134 (2010 Census) and the population has significantly decreased over the past 60 years, although the rate of decrease has slowed.
- The population within the Study Area has relatively low income and educational attainment coupled with high unemployment.
- The population's economic conditions limit its spending power, reducing the potential for growth.

Economic Context

- Health care and social services provide a large portion of jobs within the City

- Manufacturing, while diminished since the middle of the 20th Century, makes a very significant contribution to employment in the City.
- Tourism plays a limited role in the employment base of the City, although opportunities exist to increase opportunities for residents and visitors.
- Economic analysis has identified the following potential areas of growth:
    - New or adaptive re-use housing units
    - Medical/social service office space
    - Professional office space
    - Restaurant/café/bar space
    - Industrial, light industrial and high tech potential
    - An additional limited service hotel
- Primary opportunities include:
    - Enhance use of/connections to River/natural resources
        - Value = Location, Location, Connections
        - Extend the experience (Dr's visit and lunch or River-related recreation)
        - Bike path connections Lake/McCrea Point/Downtown
        - Riverwalk to reinforce healthcare/wellness corridor
        - Riverwalk to link healthcare node to commercial nodes @ Brooklyn Square and Downtown
    - Capture Opportunities in City Center
        - Downtown
            - Expand eating/drinking offerings
            - Adaptive re-use of existing buildings for residential/office
            - Additional connections from Downtown to River
        - Medical Corridor
            - Assemble key sites for private development that support Medical Corridor
            - Use Riverwalk and streetscape to define the Medical Corridor
        - Consider Riverfront locations between Main and Washington for future hotel development
    - Support continued industrial use of eastern portion of City
    - Complete fiber optic loop
    - Maintain/preserve rail
    - Consider linkages between existing manufacturers in the Study Area and JCC's "Dream It-Do It" training program
    - Complete the demolition/remediation of Dahlstrom site

Land Use and Zoning

- The Study Area has been broken into four subareas based on land use and other characteristics:
    - **Chadakoin Outlet District** – Consists of large wetlands and parks as well as significant commercial development and some industrial development
    - **Downtown District** – Contains myriad uses and includes a mixture of residential, commercial, light manufacturing, and vacant uses.
    - **Industrial Heritage Corridor** – Primarily contains a mixture of commercial, residential, and vacant (former industrial) properties.
    - **East End Industrial Area** - Consists of manufacturing facilities that are more modern and fully utilized with some vacant properties and limited residential uses.
- The zoning code was last updated in 1998 and consists of 11 zoning districts including various residential, commercial, manufacturing, and land conservation districts and one historic overlay district.
- In addition to the zoning code, Urban Design Guidelines were prepared in 2006 for five areas of the City, which include a portion of the **Downtown District**.
- Over 50 percent of the Waterfront Revitalization Area is publicly owned, and much of that is concentrated in the parks and wetlands in the **Chadakoin Outlet District**.

Brownfield, Vacant, and Underutilized Sites

- The Waterfront Revitalization Area includes 65 sites categorized as brownfield, underutilized and vacant sites.
- The 65 sites occupy approximately 250 acres and are assessed at almost $15.2 million

Water-Dependent and Water–Enhanced Uses

- Despite its location along the Chadakoin River, the Waterfront Revitalization Area contains only a limited number of water-dependent and water-enhanced uses.
- Significant opportunities exist to expand water-related uses throughout the Waterfront Revitalization Area.

Infrastructure

- The City's utility and transportation infrastructure was designed to support a larger population and more commercial and industrial users.
- The infrastructure is in relatively good shape and has excess capacity.

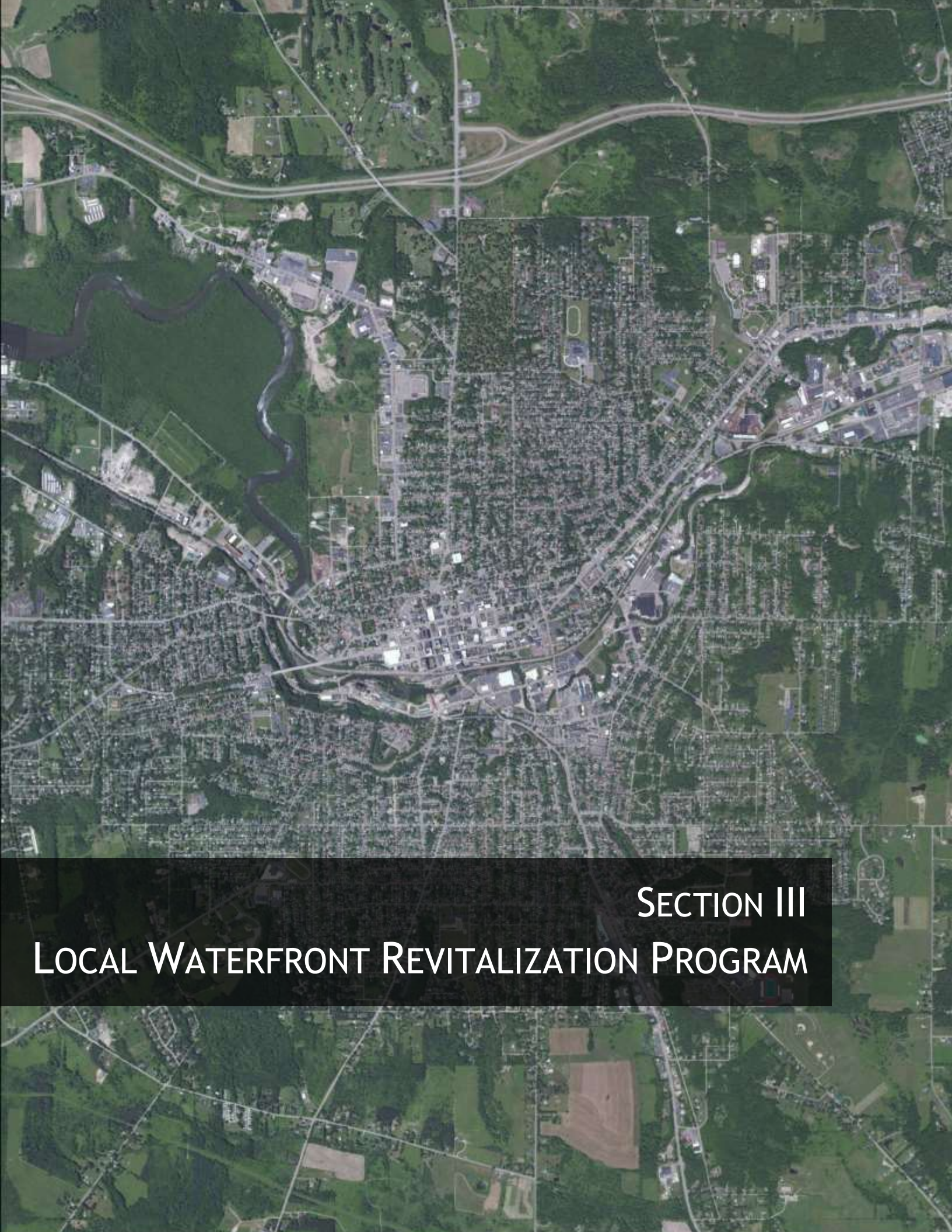
- The low-cost power and district heat provided by the BPU present opportunities to foster new development.
- The River and railroad, elevated in some places, require the use of bridges and underpasses, making pedestrian access and traffic flow challenging in places.
- Ample parking exists within the **Downtown District** north of the River, although public parking south of the River and in the other subareas is limited and will need to be expanded to facilitate access to the waterfront.

Environmental and Ecological Considerations

- Wetland and River protection
    - The wetland complex in the **Chadakoin Outlet District** is of high quality and occupies over 350 acres
    - Concerns at the wetlands include:
        - Encroachment by development
        - Invasive species management
    - Opportunities for wetland restoration exist throughout the Waterfront Revitalization Area
- A riparian treatment zone does not exist within large portions of the Study Area. A riparian treatment should be created along key portions of the River to protect habitat, improve water quality, and provide additional opportunities for residents to take advantage of the River.
- The presence of the Spiny Softshell Turtle, a Species of Special Concern, presents opportunities to increase habitat and nesting areas and an enhanced riparian treatment zone along key portions of the Chadakoin.
- Fishing in the River has become more popular as the quality and amount of access to the River has improved.
- Floating garbage accumulates above the Warner Dam and is later flushed down the River when the flood gates are opened.
- The quality and extent of aquatic habitat could be improved through the creation of living shorelines
- The incorporation of fishing friendly structures could be made to existing bulkheads.
- Water quality within the River is listed as moderately impacted with metals and other contaminants. Opportunities exist to improve water quality, including:
    - The use of green infrastructure to mitigate stormwater impacts.
    - Improved management of stormwater from existing development along the River.
    - Working with businesses with potential significant impacts, such as scrap yards and automobile repair facilities, to reduce impacts.

Public Access, Trails and Recreation

- Access to the River within the Waterfront Revitalization Area is limited in some areas due to ownership, topography, and development.
- Access to the River is provided via formal (parks and waterfront trails) and informal (walking paths through vacant properties) trails.
- Opportunities exist to extend the waterfront trail network, although the presence of the railroad, the BPU, and other developments make a continuous trail immediately adjacent to the River impossible.
- Plans exist to extend the waterfront trail along the edge of the wetlands complex (*Phase V of the Riverwalk Trail* aka the ***Chadakoin Park Bike Trail***), which will provide excellent opportunities to increase the ability of residents and visitors to appreciate the city's natural resources.
- Plans exist to extend Riverwalk (*Phase VI of the Riverwalk Trail*) in a continuous loop, connecting Downtown to McCrea Point Park, Chadakoin Park, and beyond.
- Additional efforts should be made to extend the trail network into neighborhoods and greenspace areas to better connect the City of Jamestown's residents with the Downtown and with recreational opportunities.
- The Medical Corridor concept is taking shape in Jamestown, and the creation of a pedestrian trail from the River, using the existing Riverwalk as a starting point, to the hospital would create an important linkage between two of the most important health care facilities in the City (the Riverside Medical Center and the WCA Hospital).



SECTION III
LOCAL WATERFRONT REVITALIZATION PROGRAM



SECTION III – LOCAL WATERFRONT REVITALIZATION PROGRAM POLICIES

The focal point of the LWRP planning process is the adaptation of the State-established waterfront policies by the local communities to meet specific goals. This allows the communities to identify their own waterfront issues and utilize local approaches to address them while maintaining relative consistency with State guidance. Therefore, the following policies for the City of Jamestown are consistent with those established by the State, yet they are specifically tailored to the needs and characteristics of the Chadakoin Riverfront.

This section presents the waterfront revitalization policies and their associated standards that are to be used in guiding appropriate development and actions for the Chadakoin Riverfront and associated Jamestown Waterfront Revitalization Area as defined earlier. They consider the economic, environmental, and cultural characteristics of Jamestown. The policies are comprehensive, and reflect existing laws and authority regarding development and environmental protection. Taken together, these policies and their associated standards are used to determine the appropriate balance between economic development and preservation that will permit beneficial use of and prevent adverse effects on Jamestown's riverfront resources.

3.1 DEVELOPED WATERFRONT POLICIES

POLICY 1:

Foster a pattern of development within the City of Jamestown's Waterfront Revitalization Area that enhances community character, preserves open space, makes efficient use of infrastructure, makes beneficial use of a waterfront location, and minimizes adverse effects of development.

The community character of Jamestown is defined by a pattern of urban development with a strong physical relationship to Chautauqua Lake and the Chadakoin River. The River basically follows a west to east orientation as it meanders through the City. The development patterns fall in four primary groups (defined in Section I of this document) along the River from west to east:

- Chadakoin Outlet District – Wetland areas are the prevailing land use. Also included are former industrial sites, residential and commercial.
- Downtown District – This is the central business district and has land uses that include business, service and commercial uses.
- Industrial Heritage Corridor – This area contains some active, heavy industrial uses mixed with former industrial lands along the River in this

area. Residential properties are found on the hillsides along the edges of the corridor.

- East End Industrial Corridor – This area includes many modern manufacturing facilities which are currently underutilized or fully active. Industrial lot sizes are generally larger than in the Industrial Heritage Corridor. Along the outer edges of this corridor uses include residential and some commercial.

The longstanding planning goal for the riverfront area of the City has been to reclaim and rehabilitate the riverfront area and revitalize this section of the City through economic redevelopment, increased recreational opportunities and establishment of community-oriented social activities and the facilities to accommodate them.

This policy is intended to foster a development pattern that provides for beneficial use of the riverfront resources of the City of Jamestown. The primary components of the desired development pattern are to:

- Encourage increased contact with the water through further extension of the Riverwalk Trail and other amenities to provide public access and exposure to the River while enhancing and preserving the ecological function of the River and associated floodplain
- Reuse existing, architecturally significant building stock and historically/ culturally significant sites along and near the Riverfront as centers of activity
- Foster educational opportunities, specifically ones that focus on the importance of the River in the development of the community
- Create an animated and activated waterfront through programming and amenities; thereby drawing people to the waterfront and creating a catalyst for private investment
- Create transition zones between the River and the uplands that promote contact with the waterfront via more hardscaped zones in the Downtown District and vegetated, natural riparian zones in the remaining areas.

POLICY 1.1:

Concentrate development and redevelopment in order to revitalize deteriorated and underutilized waterfront sites and strengthen the overall waterfront focus of the City of Jamestown.

New development or redevelopment should be located where infrastructure is adequate or can be upgraded to accommodate such development. The scale of development or redevelopment along the waterfront should be appropriate to the setting and character of the area and highlight existing resources, such as the local history and important natural or man-made features to reinforce community identity. Enhancement, development and/or redevelopment efforts should be primarily focused in four general areas:

1) Within the **Chadakoin Outlet District,** shoreline preservation/restoration would help mitigate flood events and provide valuable habitat
2) Along/near the southern and to a limited extent northern side of the Chadakoin River between Main Street and the BPU facility
3) Within the Medical Corridor in the vicinity of Foote, Institute, and Harrison Streets
4) Along River Street within the **Industrial Heritage Corridor**

McCrea Point is, in many ways, a gateway between Chautauqua Lake and Downtown Jamestown, and redevelopment efforts should reflect this, including the development of an actual gateway feature that welcomes residents, workers and visitors and provides a linkage to the waterfront. A Nature and Educational Center which highlights the River's importance in the historical development of the community and celebrates the valuable and beautiful ecological resources located in the vicinity (including the Chadakoin River and Class 1 wetland complex) should be constructed near or within McCrea Point Park to serve as the City's gateway feature. The center should include a transportation hub which connects boat users, vehicular users, and pedestrians/bicyclists with some form of public transportation which connects with the Downtown.

The area along/near the eastern shoreline of the Chadakoin River within the **Chadakoin Outlet District** should be designed for recreational and natural education purposes while respecting the ecological integrity of the many nearby natural resources. Enhancements should include construction of the ***Chadakoin Park Bike Trail*** connecting the NYS Bicycle Route 17 through Chadakoin Park (rather than along Washington Street) and construction of boardwalks through the wetland complex for educational purposes. Limited mixed use development which respects the ecological integrity of the area and provides ancillary support for the trail, Chadakoin Park, and the Nature and Educational Center should be encouraged.

The area along the Chadakoin River between Main Street and the BPU facility within the **Downtown District** should be designed and developed as a focus for activity, drawing locals and tourists alike to the area and linking Chautauqua Lake to the Downtown via several modes of transportation. Development should concentrate on integration with the Riverwalk Trail network and promote programmable spaces.

Revitalization efforts in the City should focus on creating conditions that will bring people to the waterfront and drive economic activity in these areas. One result of the increased demand for property along the waterfront within the **Downtown District** will be the gradual phasing out of existing non-water-compatible uses located along the waterfront. As the Study Area transitions into a vibrant waterfront, existing businesses with inconsistent uses may opt to take advantage of the increased property values to relocate to other, more appropriate areas of the City (such as the East End Industrial Corridor). When these situations arise, the City should work closely with these business owners to assist with the selection of new property within the City that meets the needs of the businesses as well as is consistent with the vision for the redevelopment of the City. Until such a time,

however, screening techniques should be utilized, wherever appropriate, to screen the non-water-compatible uses from view of the waterfront.

The Medical Corridor in the vicinity of Foote, Institute, and Harrison Streets within the **Downtown District** should be designed and developed in a comprehensive and thematic way, linking the growing medical uses within the area while taking advantage of the "healthy" recreational opportunities associated with the nearby waterfront.

The area along River Street within the **Industrial Heritage Corridor** should be assembled and evaluated for environmental concerns with the ultimate goal of providing shovel ready sights for industrial development. The focus of development within in the **East End Industrial Corridor** should be as in-fill of commercial and industrial operations to most effectively utilize land in this already developed area. In both areas, waterfront development should allow for improved access to the River for workers in the area as well as the public.

In all cases, development and redevelopment decisions should be compatible with ecological/watershed health, community and regional needs, as well as market demands. In addition, the environmental quality of degraded areas should be restored and environmental resources (such as water quality in the River) and the functions of environmental resources (such as the ability of wetlands to filter urban runoff) should be recognized and enhanced during the development or redevelopment of certain areas. The following items should be considered:

1. New development should be located where infrastructure is adequate or can be upgraded to accommodate new development or redevelopment.

2. The following planning principles should be used to guide investment and the preparation of development strategies and plans for the waterfront:
    a. Scale development to be appropriate to the setting.
    b. Design development to highlight existing resources, such as local history and important natural and man-made features to reinforce community identity.
    c. Design the waterfront as a focus for activity that draws people to the area.
    d. Provide and improve integrated linkages between the waterfront and upland portions of the community, including the use of appropriate directional signage, particularly for the residential neighborhoods that have been isolated from this area.
    e. Create "Complete Streets" (discussed in detail in the attached Ecological Conditions and Living Infrastructure Framework document) as appropriate.
    f. Meet community and regional needs and market demands when making development choices so that the end product provides a useful service and benefits and connects with the surrounding area.
    g. Recognize and enhance existing environmental resources and functions during development and devise ways to blend

environmental preservation into site design, wherever appropriate, to achieve development without adversely impacting important environmental resources and ecological function.

h. Restore environmental quality to degraded areas for both resource preservation and urban revitalization.

3. All development or uses should recognize the unique qualities of both the man-made and natural waterfront by:
    a. Using building and site design to make beneficial use of the waterfront location and associated waterfront resources.
    b. Minimizing consumption of waterfront lands that does not meet the intent of this policy or that would result in potential adverse impacts on man-made and natural resources.
    c. Incorporating recreational activities, public access, open space and other such amenities into waterfront designs, as appropriate, to enhance the subject site and the surrounding community, and to increase visual and physical access to the Chadakoin River while supporting of enhancing ecological function.
    d. Attracting people to the waterfront, as appropriate to the use.
    e. Reinforcing community identity by highlighting local history and ecology and important natural and man-made features.
    f. Ensuring that design and siting of uses and structures complements the surrounding community and landscape, particularly within the central business district.
    g. Using native plants as components of landscape design to improve habitat and water quality, and to lessen water demands.
    h. Using appropriate signage and other amenities to promote tourist activities and ensure better wayfinding along the waterfront.

POLICY 1.2:

Ensure that development or uses make beneficial use of their waterfront location.

All uses proposed for the waterfront should relate to the unique character of the waterfront area and should be appropriate for the location. Along the waterfront, water-dependent uses should be promoted and given precedence over other types of development. Existing water-dependent uses should be protected. Development that is not dependent on a waterfront location or that cannot make beneficial use of such a location should be discouraged. Water-enhanced uses may be encouraged where they are compatible with surrounding development and ecological resources and are designed to make beneficial use of their location along the River, particularly if they reinforce a nearby water-dependent use. Development inconsistent with the intended goals of waterfront development should be discouraged.

1. Future water-dependent uses and water-enhanced uses should be sited and designed to:
    a. Attract people to or near the waterfront and provide opportunities for access.
    b. Provide public views to or from the water.
    c. Promote ecological function in natural resource areas.
    d. Link the waterfront to adjoining business districts.
    e. Link the waterfront to adjoining residential neighborhoods.
    f. Create space between built structures and the River to allow access to the water (in the **Downtown District**) and/or create riparian treatment zones (in the remaining Districts).
    g. Improve community character and enhance surrounding land and water resources.

2. Future uses should be avoided that would:
    a. Result in unnecessary and avoidable loss of waterfront resources such as waterfront access and water quality.
    b. Result in adverse effects on the existing ecological resources (viz., wetlands and open space for habitat).
    c. Ignore the waterfront setting as indicated by design or orientation.

3. Current uses should be modified as appropriate to increase the consistency of character within each subarea of the waterfront:
    a. Development with waterfront-compatible uses should be encouraged to embrace their waterfront location and create amenities that take advantage of the waterfront.
    b. When market conditions along the **Downtown District** waterfront improve, increasing waterfront property values and making it financially favorable for existing waterfront-incompatible uses to relocate to other portions of the City (such as industrial operations moving to the **East End Industrial Corridor**), redevelopment projects that improve scenic and environmental impacts on the waterfront should be encouraged.

POLICY 1.3:

Protect and improve stable residential areas.

Residences in and around the waterfront contribute to the vibrancy of the area through providing living accommodations close to the River, thus encouraging human contact and interaction with the waterfront. The existing residential neighborhoods along and near the waterfront are important to the overall community character and economic functioning of the area.

The following standards should be considered when reviewing proposed projects:

- New development located in or adjacent to residential areas should be compatible with neighborhood character.
- New uses in stable residential neighborhoods should be avoided when their size or scale would significantly impact the character of the area.
- New construction, redevelopment and associated screening, such as fences and landscaping, should not reduce or eliminate vistas that connect local residents or visitors to the waterfront or views that are otherwise important to the surrounding area.
- Buffering that does not reduce or eliminate vistas that connect people to the water may be considered to separate non-compatible uses.
- The loss of informal access points to the waterfront should be evaluated. In the case of a loss of access points, the provision of new public access points shall be encouraged.
- The primary type of residential dwelling within the Study Area is the single-family home. However, many residents are better served with a variety of residential offerings. Multi-tenant condominiums or other such dwelling are becoming the preferred dwelling in urban areas, and such units would be appropriate for the **Downtown District**. Therefore, this type of development should be encouraged.

Public access improvements should also be emphasized to better establish the connection between residential areas and the waterfront. Linkages are also important and should be created through the creation of spurs from the Riverwalk Trail system into neighborhoods along 'green streets.'

POLICY 1.4:

Maintain and enhance natural areas, recreation areas, and open space.

Natural areas, open space and recreational lands provide many health, economic, and cultural benefits to the public. Some of these benefits may be felt immediately while others may be less tangible, but more long-term in effect. In addition to scenic and recreational benefits, these lands also support habitat for important fish and wildlife and provide watershed management for flood control benefits. Special consideration should be given to protecting freshwater wetlands, natural shorelines, and significant habitats. The expansion of infrastructure into undeveloped areas should be avoided where such expansion would be detrimental to waterfront resources, important natural resources, or the character of the waterfront community, particularly in the **Chadakoin Outlet District**.

To enhance community character and maintain the quality of the natural environment, potential adverse impacts that may result from site development, including impact to existing development, the physical environment, and economic factors should be identified and avoided. Development and redevelopment should be designed to take advantage of significant site characteristics, limit the

disturbance of important natural resources, foster visual compatibility with the surrounding area, and maintain the continuity of public access along the water's edge in a way that is respectful of ecological function.

1. Adverse impacts on natural resources should be avoided, including, but not limited to:
    a. Deterioration of water quality.
    b. Loss, fragmentation, and impairment of habitats and wetlands.
    c. Changes to the natural River processes that would increase shoreline flooding and erosion.

2. Continue to extend Riverwalk along/near the waterfront and into nearby residential neighborhoods, ensuring that it is sufficiently wide enough to allow for pedestrian and bicycle travel.

3. The expansion of infrastructure into undeveloped areas should be avoided where such expansion would promote growth and development that would be detrimental to important natural resources or in any way impact or reduce opportunities for public recreation.

POLICY 1.5:

Minimize potential adverse land use, environmental and economic impacts that would result from proposed development within the Waterfront Revitalization Area.

To enhance community character and maintain/improve the quality of life along the waterfront in the City of Jamestown, the potential adverse impacts of new development and redevelopment on existing land uses, ecological function in the natural environment and the local economy should be properly assessed and mitigated, as required. Development should reflect the recognition of existing site characteristics, limit disturbance of land and water, and foster visual compatibility with surrounding areas. The size and scale of development or redevelopment should be compatible with the character of the surrounding area, the adjacent Riverfront and the City as a whole.

Cumulative and secondary adverse impacts from development and redevelopment should be properly assessed and minimized. Cumulative impacts are the result of the incremental or increased impact of repetitive actions or activities when added to other past, present, or future actions or activities. Secondary impacts are those that are foreseeable, but occur at a later time or at a greater distance from the action, and are caused by an action or activity, whether directly or indirectly.

1. Potential adverse land use impacts should be minimized as follows:
    a. Develop in a manner consistent with surrounding land uses and the intended future land use of the waterfront.

2. Potential adverse environmental impacts should be minimized as follows:
    a. Consider potential impacts to water quality, ecology and other environmental concerns.
    b. Promote integrated design along the waterfront that celebrates ecological function, while improving public access and waterfront amenity.
    c. Improve habitat and increase green space whenever possible.

3. Potential adverse economic impacts should be minimized as follows:
    a. Prevent deterioration of the waterfront and the surrounding area by eliminating derelict and dilapidated conditions.
    b. Avoid uses that detract from community character of the waterfront.
    c. Prevent the isolation of community uses and people from the waterfront.
    d. Protect and enhance the economic base of the community and promote diverse economic activity.

POLICY 2:

Preserve historic resources within the City of Jamestown's Waterfront Revitalization Area.

The historic resources in the City of Jamestown are a reminder of the community's early development and its rich waterfront tradition. The **Chadakoin Outlet District** and the western portion of the **Downtown District** (particularly McCrea Point) have a significant cultural and waterfront history that should be celebrated. Additionally, the **Industrial Heritage Corridor** and to a certain extent the **East End Industrial Corridor** have a notable industrial heritage that should be recognized. These resources not only provide points of interest for residents and tourists, they become valuable links with the region's past. This policy recognizes the importance of preserving such treasures, as well as the overall quality of the adjacent areas.

Three structures within the Waterfront Revitalization Area are listed on the State or National Register of Historic Places. In addition, the New York State Archaeological Sensitivity Map identifies large portions of the Waterfront Revitalization Area as containing Archeologically Sensitive Areas. These areas include the northern and southern portions of the **Chadakoin Outlet District**, the western portion of the **Downtown District**, the eastern portion of the **Industrial Heritage Corridor**, and the entire **East End Industrial Corridor**.

Both archeological sites and historic structures are tangible links to the past development of the City of Jamestown. They are important components in defining the area's distinctive identity and heritage. The intent of this policy is to preserve

the historic and archeological resources within the City of Jamestown's Waterfront Revitalization Area by encouraging and promoting private efforts to restore, conserve and maintain historic structures.

Historic resources that would be covered under this policy include those structures, landscapes, districts, areas or sites, or underwater structures or artifacts that are listed or designated as follows:

- Any resource on, nominated to be on, or determined to be eligible for listing on the National or State Register of Historic Places;
- Any cultural resource managed by the State Natural and Historic Preserve Trust or the State Natural Heritage Trust;
- Any archaeological resource that is on the inventories of archaeological sites maintained by the State Education Department or the State Office of Parks, Recreation and Historic Preservation; and,
- Any locally designated historic or archaeological resources protected by a local law or ordinance.

Additionally, other structures and landmarks may be of significance and could be designated as such under one of the programs listed above. In such cases, the following elements would be used to determine the potential significance of the structure or landmark:

- In identifying those elements that are important in defining the character and value of an historic resource, designation information, available documentation and original research should be used.
- Important character-defining elements of the resource should be identified in terms of:
    - Time, place and use;
    - Materials, features, spaces and spatial relationships;
    - Setting within the physical surroundings and community; and,
    - Association with historic events, people or groups.
- The value of the historic resource should be determined as indicated by:
    - Its membership within a group of related resources, that would be adversely impacted by the loss of any one of the group;
    - The rarity of the resource in terms of the quality of its historic elements or in the significance of it as an example; or,
    - The significance of events, people or groups associated with the resource.

POLICY 2.1:

Maximize preservation and retention of historic resources.

This policy provides standards by which the rich historical resources within the City of Jamestown's Waterfront Revitalization Area should be protected and preserved. This can be accomplished through public expenditures where feasible, and through prohibiting incompatible development on adjacent lands which could destroy the

character of the historic resource. The City of Jamestown can help preserve, protect and enhance historic resources through the following:

1. Recognize that public investment in historical development is important to illustrate a commitment to the business community who may later invest. Appropriate public improvements should be completed; funds, in the form of existing grants or low interest loans, are available and should be sought for these improvements.

2. Promote the designation and protection of historic landmarks that reflect elements of the region's culture, social, economic, political and architectural history. These landmarks should be rehabilitated, when possible, and promoted in the community.

3. Potential impacts to historic resources in the Waterfront Revitalization Area should be thoroughly evaluated through the environmental review process. All practical means should be utilized to preserve identified resources and mitigate or avoid potential adverse impacts.

4. The historic character of significant resources identified in the City shall be preserved by protecting historic materials and features as follows:
    a. Evaluate the physical condition of important materials and features.
    b. Stabilize materials and features to prevent further deterioration.
    c. Protect important materials and features from inadvertent or deliberate removal or damage.
    d. Ensure the protection of historic elements through a program of non-intrusive maintenance of important materials and features.

5. Repair historic materials and features using recognized preservation methods when physical condition warrants such repair.

6. Foster uses that maximize retention of the historic character of a resource and minimize alterations so as to preserve and retain the character of the structure.
    a. Alterations should not obscure, destroy or radically change character defining spaces, materials, features or finishes in order to reduce adverse impacts to the resource.
    b. Alterations may include selective removal of features that are not historic elements of the resource and its setting and that detract from the overall historic character of the resource.
    c. Minimize potential negative impacts on the historic character of the resource due to necessary updates to systems in order to meet health and safety code requirements or to conserve energy.
    d. In constructing new additions, use appropriate design and construction to minimize adverse impacts to historic character and allow for the visual compatibility of the new and old sections of structure.

7. The loss of historic resources or the historic character of the area shall be minimized when it is not possible to completely preserve the resource.
    a. Historic structures should be relocated only when the resources cannot be preserved in place.
    b. Demolition of a resource should only be allowed where alternatives for retention are not feasible.

8. Avoid potential adverse impacts of development and redevelopment on adjacent or nearby historic resources.
    a. Historic resources should be protected by ensuring that development is compatible with the historic character of the affected resource.
    b. Potential development should be designed to a size, scale, proportion, mass and with a spatial relationship compatible with the historic resource.
    c. Potential development should be designed using materials, features, forms, details, textures and colors compatible with similar features of the historic resource.

9. Limit adverse cumulative impacts on historic resources.
    a. Minimize the potential adverse cumulative impact on an historic resource that is a member of a group of related resources, which may be adversely impacted by the loss or diminution of any one of the members of the group.
    b. Minimize the potential cumulative impacts of a series of otherwise minor interventions on an historic resource.
    c. Minimize potential cumulative impacts from development adjacent to the historic resource.

POLICY 2.2:

Protect and preserve archeological resources.

This policy provides standards by which the archeological resources within the City of Jamestown's Waterfront Revitalization Area should be protected and preserved. The significance of the Chadakoin River waterfront to early settlements requires that a careful review of archaeological resources be made prior to undertaking any action. Every effort should be made to identify and protect archaeological resources significant to the community.

A cultural resource investigation should be conducted when an action is proposed on an archeological site, fossil bed, or in an area identified for potential archeological sensitivity on the archeological resources inventory maps prepared by the New York State Historic Preservation Office. If impacts are anticipated on a significant archeological resource, the following actions should be undertaken:

1. Potential impacts to archaeological resources in the Waterfront Revitalization Area should be thoroughly evaluated through the environmental review process.

2. When a development action is proposed in the City of Jamestown, an assessment of potential cultural resources will be conducted.
    a. The assessment will consist of, at a minimum, a review of existing literature on cultural resources.
    b. A site survey may be necessary to determine the presence or absence of cultural resources in the project area.
    c. If cultural resources are discovered as a result of the initial survey, a detailed evaluation will be conducted to provide adequate data to allow for a determination of the significance of the archaeological resources.

3. If the potential for impacts to an archaeological resource exists, adverse impacts shall be minimized by:
    a. Redesigning the project,
    b. Mitigating direct impacts on the resources, or
    c. Recovering significant data/resources prior to construction.

4. Disturbance or adverse impacts to any archaeological resources situated on or under lands owned by the State of New York shall be avoided. These resources may not be appropriated for private use.

5. With respect to activities that involve excavation in the City of Jamestown, public agencies and utilities should contact the New York State Office of Parks, Recreation and Historic Preservation to determine appropriate protective measures for archaeological resources.

POLICY 2.3:

Protect and preserve significant cultural resources.

The Chadakoin River has been the site of substantial historic development activity that has contributed to its culture and its identity. This policy addresses the importance of maintaining these cultural resources and integrating them into the City's modern culture. It is recognized that these resources can play a significant role in marketing efforts and in the overall economic development of the area.

1. An inventory of cultural and archeological site and cultural events would play a key role in the protection and preservation of significant historic resources. This information could then be integrated into local historical literature. Local officials could then work with State to determine whether any of the information collected is worthy for inclusion on the State or National Register of Historic Places.

2. Where appropriate, seek to preserve the historic character of the City of Jamestown's Waterfront Revitalization Area. The City should strive to maintain appropriate scales, intensity of use and architectural style in this area. In addition, interpretive materials should be provided to foster appreciation and understanding of the area's maritime heritage and development.

POLICY 3:

Enhance visual quality and protect scenic resources throughout the City of Jamestown's Waterfront Revitalization Area.

Waterfront landscapes possess inherent scenic qualities. The presence of water and the ever-changing views and visually interesting working landscape draw people to the water's edge. Due to their importance, scenic resources should be considered in balancing the wise use and conservation of the waterfront.

In many areas of the City of Jamestown, the waterfront can be difficult, if not altogether impossible, to see. While historically the development of Jamestown centered on the River, with the introduction of the rail, increased pollution of the River, and diminished need for hydro-electric power, the City turned its back on the River. In many cases industries even built over the top of the River (ex. Dahlstrom Complex, Brooklyn Square, etc.). The City has worked tirelessly to reintroduce the River as a positive asset to the community. In doing so, several areas of the waterfront are now visually accessible to the general public, particularly from Riverwalk, the bridges, and public parks. However, many hidden gems are still not publically accessible and wait to be incorporated into the community's growing list of scenic resources. The visual character and quality of the Chadakoin River and surrounding natural environment, including sufficient visual access, are important resources that should be enhanced and protected.

POLICY 3.1:

Protect and improve the visual quality of the Chadakoin River.

The area surrounding the Chadakoin River provides a growing number of opportunities for enjoying high quality scenic vistas of the waterfront and surrounding urban and natural environments. The City of Jamestown needs to protect existing areas of high visual quality and improve areas with poor or non-existent visual quality of the Chadakoin River (see Figure 16) by adhering to the following standards and guidelines:

1. Minimize introduction of components which would be discordant with existing scenic components and character.

2. Restore deteriorated and remove degraded visual components.

3. Screen components which detract from visual quality.

4. Use appropriate siting, scale, form, and material to ensure structures are compatible with and add interest to existing scenic components.

5. Development should proceed in a manner that improves, or, at a minimum, does not negatively impact visual quality.

6. Preserve existing vegetation and establish new native vegetation to enhance scenic quality:
    a. Preserve existing vegetation, which contributes to the scenic quality and ecological function of the landscape.
    b. Allow for limited, selective clearing of non-native or invasive vegetation to provide public views without impairing values associated with the affected ecological function.
    c. Restore historic or important designed landscapes to preserve intended or designed aesthetic values.
    d. Restore or add vegetative cover that presents a natural appearance and enhances ecological function along riparian corridor.

7. Improve the visual quality of historic structures and sites throughout the waterfront area as defined in this LWRP.

8. To the extent possible, enhance and protect the visual interest provided by active water-dependent uses.

9. Anticipate and prevent impairment of dynamic landscape elements that contribute to ephemeral visual qualities, such as the seasonality of native vegetation along the River corridor and uplands.

10. Protect visual quality associated with public lands, including public transportation routes, public parks and public trust lands and waters.
    a. Limit water surface coverage or intrusion to the minimum amount necessary.
    b. Limit alteration of shoreline elements which contribute to scenic quality and ecological function.

11. Protect visual quality associated with open space and natural resources.
    a. Promote shoreline enhancements that enhance visual quality while strengthening ecological function.
    b. Maintain or restore original landforms except where altered landforms provide useful screening or contribute to scenic quality.
    c. Group or orient structures to preserve open space and provide visual organization.
    d. Avoid structures or activities which introduce visual interruptions to natural landscapes including:

i. Introduction of intrusive artificial light sources
ii. Fragmentation of, and structural intrusion into open space and natural resource areas
iii. Modifications to the continuity and configuration of natural shorelines and associated vegetation

3.2 NATURAL WATERFRONT POLICIES

POLICY 4:

Minimize loss of life, structures, and natural resources from flooding and erosion.

Based on the fact the Chadakoin River is the only outlet of Chautauqua Lake, water level and flooding concerns within the LWRP Study Area are directly impacted by the needs of Chautauqua Lake. Considerable study has been done on lake levels and flooding around Chautauqua Lake and along its outlet at the Chadakoin River. Recognizing that both high water levels and low water levels may cause property damage, and cause difficulties to riparian property owners, the Chautauqua County Planning Department, the New York State Department of Environmental Conservation and the Jamestown Board of Public Utilities worked to address standard lake level regulation. Through a contractual agreement between these three agencies, and in accordance with the Chautauqua Lake Regulation Plan, the lake levels may be influenced by means of controlled releases through the Warner Dam to provide for optimum flood storage capacity and recreation season conservation storage. These efforts have helped to minimize the risk of flooding in both the Lake and Riverfront communities in a cost effective manner, yet in no way can these efforts guarantee that flooding will not occur.

The large wetland complexes located within the **Chadakoin Outlet District** compose the majority of the 100-year floodplains within the LWRP Study Area. Narrow 100-year floodplains can be found along the River downstream of the wetland complexes, most located in the **East End Industrial Corridor**. The City of Jamestown participates in the National Flood Insurance Program (NFIP) and development in the floodplain is regulated under Chapter 145 of the City Code – Flood Damage Prevention. This law is designed to promote the public health, safety and general welfare and to minimize public and private losses due to flood conditions in specific areas, as designated on the Flood Insurance Rate Maps. Pursuant to Chapter 145, all construction and other development that is proposed within the regulated areas of special flood hazard requires a floodplain development permit from the Building Inspector and must be in compliance with the standards outlined in the law.

Erosion of the shoreline of the Chadakoin River has not been a significant problem to date as much of the shoreline is armored, particularly in the **Downtown District**, the **Industrial Heritage Corridor**, and to a slightly more limited extent, the **East End Industrial Corridor**.

POLICY 4.1:

Minimize flooding and erosion within the City of Jamestown's Waterfront Revitalization Area through the use of appropriate management measures.

This policy includes standards directed at protecting life and property using measures that are presented in order of priority. These areas are designated by the State Department of Environmental Conservation pursuant to the Coastal Erosion Hazard Areas Act of 1981 (Article 34 of the Environmental Conservation Law), and any coastal area included within a V-zone on Flood Insurance Rate Maps prepared by the Federal Emergency Management Agency pursuant to the National Flood Insurance Act of 1969 (P.L. 90-448) and the Flood Disaster Protection Act of 1973 (P.L. 93-234).

1. Enhance existing natural protective features by the use of non-structural measures that are likely to manage erosion.

2. Use vegetative, non-structural measures to manage flooding and erosion where shoreline characteristics allow.

3. Locate development and structures away from areas of known flooding and erosion hazards.

4. While it is acknowledged that usable land area can be lost with the installation of erosion and flood control measures, every effort will be made to prevent the loss of public lands and public trust lands. Most lands under water are held by the State in the public trust, unless ownership has been granted to an upland owner. Even if filling for erosion control takes place, ownership of the filled land remains with the State.

POLICY 4.2:

Preserve and restore natural and man-made protective features within the City of Jamestown's Waterfront Revitalization Area.

Natural protective features include unique elements of the non-built environment such as wetlands and associated natural vegetation. As flooding and erosion control protective features, these are considered superior to man-made protective features and should be preserved whenever possible.

Natural protective features that minimize the potential for flooding and erosion shall be restored and preserved to the maximum extent practicable. Development and other activities shall maximize the protective capabilities of natural protective features by:

1. Minimizing interference with natural shoreline/waterfront processes by limiting intrusion of structures into surface waters and associated wetlands.

2. Using practical vegetative approaches to stabilize natural shoreline and stream bank features.

3. Avoiding alteration or interference with natural conditions.

4. Enhance existing natural protective features.

5. Restoring the condition of impaired natural protective features wherever practical.

6. Managing activities to limit damage to, or reverse damage which has diminished the protective capacities of natural features.

7. Providing relevant signage or other educational or interpretive material to increase public awareness of the importance of natural protective features.

8. Implementing proper maintenance and operation of the Warner Dam to minimize the potential for flooding and erosion.

POLICY 4.3:

Properly manage navigational infrastructure to minimize adverse impacts on waterfront areas and riverfront processes.

Much of the Chadakoin River as it passes through the City cannot readily support navigation. However, to the extent that portions of the River (to the west of the Warner Dam) can support navigation, the applicable U.S. Army Corps of Engineers and New York State Department standards would apply.

POLICY 4.4:

Expend public funds for the management or control of flooding and erosion only in areas that will result in proportionate public benefit.

Give priority in the expenditure of public funds to actions that will protect public health and safety, mitigate past flooding and erosion impacts, protect areas of intensive development, and protect substantial public investment (land, infrastructure, facilities).

1. The expenditure of public funds for flooding and erosion control projects:
    a. Should be limited to those circumstances where public benefits exceed public costs;

   b. Is prohibited for the exclusive purpose of flooding and erosion protection for private development; and
   c. May be apportioned among each level of participating governmental authority according to the relative public benefit accrued.

2. Factors to be used in determining public benefits attributable to the proposed flood or erosion control measure include the:
   a. Economic benefits derived from protection of public infrastructure and investment and protection of water-dependent commerce.
   b. Protection of significant natural resources.
   c. Integrity of natural protective features.
   d. Extent of public infrastructure investment.
   e. Extent of existing or potential public use.

The application of these factors indicate that public expenditure for erosion and flood control projects may be warranted in developed centers.

POLICY 5:

Protect and improve water resources within the City of Jamestown's Waterfront Revitalization Area.

The purpose of this policy is to protect the quality and quantity of surface water in the City of Jamestown Waterfront Revitalization Area, including the Chadakoin River, one classified tributary, and numerous non-classified water bodies. Water quality considerations include the management of both point and non-point source pollution. Water quality protection and improvement must be accomplished by managing new, and remediating existing, sources of water pollution.

POLICY 5.1:

Prohibit direct or indirect discharges, which would cause or contribute to contravention of water quality standards and targets in local surface waters.

The following standards apply to discharges within the Study Area:

1. Prevent point source discharges to the surface waters of the Chadakoin River, tributaries, and other water bodies, and manage or avoid land uses that would:
   a. Exceed discharge limits specified by State Pollution Discharge Elimination System (SPDES) permits for industrial and municipal discharges.

b. Exceed established and applicable effluent requirements or cause or contribute to the contravention of water quality classifications and use standards.
c. Materially and adversely affect the quality of receiving waters.

2. Ensure effective treatment of sanitary waste and industrial discharges by:
    a. Maintaining efficient operation of sanitary wastewater and industrial waste treatment facilities.
    b. Providing, at a minimum, effective secondary treatment for sanitary sewage.
    c. Modifying existing sewage treatment facilities to provide improved nitrogen removal capacity.
    d. Incorporating treatment beyond secondary, when funding is available to the extent economically feasible, with particular focus placed on nitrogen removal, as part of new or upgraded wastewater treatment plant design.
    e. Reducing demand on treatment facilities by:
        i. Reducing infiltration of excess water in collection and transport systems.
        ii. Eliminating unauthorized collection system hookups.
        iii. Pre-treating industrial waste.
        iv. Limiting discharge volumes and pollutant loadings to or below authorized levels,
        v. Requiring the installation of low-flow water conservation fixtures in all new development and when replacing fixtures in existing development.
        vi. Controlling and reducing the loadings of toxic materials into the surface waters of the River, tributaries, and other water bodies by including limits on toxic metals as part of wastewater treatment plant effluent permits and by enforcing existing pretreatment requirements.
    f. Reducing or eliminating combined sewer overflows.
    g. Providing and managing on-site wastewater disposal (septic) systems by:
        i. Using on-site systems only when impractical to connect with a public sewer system.
        ii. Protecting surface and groundwater against contamination from pathogens and excessive nutrient loading by keeping septic effluent separated from these resources and by providing adequate treatment of septic effluent.
        iii. Encouraging evaluation and implementation of alternative or innovative onsite sanitary waste systems and technologies to remediate systems that currently do not adequately treat or separate effluent.

POLICY 5.2:

Minimize non-point source pollution entering surface waters and manage activities that cause non-point source pollution.

Non-point pollution is that which originates from sources that are not localized or easily identifiable. In general, non-point pollution results from various ways that the land is used: runoff from farms and agricultural operations, drainage and runoff from urbanized areas, or littering by people living or traveling in an area. As such, measures can be taken which can prevent or alleviate non-point pollution in the Chadakoin River area.

Minimize non-point pollution of the City of Jamestown's water resources using the following approaches, presented in order of priority:

1. Limit or eliminate non-point sources of pollution by:
    a. Reducing or eliminating the introduction of materials that may contribute to non-point source pollution.
    b. Prohibiting the uncontained storage of materials that may contribute to the pollution of surface or groundwater in the waterfront area.
    c. Minimizing activities that would increase off-site stormwater runoff and the transport of pollutants.
    d. Controlling and managing stormwater runoff to minimize the transport of pollutants, restore (to the greatest extent possible) degraded natural stormwater runoff conditions, and achieve a no-net increase of runoff where unimpaired stormwater runoff conditions exist.
    e. Retaining or establishing vegetation to maintain or provide soil stabilization and filtering capacity.
    f. Promoting site-integrated stormwater management practices to help treat stormwater closer to the source, through green infrastructure.
    g. Preserving natural hydrological conditions to maintain natural surface water flow characteristics and retain natural watercourses and drainage systems (where present).
    h. Where natural drainage systems are absent or incapable of handling the anticipated runoff demands, developing open vegetated drainage systems as a preferred approach, with long and indirect flow paths to decrease peak runoff flows, and using closed drainage systems only where site constraints and stormwater flow demands make open systems infeasible.

2. Reduce pollutant loads to water resources by managing unavoidable non-point sources of pollution and use appropriate best management practices as determined by site characteristics, design standards, operational conditions, and maintenance programs. Reduce non-point source pollution

using specific management measures appropriate to specific land use or pollution source categories.

a. Urban land uses
    - For new development, manage total suspended solids in runoff to remain at predevelopment loading levels.
    - For site development, limit activities that increase erosion or the amount or velocity of stormwater runoff.
    - For construction sites, reduce erosion and retain sedimentation on site, and limit and control the use of chemicals and nutrients.
    - For developed sites, limit the application of pesticides, herbicides and fertilizer products to reduce the potential for the pollution of stormwater runoff.
    - Plan, site and design roads and highways to manage erosion and sediment loss and limit the disturbance of land and vegetation.
    - Plan and design bridges to protect ecosystems.
    - For roads, highways and bridges, minimize to the greatest extent practical, the runoff of contaminants to surface waters.
    - Use vegetated stormwater treatment such as bioswales, bioretention, and tree pits as appropriate.
    - Install complete streets on major roadways into and out of Jamestown, as described in Supporting Document 2: Ecological Conditions and Living Infrastructure Framework.
    - Install green fingers along secondary streets as appropriate to promote ecological function along the street through integrated stormwater management and native vegetation, and improved access to green space (as described in Supporting Document 2: Ecological Conditions and Living Infrastructure Framework).
b. Hydro-modifications
    - Maintain the physical and chemical characteristics of surface waters, reduce adverse impacts and, where possible, improve the physical and chemical characteristics of surface waters in channels.
    - Minimize the impacts of channelization and channel modification on in-stream and riparian habitat, and identify opportunities to restore habitat.
    - Use vegetative means, to the greatest extent possible, to protect stream banks and shoreline from erosion.
    - Foster the creation of a Living Infrastructure Network, as described in Supporting Document 2: Ecological Conditions and Living Infrastructure Framework.
c. Floatables and litter

- Prohibit all direct and indirect discharges of refuse or litter into surface waters, or upon public lands contiguous to and within 100 feet of the River.
- Limit the entry of floatable materials to surface waters through the proper containment and prevention of litter.
- Remove and dispose of floatables and litter from surface waters and the shoreline of the River, especially where it collects at Warner Dam.
- Implement pollution prevention and education programs to reduce the discharge of floatables and litter in the River and City storm drains.

POLICY 5.3:

Protect and enhance water quality in the Chadakoin River and associated wetlands complex.

1. To the greatest extent possible, improve the water quality of the River and associated wetlands complex based on an evaluation of physical factors (pH, dissolved oxygen, dissolved solids, nutrients, odor, color and turbidity), health factors (pathogens, chemical contaminants, and toxicity), and aesthetic and nuisance factors (oils, floatables, refuse and suspended solids).

2. Minimize the disturbance of the River, including its bed and banks, in order to prevent erosion of soil, increased turbidity, and irregular variation in velocity, temperature, and level of water.

3. Protect the surface water quality of the River and associated wetlands complex from the adverse impacts associated with excavation, fill, dredging and the improper disposal of dredged materials.

4. Utilize, as feasible and economically practicable, street sweeping resources to reduce the amount of pollutants, sediments and litter that enters surface waters through storm drains.

5. Encourage the use of best management practices to prevent non-point source pollution, including:
    a. Limiting the application of fertilizers, herbicides and pesticides and avoiding the use of synthetic fertilizers that contribute nitrates and phosphorus to runoff.
    b. Avoiding secondary discharges of pollutants, such as petroleum products to storm drains that discharge directly to surface waters.
    c. Properly cleaning up pet wastes and controlling litter.
    d. Promote site-integrated stormwater management practices to help treat stormwater closer to the source, through green infrastructure.

POLICY 6:

Protect and restore ecosystem quality and function within the City of Jamestown's Waterfront Revitalization Area.

There are certain natural resources in the City of Jamestown that warrant protection and restoration. These resources, which include the Chadakoin River, its associated wetlands complex, important plant and animal populations and habitats, and sensitive ecological communities, all contribute to the quality of life in the City and the diversity of the local ecosystem. The purpose of this policy is to protect and restore these ecological resources.

POLICY 6.1:

Protect and restore locally significant fish and wildlife habitats.

The Chadakoin River has no designated Significant Coastal Fish and Wildlife Habitats identified by the New York State Department of Environmental Conservation (NYSDEC) or the Department of State. However, NYSDEC records reveal that one species of State Special Concern, the Eastern spiny softshell turtle, was found in the LWRP Study Area. During fieldwork, evidence of these turtles was found in several of the canals which empty into the Chadakoin River (within the **Chadakoin Outlet District**), near the Riverwalk Center along the Riverwalk Trail (within the **Downtown District**), on the downstream end of the Warner Dam and further downstream in the Chadakoin River (especially near the Gateway Center) (also within the Downtown District).

In addition, records suggest that a New York State Endangered plant, Burdick's wild leek, was identified in the wetland complexes which encompass the bulk of the **Chadakoin Outlet District**. Burdick's wild leek is known only to occur in Chautauqua County and any harvesting or removal is prohibited. The US Fish and Wildlife Service Chautauqua County Federally listed endangered and threatened species list suggests the federally endangered Clubshell and Rayed bean mussel species are known or are likely to occur in the County. Further study would be required to determine if these species are present in the River.

Various species of fish can be found throughout the River. While none are recognized by the State as rare, threatened, or endangered, the fish are an important part of a small but active recreational fishing culture emerging along the waterfront.

The following standards should be followed in order to protect and restore locally significant fish and wildlife habitats as depicted in Figure 20:

1. Protect turtle and fish resources through measures including:
    a. Any projects along the waterfront in the **Chadakoin Outlet District, Industrial Heritage Corridor,** and **East End Industrial Corridor** must be developed in a manner that ensures the protection of turtle and fish resources. Project reviewers should consider potential impacts on turtle and fish habitats, and the following actions should be taken as appropriate and applicable:
        i. Avoid activities that would destroy or impair habitats through physical alteration, disturbance or pollution, or indirectly affect the loss of habitat.
        ii. Schedule development or other activities to avoid vulnerable periods in life cycles of habitats.
        iii. Encourage a project design that will result in the least amount of potential adverse impact on habitats.
    b. Any projects within the **Downtown District** must follow existing State and federal regulations regarding waterfront development.
    c. Encourage community awareness of the turtle and fish resources through educational campaigns and strategically placed informational signs/kiosks

2. Restore significant fish and wildlife habitats through measures including:
    a. Reconstructing lost physical conditions to maximize habitat values including;
        i. Restoration of the natural shoreline and reintroduction of natural turtle nesting grounds in key areas along the River in the **Chadakoin Outlet District**, the **Industrial Heritage Corridor**, and the **East End Industrial Corridor**.
        ii. Consideration of design options promoting upstream passage of fish over man-made barriers (ex. Dahlstrom Dam and Warner Dam).
    b. Manipulating biological characteristics to emulate natural conditions through reintroduction of native flora and fauna.

POLICY 6.2:

Protect and restore freshwater wetlands.

Wetlands provide numerous benefits, including, but not limited to, habitat for fish and wildlife, erosion and flood control, natural pollution treatment, groundwater protection, and aesthetic open space. Within the **Chadakoin Outlet District**, the City possesses nearly 400 acres of “Class I” freshwater wetlands, which is the highest rank in New York State’s four class ranking system. Development within these pristine wetland areas are regulated under Federal (US Army Corps of Engineers), State (New York State Department of Environmental Conservation), and

Local (Chapter 149 of the City Code – Freshwater Wetlands) laws. The local law is designed to:

> *Preserve, protect, and conserve freshwater wetlands and the benefits derived therefrom, to prevent the despoliation and destruction of freshwater wetlands and to regulate the development of such wetlands in order to secure the natural benefits of freshwater wetlands consistent with the general welfare and beneficial economic, social and agricultural development of the City of Jamestown.*

Pursuant to Chapter 149, all regulated activity in any freshwater wetland or adjacent area requires a permit from the City of Jamestown Clerk and Department of Parks, Recreation, and Conservation and must be in compliance with the standards outlined in the law (see Figure 20 for location of wetlands).

In addition to the above mentioned laws, the following standards should be followed in order to protect and restore freshwater wetlands:

1. The following measures can further the protection or restoration of wetlands:
    a. Complying with the statutory and regulatory requirements of the Freshwater Wetlands Act, Stream Protection Act, and other applicable laws.
    b. Prevention of the net loss of wetlands by:
        - Avoiding placement of fill or excavation of wetlands;
        - Minimizing adverse impacts resulting from unavoidable fill, excavation or other activities; and
        - Providing and maintaining adequate buffers between wetlands and adjacent or nearby uses and activities in order to ensure protection of the character, quality, value and function of the wetlands area.

2. Any potential trail/boardwalk development projects through or adjacent to the wetlands complex to allow for public access to and educational opportunities focused on these natural areas may impact the wetlands. As with other types of development projects, adequate mitigation measures will be evaluated and implemented prior to commencing trail/boardwalk development

POLICY 6.3:

Prevent the further spread of invasive plant species through the use of aggressive management techniques.

Invasive plant species harm the ecological integrity of the natural landscape by multiplying to such levels as to outcompete and eliminate most forms of native

vegetation. Invasive species typically aggressively spread throughout the ecosystem along water routes and through animal dispersal and soil movement. Within the **Chadakoin Outlet District**, two very aggressive, non-native invasive wetland plants were found during a field investigation conducted by Biohabitats. ***Japanese knotweed*** was identified in the northwest corner of wetlands LW-10, within the City's storage facility north of Chadakoin Park, and along the proposed Chadakoin Park Bike Trail on the western edge of the City's storage facility. ***Common reed*** was observed in multiple locations throughout Chadakoin Park and its vicinity. Both of these plants currently exist in small patches, but if left unchecked, will most likely aggressively spread along the bike and river corridor and throughout Chadakoin Park. Treatment of these plants will help to combat these invasive species, preserve the ecological integrity of the class "I" wetland complex, while allowing native vegetation to flourish.

The other three sub-areas which form the remainder of the LWRP Study Area are highly commercial and industrial in nature. River buffers typically range from 0 to 25 feet wide with few exceptions. Concrete and stone walls, gabions, bulkheads, and building foundations dominate shorelines. Biohabitats staff observed that invasive and pioneer species more adapted to these disturbed conditions dominate the riparian vegetation. These invasive species include ***honeysuckle***, ***multiflora rose***, ***Norway maple***, ***tree of heaven***, ***crown vetch***, ***buckthorn***, and ***Japanese knotweed***.

Invasive species management techniques should be implemented throughout the Study Area, including:

1. Aggressive removal of known invasive species would include:
    a. Mechanical removal is preferred over chemical removal.
    b. When appropriate, foliar treatments using herbicides should be implemented in the springtime.
    c. Reassessment in the late summer/early fall for follow-up mechanical removal and/or foliar treatment (several follow-up treatments may be required over several years).
    d. As the invasive species patches dies back, supplemental plantings of native plants may be needed if colonization is slow.

2. Plant native species in areas cleared of invasive plants. Include a diverse mix of native herbaceous and woody species, including some fast-growing trees and shrubs, to help suppress future invasive species establishment.

3. A monitoring program in association with Jamestown Community College or one of the local watershed/wildlife conservation entities should be established to review invasive species conditions within the Study Area on a regular basis.
    a. A prioritization should be created to identify the areas which should receive immediate attention.

b. Areas in which new invasive species are noted or areas in which existing patches are spreading should be flagged and given priority for control.

POLICY 6.4:

Protect and restore the Chadakoin River shoreline.

Riparian and shoreline conditions differ between the **Chadakoin Outlet District** and the other three sub-areas. The 2.5 river miles of the Chadakoin from the Chautauqua Lake outlet to McCrea Point (primarily located within the **Chadakoin Outlet District**) consist of predominately natural shoreline and riparian areas. The two Class I wetlands buffer the majority of the River and are categorized as freshwater forested/shrub wetland. Human impacts within this area are limited to fill, debris and a patch of Japanese knotweed on the right bank near the Chautauqua Lake outlet; several small commercial and residential docks on the left bank where the River approaches Route 430; relic piling along the left bank across from McCrea Point; and the docks and grounds associated with McCrea Point itself. In general, the shorelines are gentle sloping, thus exposing them to seasonal and episodic inundation. These inundations, sheer size, and limited human encroachment and visitation make these wetlands important areas for amphibians and birds. In addition, the nature of the River and shoreline interaction lends itself to large concentrations of submerged and floating aquatic vegetation, also ideal habitat for resident fish species.

As the Chadakoin River passes McCrea Point it enters a highly commercial and industrial area with narrow riparian buffers and varying degrees of river walls. Throughout the remainder of the LWRP Study Area buffers typically range from 0 to 25 feet wide with few exceptions. Concrete and stone walls, gabions, bulkheads, and building foundations dominate shorelines. There is minimal floodplain interaction within this reach as the River is channelized in most instances below the adjacent land. This disconnect appears to be impacting nesting turtles as they must concentrate nesting sites in the limited areas with floodplain access, which in many cases are industrial areas. It was observed by Biohabitats staff that invasive and pioneer species more adapted to disturbed conditions dominate the riparian vegetation in this section of the Study Area. Buffer canopies are typically limited to one to two tree widths, thus providing minimal ecological benefits.

Based on these observations, an opportunity exists to enhance the shoreline and upland areas, and enhance and stabilize the riverside trail interface with the native River shoreline. Such actions include:

1. Give priority in the expenditure of public funds to actions that will protect and restore the Chadakoin River shoreline.

2. Create riparian transition zones where appropriate in the **Chadakoin Outlet District**, **Industrial Heritage Corridor**, and the **East End Industrial Corridor**. These areas will act as a transition between the River and the upland, and may include trails and other access as well riparian buffers. A riparian buffer is a permanent naturally vegetated area located adjacent to a stream, river, lake, pond or wetland. Riparian buffers provide important habitat and shelter for native aquatic and terrestrial wildlife, capture and filter stormwater runoff, and serve as "rights-of-way" for dynamic stream and river systems. Their conservation and protection is critical to watershed health and management. In dense urban areas like downtown Jamestown, the design of riparian buffers may vary due to a variety of constraints, such as property ownership, existing development and infrastructure and economic development concerns. In these areas, every effort should be made to integrate living infrastructure into the urban landscape within the riparian transition zones to provide habitat, stormwater runoff treatment, and river protection. Where possible, an enhanced wooded (vegetation only) transition zone is the preferred approach.

3. Various types of plantings, river stabilization, facilities and furnishings dot the Riverwalk leading to some inconsistency of styles, vegetation health, shoreline function, and habitat value.
    a. The City has expressed a desire for greater hardscaping within the **Downtown District** and riparian transition zones where appropriate in the **Chadakoin Outlet District**, **Industrial Heritage Corridor**, and the **East End Industrial Corridor**, as described in Policy 6.4.2.
    b. Turf should be limited to selected areas where picnicking and active use might be desired.
    c. Increase the areas of wooded shoreline.
    d. Enhance the shoreline through the design for overall ecological function but with some accessibility to the River's edge for pedestrians.
    e. Diversify and expand the overall the vegetation palette to include denser plantings of native species and to provide better shoreline stabilization for the river with a more natural approach.

4. Where feasible, vacant lands and shoreline areas should be used to create broader shoreline buffers.

5. Shoreline restoration should occur where there is evidence of erosion or need for stabilization.

6. Aquatic habitat should be improved to increase recreational fishing opportunities through the creation of living shorelines and incorporating fishing friendly structures to existing bulkheads.
    a. Living shorelines, which use native plants, including grasses, trees and shrubs to provide stabilization while also adding beauty and habitat should replace riprapped, bulkheaded, mown, and eroding streambanks.

b. Fishing access areas could also be incorporated into the living shorelines.
c. Where bulkheads are to remain, living seawall habitats techniques, such as steel/mesh baskets, can be anchored to the structure and planted with submerged or emergent vegetation to provide cover and support an invertebrate food base for fish.
d. Turtle nesting areas should be created where appropriate in the **Chadakoin Outlet District**, **Industrial Heritage Corridor**, and the **East End Industrial Corridor**.

7. Pockets for fishing and kayak/canoe access could be incorporated into the native plantings and additional plantings could be used to screen adjacent industrial and business activities from the River.

8. Encourage the following actions in each of the ecological priority nodes (as identified in Supporting Document 2: Ecological Conditions and Living Infrastructure Framework document):
    a. Chadakoin Park and Wetland/Marsh complex – combination of habitat enhancement, restoration, and active recreation with the potential inclusion of an environmental education center.
    b. McCrea Point – living shoreline restoration and stormwater management as needed.
    c. Panzarella Point and BPU site – shoreline restoration, stormwater management, native plant enhancement.
    d. Harrison Street to Foote Avenue permaculture/urban agriculture – productive and participatory landscapes that invite urban gardeners to help shape the landscape and enhance the riparian buffer with a series of gardens.
    e. Gateway Center (31 Water Street) habitat restoration and stewardship zone – shoreline restoration and impervious cover removal, with the potential for stewardship opportunities, productive landscapes partnered with the food bank within the Gateway Center facility, and green jobs training.
    f. Dahlstrom site river restoration node – restoration of riparian area floodplain and shoreline.
    g. Hope Windows to Bigelow Street to floodplain and upland park zone – management and enhancement of shoreline and floodplain, broadening connections of nature trail, creating new open space access areas and strengthening ecological character of river buffer, integrated stormwater management in parking lots with continued use.

POLICY 6.5:

Encourage community awareness and stewardship of natural resources along the waterfront through the support of community activities.

The waterfront is a significant asset for the City of Jamestown, and efforts should be made to enhance its visibility throughout the City. Efforts to increase awareness of the River should include:

1. Expanding the Riverwalk and increasing access opportunities.
2. Holding waterfront community events such as concerts and festivals to draw people to the waterfront.
3. Fostering the development of additional amenities and waterfront-related uses that bring additional visitors to the waterfront.
4. Creating educational and historical signage along accessible areas of the River
5. Completing annual River cleanup activities that are widely advertised.

POLICY 7:

Protect and improve air quality in the City of Jamestown's Waterfront Revitalization Area.

This policy provides for protection of the City of Jamestown from air pollution generated within the waterfront area or from outside the waterfront area which adversely affects the region's air quality. This is achieved through enforcement of State and Federal air quality standards and permit requirements.

POLICY 7.1:

Minimize existing air pollution and prevent new air pollution within the City of Jamestown's Waterfront Revitalization Area.

New land uses and development in the City of Jamestown should comply with the following:

1. Limit pollution resulting from new or existing stationary air contamination sources consistent with:
    a. Attainment or maintenance of any applicable air quality standards,
    b. Applicable New Source Performance Standards,
    c. Applicable control strategy of the State Implementation Plan, and
    d. Applicable Prevention of Significant Deterioration requirements.
2. Recycle or salvage air contaminants using best available air cleaning technologies.

3. Limit pollution resulting from vehicle or vessel movement or operation.

4. Restrict emissions of air contaminants to the outdoor atmosphere that are potentially injurious to human, plant and animal life, or that would unreasonably interfere with the comfortable enjoyment of life or property.

POLICY 7.2:

Minimize discharges of atmospheric radioactive material sources to levels that are low as practicable.

State air quality standards regulate radioactive materials and pollutants. For actions with a potential impact on air quality, the City shall provide necessary information, as appropriate, to the State to enable the effective administration of air quality statutes pertaining to atmospheric radioactive material.

POLICY 7.3:

Assist the State whenever possible in the administration of its air quality statutes pertaining to chlorofluorocarbon compounds and to the atmospheric deposition of pollutants in the region, particularly from nitrogen sources.

State air quality standards regulate chlorofluorocarbon pollutants and nitrogen pollution. For actions with a potential impact on air quality, the City shall assist the State, whenever possible, in the administration of its air quality statutes pertaining to chlorofluorocarbon compounds and to the atmospheric deposition of pollutants in the region, particularly nitrogen sources.

POLICY 8:

Minimize environmental degradation in the City of Jamestown's Waterfront Revitalization Area from solid waste and hazardous substances and wastes.

The intent of this policy is to protect people from sources of contamination and to protect the waterfront resources of the City of Jamestown from degradation through proper control and management of wastes and hazardous materials. Attention is also required to identify and address sources of soil and water contamination resulting from landfill and hazardous waste sites in the City of Jamestown.

1. As part of the City's overall economic development approach, brownfield sites should be addressed via the following:
    a. Identifying potentially contaminated brownfield sites throughout the Study Area.
    b. Prioritizing the sites based on redevelopment potential, geographic location, site features, and/or potential for exposure.
    c. When possible and appropriate, working with property owners, developers, and regulators to address contamination issues within the Study Area.
    d. Obtaining funding to inventory, assess, and/or remediate brownfield sites.

POLICY 8.1:

Manage solid waste to protect public health and control pollution.

1. Plan for proper and effective solid waste disposal prior to undertaking major development or redevelopment activities that generate solid wastes.

2. Manage solid waste by:
    a. Reducing the amount of solid waste generated.
    b. Reusing or recycling material.
    c. Using land burial or other approved methods to dispose of solid waste that is not otherwise being reused or recycled.

3. Prevent the discharge of solid wastes into the City environment and River water by using proper handling, storage, management, and transportation practices.

4. Operate solid waste management facilities to prevent or reduce water, air, and noise pollution and other conditions harmful to the public health.

POLICY 8.2:

Manage hazardous wastes to protect public health and control pollution.

1. Manage hazardous waste in accordance with the following priorities:
    a. Eliminate or reduce generation of hazardous wastes to the maximum extent practicable.
    b. Recover, reuse, or recycle remaining hazardous wastes to the maximum extent practicable.
    c. Use detoxification, treatment, or destruction technologies to dispose of hazardous wastes that cannot be reduced, recovered, reused, or recycled.

d. Where practical, phase out land disposal of industrial hazardous wastes.
e. Prohibit the siting of any new facility that would generate significant quantities of hazardous wastes, or the disposal of any hazardous wastes within the waterfront area.

2. Ensure maximum public safety through proper management of industrial hazardous waste treatment, storage, and disposal.

POLICY 8.3:

Protect the environment from degradation due to toxic pollutants and substances hazardous to the environment and public health.

1. Prevent release of toxic pollutants or substances hazardous to the environment that would have a deleterious effect on fish and wildlife resources and human health.

2. Prevent environmental degradation due to persistent toxic pollutants by:
   a. Limiting discharge of bioaccumulative substances
   b. Avoiding resuspension of toxic pollutants and hazardous substances and wastes, and avoiding reentry of bioaccumulative substances into the food chain from existing sources.

3. Prevent and control environmental pollution due to radioactive materials.

4. Protect public health, public and private property, and fish and wildlife from inappropriate use of pesticides.
   a. Limit use of pesticides to effectively target actual pest populations as indicated through integrated pest management methods.
   b. Prevent direct or indirect entry of pesticides into waterways.
   c. Minimize exposure of people, fish, and wildlife to pesticides.

5. Report, respond to, and take appropriate action to correct all unregulated releases of substances hazardous to the environment.

6. Remediate sites containing toxic pollutants and substances hazardous to the environment and public health.

POLICY 8.4:

Prevent and remediate discharge of petroleum products.

The handling of petroleum products near water bodies must be undertaken with utmost care. The following standards should be applied in the City of Jamestown:

1. Minimize adverse impacts from potential oil spills by appropriate siting of petroleum storage and distribution facilities.

2. Demonstrate that adequate plans for prevention and control of petroleum discharges are in place at any significant petroleum-related facility.

3. Prevent discharges of petroleum products by following methods approved for handling and storage of petroleum products and by using approved design and maintenance principles for storage facilities.
4. Clean up and remove any petroleum discharge that occurs in the waterfront area or River waters giving first priority to minimizing environmental damage.

5. Undertake clean-up and removal activities in accordance with the guidelines and procedures contained in the New York State Water Quality Accident Contingency Plan and Handbook giving first priority to minimizing environmental damage.

POLICY 8.5:

Transport solid waste and hazardous substances and waste in a manner which protects the safety, well being, and general welfare of the public; the environmental resources of the state; and the continued use of transportation facilities.

Transportation of solid waste and hazardous substances and waste shall be conducted using routes and methods that protect the safety, well-being, and general welfare of the public and the environment. Other than the residential and/or commercial collection of municipal solid waste, local streets and highways shall be avoided unless absolutely necessary. Preferred routes shall consist of the interstate highway and rail systems.

POLICY 8.6:

Site solid and hazardous waste facilities to avoid potential degradation of waterfront resources.

1. Solid and hazardous waste facilities, including automobile scrap facilities, are not considered as appropriate uses for the waterfront and the siting of such uses in this area should be prohibited.
    a. Where such facilities currently exist within the waterfront area, the City should work with the owners to identify a more appropriate location within the City that is consistent with that type of land use.

2. If the need for a waterfront location is demonstrated, preclude impairment of waterfront resources from solid and hazardous waste facilities by siting these facilities so that they are not located in or would not adversely affect:
    a. Natural protective feature areas
    b. Surface waters, primary water supply, or principal aquifers
    c. Habitats critical to vulnerable fish and wildlife species, vulnerable plant species, and rare ecological communities
    d. Wetlands

3.3 PUBLIC WATERFRONT POLICIES

POLICY 9:

Provide for public access to, and recreational use of, the Chadakoin River, public lands, and public resources within the City of Jamestown's Waterfront Revitalization Area.

Along many stretches of the Chadakoin River, physical and visual access to the waterfront and surface waters is limited for the general public. With the exception of Jones Memorial Park, Chadakoin Park, McCrea Point, Panzarella Park, Keelboat Landing, and Riverwalk, the majority of the parcels fronting the River are privately owned. Furthermore, physical limitations due to steep slopes have also limited access to the shoreline.

Given the length of the Chadakoin River shoreline, the existing public access opportunities are not adequate. Through wise placement of additional access points and appropriate development methods, new opportunities can be created for the public to fully appreciate the area's vast waterfront resources.

This policy incorporates measures needed to improve public access and recreational opportunities along the River shoreline. In some cases, existing facilities need only to be enhanced or linked with other sites. Together, the public access projects described in Section IV of this Report provide a comprehensive system to address the needs of residents and visitors to the City. The following policies, along with the proposed projects, address the issues of public access and scenic impacts.

POLICY 9.1:

Promote appropriate and adequate physical public access and recreation throughout the City of Jamestown's Waterfront Revitalization Area.

The lack of public access to waterfront lands along the Chadakoin River has prompted the identification of many of the projects described in Section IV of this Report.

Public access and recreation facilities can generate revenue in a community and also help attract tourists, both goals identified by the community during the preparation of this LWRP. Potential spin-off benefits can be realized in terms of retail businesses, hotels or restaurants. Besides making the area more attractive for visitors, waterfront access also enhances the quality of life for area residents.

When possible, waterfront land should be kept in public ownership through a lease arrangement. If private non-water-related uses do locate in this area, physical public access to the waterfront should be included in the development. New development may not diminish the public's access to or enjoyment of the waterfront, and should enhance public access wherever practicable.

Several locations where public access and/or recreational amenities could be developed are identified in the standards below, which shall be used as a guide for the City in making future development decisions.

1. Promote the extension of the Riverwalk Trail system, which acts as an attraction and as links to neighborhoods.

2. Promote the creation of programmed activity areas along the waterfront.

3. Provide a transportation network that unites the City of Jamestown's Waterfront Revitalization Area by developing integrated vehicular parking and access points to the Riverwalk. Interpretive nodes, picnic areas, viewing locations and active recreation nodes should be developed along the entire waterfront.

4. Promote the location of small craft boat launches and other water-based recreational uses where feasible.

5. Limit the construction of private, non-water-related commercial uses in order to preserve the waterfront as a destination and tourist attraction.

6. Protect and maintain existing public access and recreation facilities in the City of Jamestown's Waterfront Revitalization Area.

7. Where possible, provide for public access at streets terminating at or near the shoreline.

8. Promote an increased level of access at existing public waterfront areas where the need has been identified.

9. Promote the use of "conservation" easements in environmentally sensitive areas in the City of Jamestown's Waterfront Revitalization Area (also discussed in Policy 9.5).

POLICY 9.2:

Provide public visual access from public lands to the Chadakoin River and adjacent shoreline open spaces / natural areas at all sites where physically practical and ecologically sustainable.

The City of Jamestown's Waterfront Revitalization Area offers diverse topography that affords spectacular views of this area of the City. Most views are obstructed or partially obstructed at some locations by structures, woods or vegetation. Creating more opportunities for public visual access is important to allow full appreciation of the beauty and resources of the area, and to increase the attractiveness of the waterfront area for residents and tourists alike.

1. Prevent the loss of existing visual access by limiting the scale, design, location or structures of development or activities.

2. Protect view corridors provided by streets and other public areas leading to the waterfront.

3. Allow vegetative or structural screening of an industrial or commercial waterfront site if the resulting improvement in overall visual quality outweighs the loss of visual access.

4. Increase the visual access to the waterfront whenever practical by providing turnoffs, interpretive exhibits or informational kiosks.

5. Minimize access points through sensitive areas to promote ecological function and avoid further fragmentation of natural resource lands.

POLICY 9.3:

Preserve public interest in and use of lands and waters held in public trust by the State and other governmental entities.

Coordinate efforts for waterfront interaction and preservation with other governmental agencies through joint venture efforts resulting in active and passive recreation projects as discussed in Section IV of this Report. General standards to implement this policy are as follows:

1. Limit grants and leases, and easements regarding lands underwater in accordance with an assessment of potential adverse environmental impacts

of the proposed use or structure. Use the following factors in assessing potential adverse impacts:

- Environmental impact
- Values of the natural resource
- Size, character, and effect of transfer on neighboring uses
- Effect of transfer on natural resources
- Water dependent nature of the use
- Adverse economic impact
- Consistency with public interest

2. Limit transfer of interest in public trust lands to the minimum necessary.

3. Grants in fee of underwater lands are limited to exceptional uses.

4. Retain a public interest in the transfer of interest in underwater lands which will be adequate to preserve public access and recreation opportunities.

5. Private uses or structures on underwater lands should be limited to entities that have a riparian interest and are water-dependent.

6. Avoid substantial loss of public interest in public trust lands by assessing the cumulative impact of individual grants, easements, and leases.

POLICY 9.4:

Provide access and recreation opportunities that are compatible with the City of Jamestown's Waterfront Revitalization Area's natural resources.

The following guidelines provide standards by which the City can assess the potential for adverse environmental effects on new access and recreation projects in the Waterfront Revitalization Area.

1. Provide appropriate access and recreational activity in the **Lake Outlet District**, **Industrial Heritage Corridor**, and **East End Industrial Corridor** that will avoid adverse impacts on natural resources. The following factors shall be used in determining the potential for adverse environmental effects:
    a. Intensity of the associated activity
    b. Level of likely disturbance associated with the proposed activity. The following types of activities are listed in order of most potential for disturbance to least potential:

        - Motorized activities
        - Active, non-motorized activities, including water-dependent and water-related uses
        - Passive activities

- Avoidance of the area
- Sensitivity of the natural resources involved and the extent of the ecological benefits associated with avoidance of the area

2. Limit public access and recreational activities where uncontrolled public use would lead to impairment of natural resources.

3. Establish appropriate seasonal limitations on access and recreation where necessary to minimize adverse environmental impacts.

4. Provide educational, interpretive, research and passive uses of natural resources through appropriate design and control of public access and recreation.

5. Provide public access for fish and wildlife resource related activities, including fishing, provided that the level of access would not result in a loss of resources necessary to continue supporting these uses.

6. Provide access using methods and structures which maintain and protect open space areas associated with natural resources.

7. Where appropriate, promote the development of additional trails through the wetland area at the Chautauqua Lake Outlet for nature interpretation and for recreational use of fish and wildlife resources.

8. Consider the development of pedestrian and bicycle trails along the waterfront to foster public appreciation of this resource.

POLICY 9.5:

Where feasible, utilize conservation easements to provide public access and greenway trail development along the waterfront.

The use of conservation easements has been growing in popularity, as communities attempt to increase access to waterfronts and other natural areas of interest. The policy entails:

1. The City will work to obtain conservation easements at tax delinquent properties following foreclosure.

2. The City will work to form partnerships with private property owners in areas in which a high priority has been identified for the extension of trails, the creation of improved waterfront amenities, and/or the restoration of shoreline.

3. The City may purchase waterfront property with the intent of creating public access and/or greenway trails.

POLICY 9.6:

Connect important open space assets to each other and to the surrounding neighborhoods.

Proposed projects within the LWRP Study Area will preserve and improve connections to important open space assets. A trail system has been developed in the City and expansion of the trail network is planned. Connecting the trail system to the downtown, surrounding neighborhoods, parks as well as significant open space areas has wide public support and is an important community goal.

The waterfront trail system (Riverwalk) will run along the water's edge to the maximum extent practicable. Trails will be designed to accommodate appropriate forms of non-motorized transportation in a safe and attractive manner. As public investments are made in the waterfront area, the trail will be improved as necessary and appropriate to accommodate the variety of users.

Where new development is created along the River, provisions for public access to the River should be incorporated within the design of the site. Such provisions should allow for pedestrian corridors and other design elements consistent with the linear park nature of the River corridor. Design elements may include the construction of impervious paths, boardwalks, the introduction of plantings, benches, trash receptacles and bike racks, or other design elements as appropriate. Vehicular access, with the exception of emergency vehicles should be prohibited on the trail and any drop-off points should be set well back from the River's edge. The incorporation of parks and other green spaces, pedestrian access and trails, within any new development should be encouraged.

3.4 WORKING WATERFRONT POLICIES

POLICY 10:

Protect the City of Jamestown's water-dependent uses and promote siting of new water-dependent uses in suitable locations.

Waterfront activity in the City of Jamestown has traditionally concentrated along the Chadakoin River to make use of the water power and clean water for other industrial uses. However, the City's industries no longer utilize the River, and the opportunity exists to re-vision the City's waterfront. The intent of this policy is to protect existing and promote the siting of new water-dependent uses along the

River waterfront by ensuring adequate provision of infrastructure for their efficient and orderly operation. This policy is also intended to address the management of conflicts, congestion and competition for space in the use of the waterfront and its adjoining surface waters.

Many water-dependent uses often include and are supported by other uses that are complementary and supportive to the water-dependent use and do not impair the ability to water-dependent uses to function. The water-enhanced uses often provide beneficial support to the primary use, as well as convenience for users. Standards for the siting of water-enhanced uses are also established below.

POLICY 10.1:

Protect existing water-dependent uses.

Water-dependent uses are activities which require a location in, on, over, or adjacent to the water because the activities require direct access to water and the use of water is an integral part of the activity. Due to the area's history, very few water-dependent uses now occur on the Jamestown's waterfront. Existing water-dependent uses along the Chadakoin River include fishing, boat launches, public boat docking, and the Fire Training Center. Actions that would adversely impact or interfere with these and other water-dependent uses should be avoided.

New development proposals on and near the Chadakoin River should consider the impact of this new development on existing water-dependent uses, including:

1. Impacts to existing water-dependent uses should be avoided.

2. When impacts to water-dependent uses cannot be avoided, mitigation measures should be implemented, which may include replacement of water-dependent uses or enhancement of other, existing water-dependent uses.

POLICY 10.2:

Promote the siting of new water-dependent uses at suitable locations.

Although the number of sites suitable for development or redevelopment for water-dependent uses along the Chadakoin River are limited due to the shallow depth of the River, the relatively narrow width of the River, the steep topography along certain stretches of the shoreline, existing development, and the vast amounts of land that are publicly owned and/or protected due to environmental reasons, opportunities do exist for additional water-dependent uses. These new water-dependent uses should be located within developed areas that already contain

concentrations of water-dependent and water-enhanced commercial and recreational uses and essential support facilities.

Water-dependent uses should be discouraged from undeveloped areas unless there is a demonstrated demand for the use, the use has unique locational requirements that necessitate a particular site, or the use is of a small scale and is consistent with the character of the area.

Careful review of each project is required to ensure the development does not adversely impact the natural environment, existing communities or scenic or aesthetic resources. The following items apply to the development of new water-dependent uses:

1. Encourage the location of new water-dependent development throughout the City, especially within the **Chadakoin Outlet District** and the **Downtown District**. However, this development should not fragment the habitat within the **Chadakoin Outlet District**, which contains a large proportion of sensitive lands.

2. Seek to attract a mix of unique, water-dependent uses that increase economic activity in the **Downtown District**.

3. Seek to attract a mix of unique, water-dependent uses that increase recreational activity throughout the City, especially in the **Chadakoin Outlet District**.

4. Ensure waterside and landside access, as well as upland space for parking and other facilities, is adequate.

5. Evaluate whether the necessary infrastructure exists or is easily accessible.

6. Promote standards to make beneficial use of the site's waterfront location, as outlined in Policy 1.2.

7. Create unique, water-dependent uses that increase the activity at appropriate sites along the waterfront while not harming the existing fish and wildlife habitats.

POLICY 10.3:

Allow water-enhanced uses in the City of Jamestown's Waterfront Revitalization Area that complements or improves the viability of water-dependent uses.

Water-enhanced uses are defined as activities that do not require a location on or adjacent to the water to function, but whose location on the waterfront could add to public enjoyment and use of the water's edge, if properly designed and sited.

Water enhanced uses are generally of a recreational, cultural, commercial or retail nature. Existing water-enhanced uses along the Chadakoin River include Jones Memorial Park, Panzarella Park, Keelboat Landing, and the Riverwalk.

Actions that would adversely impact or interfere with these and other water-enhanced uses (other than the siting of a new water-dependent use) should be avoided. When determining if a water-enhanced use is appropriate for siting along a waterfront, the following factors should be considered:

1. The use would provide an economic incentive to prevent the loss of a water-dependent use.

2. The use would be sited and operated so as not to interfere with water-dependent uses.

3. The use would complement a water-dependent use.

4. The use would be sited in a manner that does not preclude future expansion of a water-dependent use.

5. The activity makes beneficial use of a shoreline location through siting and design to increase public enjoyment of the waterfront, improve the economic viability of the area, and enhance community character.

6. The use would be sited and operated so as to not interfere with public access along the water's edge.

7. The use will be protective of fish and wildlife habitat and water quality.

POLICY 10.4:

Minimize adverse impacts of new and expanding water-dependent uses, provide for their safe operation, and maintain regionally important uses.

1. Site new and expand existing water-dependent uses where there is:
    a. Adequate upland for support facilities and services
    b. Sufficient waterside and landside access
    c. Appropriate nearshore depth to minimize dredging
    d. Suitable water quality classification
    e. Minimization of effects on wetlands and wildlife habitat

2. Maintain regionally important water-dependent uses and facilities.

POLICY 10.5:

Provide sufficient infrastructure for water-dependent uses.

The following factors should be considered when evaluating infrastructure related to the waterfront:

1. Evaluate the capacity and condition of infrastructure where water-dependent uses are planned

2. Identify areas in which capacity and/or condition of infrastructure is insufficient for proposed development

3. Seek funding for infrastructure upgrades as appropriate

4. Incorporate long-term development plans into regular infrastructure maintenance and upgrade actions

POLICY 11:

Promote sustainable use of living freshwater resources within the City of Jamestown's Waterfront Revitalization Area.

Recent fisheries reports for the Chadakoin River are not available, but limited data on sportfish in Chautauqua Lake is available and many sportfish are taken from the Lake. It can be assumed that a number of these fish also inhabit the Lake outlet, which is similar to the habitat of the lake, and within the Chadakoin River. Although commercial fishing plays no role in the local economy, recreational fishing is growing substantially in popularity as public access to areas along the riverfront increase.

Continued use of living marine resources depends on maintaining long-term health and abundance of fisheries resources and their habitats in the Chadakoin River. This requires active management of fisheries, protection and conservation of habitat, and maintenance of water quality at a level that will foster occurrence and abundance of these resources. Allocation and use of available resources must be consistent with the restoration and maintenance of healthy stocks and habitats that maximize the benefits of resource use so as to provide valuable recreational experiences and sustainable ecological resources.

POLICY 11.1:

Ensure the long-term maintenance and health of fishing resources in the Chadakoin River.

1. Ensure that recreational use of fish resources are managed in a manner that:
    a. Places primary importance on maintaining the long-term health and abundance of fisheries.
    b. Results in sustained useable abundance and diversity of the resource.
    c. Does not interfere with population and maintenance and restoration efforts.
    d. Uses best available scientific information in managing the resources.

2. Protect and manage native stocks and restore sustainable populations of indigenous fish and wildlife species.

3. Foster occurrence and abundance of fishing resources through the protection of spawning grounds, river and shoreline habitats, and water quality.

POLICY 11.2:

Promote recreational use of the Chadakoin River fisheries.

The intent of this policy is to promote and enhance important recreational fishing in the City of Jamestown by:

1. Providing adequate infrastructure to meet recreational needs, including appropriate fishing piers, dockage and parking.

POLICY 12:

Protect agricultural lands within the City of Jamestown's Waterfront Revitalization Area.

The intent of this policy is to conserve and protect important agricultural uses in the City of Jamestown by preventing the conversion of prime farmland to other uses and protecting existing and potential agricultural production.

While agriculture is still considered an important part of the economy of many of the surrounding communities, the City of Jamestown contains no farmland or farming operations. Therefore, Policy 12 is not applicable.

POLICY 13:

Promote appropriate use and development of energy and mineral resources within the City of Jamestown's Waterfront Revitalization Area.

The intent of this policy is to foster the conservation of energy resources in the City of Jamestown's Waterfront Revitalization Area by seeking alternative energy sources, providing for standards to ensure maximum efficiency and minimum environmental impacts when siting energy facilities, minimizing the impact of fuel storage facilities and addressing mineral extraction.

POLICY 13.1:

Conserve energy resources and promote alternative energy sources that are self-sustaining, including solar powered energy generation.

The conservation of energy should be an important part of prudent future planning. Energy efficiency can be achieved through several means that fall under the jurisdiction of local governments, including:

1. Promoting the increased use of public transportation (such as the Chautauqua Area Rural Transit System [CARTS]) to the extent feasible.

2. Providing for pedestrian and bicycle modes of transportation and their integration into the larger transportation system.

3. Promoting energy efficient design in new developments.

4. Promoting greater energy efficiency when upgrading public facilities.

POLICY 13.2:

Minimize impacts from new energy generation and transmission development within the City of Jamestown's Waterfront Revitalization Area.

The Waterfront Revitalization Area already contains the Board of Public Utilities electrical generating plant. It is unlikely additional generation facilities would be sited within the Waterfront Revitalization Area.

However, if new energy generation and transmission developments are evaluated, the degradation of waterfront resources in the City of Jamestown's Waterfront

Revitalization Area should be avoided by siting new energy generating and transmission facilities so they do not adversely affect:

1. Commercial and recreational fishing
2. Habitats critical to fish and wildlife species, vulnerable plant species, and rare ecological communities
3. Wetlands
4. Historic resources
5. Scenic resources

POLICY 13.3:

Minimize the adverse impacts from the storage of fuel products within the City of Jamestown's Waterfront Revitalization Area.

The following considerations were generally derived from Environmental Conservation Law, Article 23, Title 17 and from Federal Safety Standards, 40 CFR Part 193 and apply to the storage of fuel products within the Waterfront Revitalization Area:

1. Ensure that the production, storage and retention of petroleum products within the City of Jamestown's Waterfront Revitalization Area is done in accordance with State regulations.
2. Protect natural resources within the City of Jamestown's Waterfront Revitalization Area by complying with local, county and State oil spill contingency plans.
3. Because of the high potential for hazard associated with liquefied natural gas facilities, these facilities are considered inappropriate and would not provide significant public benefit along the City of Jamestown waterfront and, thus, such uses should be discouraged in this area

POLICY 13.4:

Ensure that mining, excavation, and dredging do not cause an increase in erosion, or an adverse effect on natural resources.

This policy regulates mining, excavation and dredging activities in the City of Jamestown Waterfront Revitalization Area. Due to the disruptive nature of these

activities and the environmental sensitivity of the area, caution must be exercised to ensure these activities do not adversely affect natural resources.

Mining is assumed to be an inappropriate use in the City of Jamestown Waterfront Revitalization Area, along the waterfront in particular.

Dredging may prove to be essential for waterfront revitalization and development in some areas. Dredging projects, however, may adversely affect water quality, fish and wildlife habitats, wetlands, and other important waterway resources. Often these adverse effects can be minimized through careful design and timing of the dredging operations and proper siting of the dredge spoil site. Dredging permits may be granted by the State if it has been satisfactorily demonstrated that these anticipated adverse effects have been reduced to levels, which satisfy dredging permit standards set forth in regulations developed pursuant to Environmental Conservation Law (Articles 15, 24, 25 and 34).

Dredging projects should consider:

1. Whether the benefits outweigh the potential environmental impacts.
2. Safe operations that protect human health and the environment.
3. The eastern spiny softshell turtle, a Species of Significant Concern.
4. The proper handling and disposition of dredge spoils.

This page intentionally left blank.



Section IV
Proposed Land and Water Uses and Proposed

SECTION IV – PROPOSED LAND AND WATER USES AND PROPOSED PROJECTS

This section of the LWRP describes and illustrates the proposed land and water uses for the City of Jamestown Waterfront Revitalization Area (Figure 21). Proposed projects are briefly described within the text and the Implementation Matrix (Table 22). Figures 22, 23, and 24 identify the locations of proposed projects within the LWRP Area.

4.1 PROPOSED LAND USES

The current and proposed land use patterns within the LWRP Study Area vary by sub-area. However, the land uses in the City of Jamestown Waterfront Revitalization Area are proposed in a manner that will continue the general patterns of existing development in the Study Area with some transitioning of inconsistent uses via market forces. Land use changes are proposed to protect waterfront resources, maintain the existing character of the community, and properly accommodate future development. Recommendations have been included to provide a continuous connection of multi-use trails to improve public access along the shoreline and to link the City with existing and proposed trails in adjoining communities. The objective is to allow the waterfront to be a viable segment in a regional trail system. The generalized land use recommendations shown in Figure 21 are intended to support the Local Waterfront Revitalization Program Policies contained in Section III.

The **Chadakoin Outlet District** sub-area will continue to contain a variety of land use patterns, including:

- Industrial uses adjacent to the railroad, with redevelopment of a number of the currently vacant and underutilized properties within the area.
- Green space proximal to the River and associated with Chadakoin Park, enhanced access to the River, an improved trail network, ecological preservation and enhancement, and new educational opportunities through the creation of a Nature and Educational Center.
- Commercial uses along Washington Street and Fluvanna Avenue, with in-fill development of underutilized and vacant properties.

Land use within the **Downtown District** sub-area will undergo the most significant change, as many of the current uses are not compatible with the vision for a vibrant waterfront with exceptional access, amenities, and programming that draw

significant numbers of people. In some cases, such as the Jamestown Cycle Shop, Friendly's Restaurant, and the Oriental Star Buffet, uses are compatible and should be expanded upon and encouraged. Where existing development is inconsistent, market forces will gradually encourage the inconsistent development to relocate to other, more appropriate areas of the City. Additional focus will be placed on development of the Medical Corridor concept (as discussed in further detail later in this section), and the results will include the conversion of underutilized sites to medical office space and other related uses.

Land uses in the **Industrial Heritage Corridor** will be modified slightly from existing conditions, where currently vacant and underutilized properties will be put back into productive use, primarily for commercial or industrial uses. Additionally, access to the River will be enhanced where appropriate to provide workers and residents alike the ability to enjoy the Riverfront.

The **East End Industrial Corridor** primarily consists of manufacturing facilities that are more modern and fully utilized. The few properties that are underutilized can be easily retrofitted for reuse and remain as industrial uses. Enhancements to the commercial and residential areas within this sub area could include improved access to the waterfront and ecological preservation and enhancement along the River corridor.

4.2 PROPOSED WATER USES / HARBOR MANAGEMENT

As discussed in Section 2.3, the Chadakoin River within the City of Jamestown Waterfront Revitalization Area is essentially comprised of two reaches with distinct characteristics. From the western boundary of the City to the Warner Dam, the River is broad, relatively deep, and slow moving. From the Warner Dam to the eastern City boundary, the River is more confined, shallow, and fast moving. Due to these differences, water uses in the two sections of the River are quite different.

In the western portion of the River, boating is a primary recreational use, at least to the Fairmount Avenue Bridge, under which access to boats is restricted due to the bridge's limited height. Additional bridges downstream of the Fairmount Avenue Bridge also are low and limit the potential for boating. Boating between the Lake Outlet and the Second Street Bridge is known to be a very scenic trip. The five-mile per-hour speed limit is set by the county under the authority of the NYS Navigation Law and enforced by the Chautauqua County Sheriff's Office Marine Patrol.

McCrea Point Park contains a limited number of docks and slips, and a boat launch is available for public use. The Park is owned and operated by the City of Jamestown.

LABELLA Associates, D.P.C.

CITY OF JAMESTOWN

LOCAL WATERFRONT REVITALIZATION PROGRAM

Generalized Land Use Recommendations Map

LWRP Study Area
City Corporate Limits
Surface Water

Land Use

- Recreation/Conservation
- Residential
- Commercial
- Industrial (Infill)
- Downtown Waterfront Development
- Downtown Core (Mixed Use)
- Medical Corridor Development
- Shovel-Ready Industrial Park
- Residential & Rec/Conservation
- Residential & Commercial

Sources:
1. City of Jamestown Local Waterfront Revitalization Program Work Plan Map - Edited by LaBella to reflect steering committee revisions
2. Base Map: 2012 Chautauqua County Orthoimagery obtained from NYSGIS Clearinghouse

0 1,000 Feet

1:15,000

This map was prepared for the New York State Department of State with funds provided under Title 11 of the Environmental Protection Fund.

Path: I:\Jamestown Urban Renewal Agency\21251\Drawings\LWRP\MAP 2014.01.28 Proposed Land Use.mxd

Figure 21. Generalized Land Use Recommendations Map

A few private docks are located in this section of the River, and an informal boat launch is located at the foot of Clifton Avenue.

Fishing comprises the other primary recreational opportunity within the western section of the River. Fishing occurs primarily at McCrea Point and Panzarella Parks, the Riverwalk, and a number of informal access points. Only a small portion of the Riverwalk currently extends into the western section of the River. As the Riverwalk is expanded farther into the western section of the River, additional pedestrian and biking opportunities will be available, and additional formal fishing access points will be created.

The eastern portion of the River is too shallow for boating, and navigating with canoes and kayaks is challenged by the low bridges along the River's reach. Waterfront recreation in this section primarily consists of walking, biking, and fishing. The Riverwalk offers formal paths and fishing access, and any extension of the Riverwalk will increase opportunities for recreation. Conversion of vacant sites to greenspace would provide additional recreational opportunities and shoreline restoration could be integrated into such projects.

4.3 PROPOSED PROJECTS

A host of projects have been discussed in the City of Jamestown Waterfront Revitalization Area to improve opportunities for economic development, public access, and recreation. A key focus of the City's waterfront revitalization strategy is to take advantage of the recreational tourism potential of the waterfront. To this end, projects proposed for the area should be oriented around improving and increasing the public's ability to access and utilize local surface waters and providing additional recreational amenities along the waterfront. These projects will result in the gradual transition of properties with inconsistent uses to those with uses consistent with the waterfront concepts presented in this document, and, in the long-term, ultimately result in the transformation of the Study Area into a vibrant waterfront. These projects are based on the community's vision for revitalization of the Study Area, existing plans, and the various analyses presented within this document that are contained in the Supporting Documents portion of this report, including:

1. Economic and Market Analysis
2. Ecological Conditions and Living Infrastructure Framework
3. Urban Design Analysis

Figures 22, 23, and 24 identify the locations of proposed projects within the Study Area while the Implementation Matrix (Table 22) provides leader, partner, funding, priority, and time frame information about each of the proposed projects.

OVERALL GOALS AND OBJECTIVES

The ultimate key to the City's future is the improvement of the tax base, which has eroded over the past few decades due to job loss and decreasing population. The intent, therefore, of the proposed projects is to create quality, connected, safe, convenient and healthy places to live and work, that make the region attractive for residential, commercial, and industrial development. While not every project listed below has a direct impact on economic development, all proposed projects have, at a minimum, an indirect impact on the City's economy. For example, the extension of the Riverwalk does not directly create additional employment or tax revenue, but it does increase the quality of the community, which attracts people to the area. This increase in the quality of recreational opportunities would attract new residents to the City, and result in population growth and an increase in the tax base.

The proposed projects have been classified into the following broad categories:

- Economic Development (Figure 22)
- Quality of Life Improvements (Figure 23)
- Natural/Environmental Enhancements and Improvements (Figure 24)
- Additional Strategies

These categories are generalized and many of the proposed projects contain elements of more than one category.

Table 22. City of Jamestown LWRP: Proposed Projects Implementation Matrix

City of Jamestown - Local Waterfront Revitalization Program: Proposed Projects Implementation Matrix													
			Implementation Leader(s)*	Other Partners*	Potential Funding Source(s)*	Estimated Project Cost	Implementation Priority			Implementation Timing			
							High	Med	Low	Near	Mid	Long	Ongoing
Economic Development:													
Enhance Existing and Foster New Development Opportunities													
EDO 1	Enhance Existing Waterfront Businesses		City	Business/Land Owners			X			X			
EDO 1a	Examples:	Jamestown Cycle Shop (such as bike and boat rentals)	City	Jamestown Cycle Shop	Owners	$5,000	X			X			
EDO 1b		Friendly's (such as outdoor seating and/or an ice cream window)	City	Kessler Family LLC	Owners	$10,000	X			X			
EDO 1c		Oriental Star Buffet (such as outdoor seating)	City	Lin Zhao Hui	Owners	$5,000	X			X			
EDO 2	Address Vacant and Underutilized Waterfront Properties		City	Business/Land Owners				X		X			
EDO 2a	Example:	0 Allen Street - Vacant parking to greenspace/waterfront access	City, DPW		EPF, RTCAP, LWRP, EPABG	$50,000		X		X			
EDO 3	Assisting the Repositioning of Existing Properties		City	Business/Land Owners			X					X	
EDO 3a	Buffering of inconsistent uses from view of the waterfront where appropriate		City, DPW	Business/Land Owners	Owners, City	$25,000		X		X			
EDO 4	Advance the Downtown Riverfront Opportunity Zone Concept		City	JRC			X						X
EDO 5	Focus Appropriate Development/Redevelopment of Key Sites within the Downtown Riverfront Opportunity Zone		City	Developers	Private, RSTRNY, NYMS	TBD	X						X
EDO 6	Establish a Riverfront Tourism Attraction		City	CCVB			X				X		
EDO 6a	Example:	National Comedy Center (NCC) – Phased Development	Lucy-Desi Center	City, Gebbie, STERA/WNYPR, JRC	Gebbie, EPF, Private	$2 million	X			X	X		
EDO 7	Create an Excursion Train Connection to Buffalo/Niagara Falls		City	WNY Railway Historical Society, Inc.	TIGER	$10 million		X				X	
EDO 8	Foster Specialty Retail in the Downtown Core by:												
EDO 8a	Identify Appropriate Locations for Specialty Retail		City	Developers, Land Owners	City	$0		X		X			
EDO 8b	Create City-Led Recruitment Program to Entice Specialty Retailers to Locate in the City		City	Developers, Land Owners, Gebbie, JRC	City, Gebbie, JRC, RSTRNY, NYMS	$25,000			X		X		
EDO 9	Create Additional Professional Office Space by:												
EDO 9a	Identify Appropriate Locations for Professional Office Space		City	Developers, Land Owners	City	$0		X		X			
EDO 9b	Create City-Led Recruitment Program to Entice Office Space Users to Locate in the City		City	Developers, Land Owners, Gebbie, JRC	City, Gebbie, JRC, RSTRNY, NYMS	$25,000			X		X		
EDO 10	Advance the Medical Area Opportunity Zone Concept through the Creation of a Comprehensive Medical Corridor Plan		City	JAMA, WCA, WNYUA, TRC	LWRP, WCA, CDBGTA, City, County	$50,000		X			X		
EDO 11	Focus Appropriate Development/Redevelopment of Key Sites within the Medical Area Opportunity Zone		City	JAMA, WCA, WNYUA, TRC, Developers				X				X	
EDO 11a	Key Sites:	Vacant Parcels on Foote (such as Riverwalk extension, park, ped. bridge)	City	DPW, Land Owners	EPF, TEP, RSTRNY, BOA	$750,000		X		X			
EDO 11b		Briggs Street (such as medical-related development)	City	Business/Land Owners, Developers	Private, RSTRNY	TBD			X			X	
EDO 11c		Harrison/Briggs Block (such as medical-related development)	City	Business/Land Owners, Developers	Private, RSTRNY, BOA	TBD			X		X		
EDO 11d		NW Corner of Harrison & Foote (such as medical-related development)	City	Business/Land Owners, Developers	Private, RSTRNY	TBD			X		X		
EDO 12	Create New Medical Office and Social Service Space by:												
EDO 12a	Identify Appropriate Locations for Medical Office and Social Service Space		City	Developers, Land Owners	City	$0		X		X			
EDO 12b	Create City-Led Recruitment Program to Entice Medical Office and Social Service Space Users to Locate in the City		City	JAMA, WCA, WNYUA, TRC, JRC, Developers, Land Owners	City, RSTRNY, JAMA, WCA, WNYUA, TRC, JRC	$25,000			X		X		
EDO 13	Foster Additional Eating and Drinking Establishments by:												
EDO 13a	Identify Appropriate Locations for Eating and Drinking Establishments		City	Developers, Land Owners	City	$0	X			X			
EDO 13b	Create City-Led Recruitment Program to Entice Eating & Drinking Businesses to Locate in the City		City	Developers, Land Owners, Gebbie, JRC	City, Gebbie, JRC, RSTRNY, NYMS	$25,000		X			X		

Table 22 Continued on Next 5 Pages *** Key for Implementation Leaders, Other Partners, and Potential Funding Source(s) on Page 196**

City of Jamestown - Local Waterfront Revitalization Program: Proposed Projects Implementation Matrix

			Implementation Leader(s)*	Other Partners*	Potential Funding Source(s)*	Estimated Project Cost	Implementation Priority			Implementation Timing			
							High	Med	Low	Near	Mid	Long	Ongoing
Industrial, Former Industrial, and Other Brownfield Sites													
EDI 1	Create an Inventory of Shovel-Ready Sites by Creating a City-Led Program to:												
EDI 1a	Assess the Environmental Conditions of Strategic Sites		City	CCIDA, DEC, USEPA	EPABG, BOA	TBD	X			X			
EDI 1b	Update Environmental Conditions Inventory as Necessary		City	CCIDA, DEC, USEPA	EPABG	TBD	X						X
EDI 1c	Create Shovel Ready Sites where Appropriate		City	CCIDA, DEC, USEPA	EPABG	TBD		X			X		
EDI 1d	Entice Developers/Businesses to Locate and Build at these Locations within the City		City, CCIDA	Developers/Businesses	City, CCIDA	$25,000		X			X		
EDI 2	Convert Brownfield Sites to Low-Maintenance Open Space as Interim Uses		City	DPW, Land Owners				X					X
EDI 2a	Examples:	Areas north and west of the Weitsman Scrap Yard	City	DPW, George White, Irving E. Fisher	Owners, DEC, EPABG	$50,000		X		X			
EDI 2b		Trolley Building	City	DPW, Eagles Nest Partners LLC	Owners, DEC, EPABG	$50,000	X			X			
EDI 2c		Portions of the Lennox Property	City	DPW, Ownership in Dispute	Owners, DEC, EPABG	$50,000			X		X		
EDI 2d		Vacant Parking on River Street	City	JURA	Owners, DEC, EPABG	$25,000			X	X			
EDI 3	Improve Utilization of Underutilized and Brownfield Sites		City	Business/Land Owners, CCIDA, STERA/WNYPR	Owners, RSTRNY	TBD		X			X		
EDI 4	Focus on Development/Redevelopment of the following Key Brownfield Sites:												
EDI 4a	Automatic Voting Machine Corp		City, DPW	Business/Land Owners, DOT/CCDOT, STERA/WNYPR	Owners	$5 million		X			X		
EDI 4b	Advance the Cleanup and Redevelopment of Brownfield Sites on Washington Street		City, County	DEC, Developers	DEC	$2 million	X					X	
EDI 4c	Redevelopment of East 1st Street – Arts and Heritage Corridor		City	Business/Land Owners, Developers	Private	$2 million			X		X		
EDI 4d	CCIDA/United Lumber Sites		CCIDA	Developers	Private, BOA	TBD	X			X			
EDI 4e	Develop River Street Industrial Park		City, CCIDA	Business/Land Owners, Developers	City, CCIDA, DEC, USEPA, BOA	TBD			X		X		
EDI 4f	Redevelopment of the Dahlstrom Complex		City, CCIDA	Business/Land Owners, Developers	Private, BOA	TBD	X			X			
Housing													
EDH 1	Foster the Development of New/Adaptive Re-Use Housing Units by:												
EDH 1a	Identify Appropriate Locations for New/Adaptive Re-Use Housing Units		City	Developers, Land Owners	City, CDBG	$0		X		X			
EDH 1b	Create City-Led Recruitment Program to Entice Development of New/Adaptive Re-Use Housing Units in the City		City	Developers, Land Owners, Gebbie, JRC	City, Gebbie, JRC, CDBG, RSTRNY	$25,000			X		X		
Quality of Life Improvements:													
Improve Connectivity													
QLC 1	Continue to Develop a Continuous Riverwalk including:		City, DPW	Nearby Communities, STERA/WNYPR, CCHN, CRT, DOT/CCDOT, Land Owners									X
QLC 1a	Construct Phase 5 of the Riverwalk Trail System: *Chadakoin Park Bike Trail* (already funded)		City, DPW	STERA/WNYPR, CRT	EPF, City	$350,000	X			X			
QLC 1b	Construct Phase 6 of the Riverwalk Trail System (already funded)		City, DPW	STERA/WNYPR, CCHN, DOT/CCDOT, Land Owners	EPF, City, CDBG, BPU	$1.4 million	X			X			
QLC 1c	Construct Lucy Trail (already funded)		County	City, DPW, V. of Celoron	TEP, County	$1.2 million	X			X			
QLC 1d	Phase 1 of NCC project (staircase, at-grade rail crossing, Festival Lawn park, trail connections)		City	Lucy-Desi Center, Gebbie, STERA/WNYPR, JRC	EPF, City, Gebbie, TEP, CDBG	$1.4 million	X			X			
QLC 1e	Extend Riverwalk easterly from Keelboat Landing		City, DPW	STERA/WNYPR	EPF, City, TEP, CDBG	$500,000			X			X	
QLC 1f	Extend Riverwalk southeasterly from Harrison Street to the Gateway Center		City, DPW	Land Owners	EPF, City, TEP, CDBG	$750,000		X			X		
QLC 1g	Extend Riverwalk northeasterly from Harrison Street to the Jamestown High School		City, DPW		EPF, City, TEP, CDBG, SRTS	$250,000		X			X		

Table 22 Continued on Next 4 Pages *** Key for Implementation Leaders, Other Partners, and Potential Funding Source(s) on Page 196**

City of Jamestown - Local Waterfront Revitalization Program: Proposed Projects Implementation Matrix

			Implementation Leader(s)	Other Partners	Potential Funding Source(s)	Estimated Project Cost	Implementation Priority			Implementation Timing			
							High	Med	Low	Near	Mid	Long	Ongoing
QLC 2	Develop the East End Nature Trail and Park including:												
QLC 2a	Create Trail from Dahlstrom to Hope's Window Properties		City, DPW	Buffalo St Partners LLC, Jamestown Metal Products, Blackstone Business	EPF, TEP, CDBG, City, Private	$1 million		X		X			
QLC 2b	Create Pocket Park on City-Owned Land east of Bigelow Ave (consider obtaining the rights to expand onto nearby private properties)		City, DPW	Jamestown Vietnam Veterans Assoc., H&H Metal Specialty Inc.	EPF, TEP, City, COTA	$300,000		X			X		
QLC 2c	Create Trail from Hope's Window Properties to Pocket Park		City, DPW		EPF, TEP, CDBG, City	$250,000		X			X		
QLC 2d	Obtain Permission to Use Hope's Window Existing Trail		City, DPW	Hope's Windows Inc	NA	$0		X		X			
QLC 2e	Create Connections from Hope's Window Existing Trail to Dahlstrom and Park Trails		City, DPW	Hope's Windows Inc	EPF, TEP, CDBG, City	$200,000		X				X	
QLC 3	Improve North-South Connections through Construction/Rehabilitation of:												
QLC 3a	Pedestrian Bridges:	Across the River from Panzarella Park to the North Shore (part of NCC project)	City, DPW	Lucy-Desi Center, Gebbie	RTCAP, RTP, EPF, City	$1 million	X			X			
QLC 3b		Across the River just west of the Washington Street Bridge (part of NCC project)	City, DPW	Lucy-Desi Center, Gebbie	RTCAP, RTP, EPF, City	$750,000	X			X			
QLC 3c		Across the River from Brooklyn Square to the North Shore	City, DPW	STERA/WNYPR, Land Owners	RTCAP, RTP, EPF, City	$750,000			X			X	
QLC 3d		Across the Railroad from the North Shore to East 1st Street	City, DPW	STERA/WNYPR, Land Owners	RTCAP, RTP, EPF, City	$750,000			X			X	
QLC 3e		Across the River from Brooklyn Square to Institute St (N of Harrison)	City, DPW	Land Owners	RTCAP, RTP, EPF, City	$500,000			X			X	
QLC 3f		Across the River from Vacant Parcels on Foote to Briggs Street	City, DPW	Land Owners	RTCAP, RTP, EPF, City	$500,000	X			X			
QLC 3g		Across the River from King Street to the Fire Training Center	City, DPW	Land Owners	RTCAP, RTP, EPF, City	$500,000			X			X	
QLC 3h		Across the River from Hope's Windows to James Avenue	City, DPW	Land Owners, DOT/CCDOT	RTCAP, RTP, EPF, City	$500,000			X			X	
QLC 3i		Across the River from Bigelow Avenue to Niagara Avenue	City, DPW	Land Owners, DOT/CCDOT	RTCAP, RTP, EPF, City	$600,000			X			X	
QLC 3j	Viaducts:	Under the Railroad at Fairmount Avenue	City, DPW	STERA/WNYPR, Land Owners	RTCAP, RTP, EPF, City	$100,000			X			X	
QLC 3k		Under the Railroad at Institute Street	City, DPW	STERA/WNYPR, Land Owners	SRTS, RTP, EPF, City	$100,000	X			X			
QLC 4	Reutilize Porter Avenue Park		City, DPW	Land Owners	EPF, COA	$500,000			X			X	
QLC 5	Develop a Bicycle Infrastructure Network		City, DPW	DOT/CCDOT	EPF, TEP, CDBG, City		X						X
QLC 6	Intersection Enhancements		City, DPW	DOT/CCDOT	SRTS, TEP, City				X				X
QLC 7	Street Improvements		City, DPW	DOT/CCDOT	SRTS, TEP, City				X				X
Amenities													
QLA 1	Develop New Fishing Access Sites and Improve Existing Sites including:												
QLA 1a	Formalize Fishing Opportunities under the West 6th Street Bridge (funded – Riverwalk Phase VI)		City, DPW	DOT/CCDOT, Land Owners	EPF, City	$10,000	X			X			
QLA 1b	Formalize Fishing Opportunities near the 3rd Street Bridge and Steel Street (funded – Phase VI)		City, DPW	DOT/CCDOT, Land Owners	EPF, City	$10,000	X			X			
QLA 1c	Formalize Fishing Opportunities west of and under the Washington Street Bridge		City, DPW	DOT/CCDOT, Land Owners	EPF, RTCAP, LWRP, City	$10,000		X			X		
QLA 1d	Formalize Fishing Opportunities behind the Gateway Center		City, DPW	Land Owners	EPF, RTCAP, LWRP, City	$10,000		X			X		
QLA 1e	Formalize Fishing Opportunities near the low head dam at Harrison and Winsor		City, DPW	Land Owners	EPF, RTCAP, LWRP, City	$10,000	X			X			
QLA 1f	Formalize Fishing Opportunities near the low head dam at Buffalo and Allen		City, DPW	Land Owners	EPF, RTCAP, LWRP, City	$10,000	X			X			
QLA 1g	Formalize Fishing Opportunities behind Dahlstrom on north side of Blackstone Ave		City, DPW	Land Owners	EPF, RTCAP, LWRP, City	$10,000		X			X		
QLA 1h	Formalize Fishing Opportunities behind Hope's Windows (get public permission)		City, DPW	Land Owners	EPF, RTCAP, LWRP, City	$10,000		X			X		
QLA 1i	Formalize Fishing Opportunities at City-owned vacant parcels east of Bigelow Ave		City, DPW		EPF, RTCAP, LWRP, City	$10,000		X			X		
QLA 1j	Create Fishing Opportunities by clearing brush at existing stairwell to River at Tiffany Ave		City, DPW	DOT/CCDOT, Land Owners	EPF, RTCAP, LWRP, City	$10,000	X			X			
QLA 1k	Improve McCrea Point Docks and access along the River edge for Fishing Opportunities (funded – Riverwalk Phase VI)		City, DPW		EPF, City	$100,000	X			X			

Table 22 Continued on Next 3 Pages *** Key for Implementation Leaders, Other Partners, and Potential Funding Source(s) on Page 196**

City of Jamestown - Local Waterfront Revitalization Program: Proposed Projects Implementation Matrix

		Implementation Leader(s)*	Other Partners*	Potential Funding Source(s)*	Estimated Project Cost	Implementation Priority			Implementation Timing			
						High	Med	Low	Near	Mid	Long	Ongoing
QLA 2	Develop New Boating Access Sites and Improve Existing Sites including:											
QLA 2a	Improve McCrea Point Boat Launch and Docks (funded – Riverwalk Phase VI)	City, DPW		EPF, City	$100,000	X			X			
QLA 2b	Improve Panzarella Park Docks (funded – Riverwalk Phase VI)	City, DPW		EPF, City	$50,000	X			X			
QLA 2c	Formalize Clifton Avenue Boat Launch	City, DPW	Land Owners	EPF, RTCAP, LWRP	$25,000	X			X			
QLA 2d	Formalize Jones Memorial Park Boat Launch	City, DPW		EPF, RTCAP, LWRP	$25,000		X				X	
QLA 2e	Create Boat Launch Near Washington Street Bridge	City, DPW	Land Owners	EPF, RTCAP, LWRP	$25,000		X				X	
QLA 2f	Encourage Downtown Business to Rent Kayaks/Canoes	City, DPW	Business/Land Owners	NA	$0		X			X		
QLA 2g	Create Formalized Portage Around Warner Dam	City, DPW	Land Owners	EPF, RTCAP, LWRP	$25,000			X			X	
QLA 3	Protect Existing, Develop New, and Improve Unsightly Scenic Vistas	City, DPW	Business/Land Owners, CWC, JAS, JCC	LWRP, EPF, RTCAP				X				X
QLA 4	Waterfront Programming	City	DOE, JCC, JAS, RTPI, CLA, CWC, CCECC, CCHN, JRC	JRC, City		X			X			
QLA 5	Educational and/or Interpretive Center(s)	City	DOE, JCC, JAS, RTPI, CLA, CWC, CCECC, CCHN, STERA/WNYPR, Land Owners, Developers	EPF, CDBG, LWRP, COTA	$2 million		X		X			
QLA 5a	Analyze feasibility of public transportation connection between Center and Downtown	City	CARTS	TEP	$50,000			X	X			
Natural/Environmental Enhancements and Improvements:												
Environmental Quality Improvements												
NEQ 1	Development/Riparian Transition Zones:											
NEQ 1a	Finalize Zoning Code Language creating the Dev/Riparian Transition Zones	City		NA	$0		X		X			
NEQ 1b	Adopt Zoning Code Language creating the Dev/Riparian Transition Zones	City		NA	$0		X		X			
NEQ 1c	Enforce New Zoning Code Standards	City	DPW	NA	$0		X					X
NEQ 2	Invasive Species Removal and Management:											
	Chadakoin Outlet District:											
NEQ 2a	Northwest corner of State wetland LW-10	City, DPW	JCC, CWC	USDA, NOAA, USFWS, NFWF	TBD		X		X			
NEQ 2b	Edge of the former municipal landfill where it meets the River	City, DPW	JCC, CWC	USDA, NOAA, USFWS, NFWF	TBD		X		X			
NEQ 2c	Chadakoin Park	City, DPW	JCC, CWC	USDA, NOAA, USFWS, NFWF	TBD		X		X			
NEQ 2d	Along the River's edge on tussocks and stumps	City, DPW	JCC, CWC	USDA, NOAA, USFWS, NFWF	TBD		X				X	
	Downtown District:											
NEQ 2e	Along the railroad and River between 6th Street and Washington Street	City, DPW	JCC, CWC	USDA, NOAA, USFWS, NFWF	TBD			X		X		
NEQ 2f	Along the River from Washington Street to Winsor Street where riparian edge is narrow	City, DPW	JCC, CWC	USDA, NOAA, USFWS, NFWF	TBD			X			X	
	Industrial Heritage Corridor and East End Industrial Corridor:											
NEQ 2g	Along the River especially near Harrison Street (before Winsor Street), Allen Street, Buffalo Street, and Blackstone Avenue	City, DPW	JCC, CWC	USDA, NOAA, USFWS, NFWF	TBD			X			X	
NEQ 2h	Floodplain area to the east of Bigelow Avenue (north and south side of River)	City, DPW	JCC, CWC	USDA, NOAA, USFWS, NFWF	TBD			X		X		
NEQ 3	Wetlands Restoration and Management:											
NEQ 3a	Western portion of Chadakoin Park (where saturated soils cannot support recreation)	City, DPW	JCC, CWC	NOAA, USFWS, NFWF	TBD			X			X	
NEQ 3b	Formalize existing mown trail in northern portion of Chadakoin Park providing controlled access to the wetland complex	City, DPW	JCC, CWC	RTCAP, RTP, NOAA	$500,000		X			X		

Table 22 Continued on Next 2 Pages *** Key for Implementation Leaders, Other Partners, and Potential Funding Source(s) on Page 196**

City of Jamestown - Local Waterfront Revitalization Program: Proposed Projects Implementation Matrix													
		Implementation Leader(s)*	Other Partners*	Potential Funding Source(s)*	Estimated Project Cost	Implementation Priority			Implementation Timing				
						High	Med	Low	Near	Mid	Long	Ongoing	
NEQ 4	Upland Restoration/Shoreline Restoration/Living Shorelines:												
NEQ 4a	Within Chadakoin Park, saturated/flooded playing fields restored as natural areas	City, DPW	JCC, CWC	NOAA, USFWS, NFWF	$50,000			X	X				
NEQ 4b	Living shoreline techniques along mown and eroding shorelines on both sides of the River in the vicinity of McCrea Point Park	City, DPW	JCC, CWC	NOAA, USFWS, NFWF	$50,000		X			X			
NEQ 4c	Living seawall habitats anchored to the bulkheads in McCrea Point Park	City, DPW	JCC, CWC	NOAA, USFWS, NFWF	$25,000			X		X			
NEQ 4d	Begin discussions with STERA/WNYPR to consider retrofitting the rails with low plantings between the rails (a green alternative to the traditional stone fill)	City, DPW	STERA/WNYPR	NOAA, USFWS, NFWF	$0			X			X		
NEQ 4e	Begin discussions with STERA/WNYPR to consider naturalizing areas no longer in use	City, DPW	STERA/WNYPR	NOAA, USFWS, NFWF	$0			X			X		
NEQ 4f	Increase vegetative diversity of Panzarella Park	City, DPW	JCC, CWC	NOAA, USFWS, NFWF	$25,000			X					
NEQ 4g	Enhance Panzarella Park boardwalk and include floating wetlands or living seawalls	City, DPW	JCC, CWC	NOAA, USFWS, NFWF	$75,000			X					
	Shoreline and Upland Restoration:												
NEQ 4h	Along the right bank of the River near the Gateway Center	City, DPW	JCC, CWC, Business/Land Owners	NOAA, USFWS, NFWF	TBD		X		X				
NEQ 4i	Along the left bank of the River from Foote Ave to Winsor St	City, DPW	JCC, CWC, Business/Land Owners	NOAA, USFWS, NFWF	TBD			X			X		
NEQ 4j	Along the right bank of the River near D.C. Rollforms (Dow Craft)	City, DPW	JCC, CWC, Business/Land Owners	NOAA, USFWS, NFWF	TBD			X			X		
NEQ 4k	Along the left bank of the River near the Dahlstrom Parking Lot	City, DPW	JCC, CWC, Business/Land Owners	NOAA, USFWS, NFWF	TBD			X		X			
NEQ 4l	Along both sides of the River near the Dahlstrom Building	City, DPW	JCC, CWC, Business/Land Owners	NOAA, USFWS, NFWF	TBD		X			X			
NEQ 4m	Along the right bank of the River near the vacant parking lot at 100 Blackstone Ave	City, DPW	JCC, CWC, Business/Land Owners	NOAA, USFWS, NFWF	TBD			X		X			
NEQ 4n	Along the right bank of the River between Hope's Windows and Bigelow Ave	City, DPW	JCC, CWC, Business/Land Owners	NOAA, USFWS, NFWF	TBD			X		X			
NEQ 5	Stormwater Management:												
NEQ 5a	Treat significant stormwater runoff by retrofitting existing ditches (18th St Canal, 11th St Canal, and Lafayette St ditch)	City, DPW		City, CDBG, GIGP	$50,000		X				X		
NEQ 5b	Implement stormwater best management practices at Weitsman Scrap Yard	City, DPW	Web-Jamestown Corp.	Private	$50,000	X			X				
NEQ 5c	Stormwater management at McCrea Point Park as needed	City, DPW		City, EPF	$10,000			X	X				
NEQ 5d	Stormwater management east of the Jamestown BPU building	City, DPW	Business/Land Owners	City, CDBG, GIGP	$25,000			X	X				
NEQ 5e	Stormwater management & vegetated planters under the Washington Street Bridge	City, DPW		City, CDBG, GIGP	$10,000			X		X			
NEQ 5f	Expand vegetated stormwater planters scheme to other streets that connect to the River/Chadakoin Park	City, DPW	Land Owners	City, CDBG, GIGP	$100,000			X			X		
NEQ 5g	Stormwater management along Victoria Avenue	City, DPW		City, CDBG, GIGP	$50,000			X			X		
NEQ 5h	Work with Gateway Center business/land owners to remove unused sections of the impervious parking lot	City, DPW	Community Development Association	Private	TBD			X	X				
NEQ 5i	Restore some of the brick roadways (for aesthetics, reuse of local materials, & stormwater)	City, DPW		City, CDBG, GIGP	TBD			X			X		
NEQ 5j	Stormwater management practices in parking lots (especially in industrial areas)	City, DPW	Business/Land Owners, Developers	Private			X					X	
NEQ 5k	Incorporate special attention to stormwater management into the review of site plans	City		NA	$0	X			X				
NEQ 6	Eastern Spiny Softshell Turtle Habitat Enhancement:												
NEQ 6a	Habitat enhancement along the 18th Street and 11th Street canals	City, DPW	JCC, CWC	NOAA, USFWS, NFWF	$25,000			X	X				
NEQ 6b	Encourage turtle habitat creation at appropriate locations (but not within the *Downtown District*)	City, DPW	JCC, CWC	NOAA, USFWS, NFWF	TBD		X		X				
NEQ 6c	Educate residents about the importance of the local ecology by placing interpretive signage, informational kiosks, or maps at key locations throughout the River corridor	City, DPW	JCC, CWC	NOAA, USFWS, NFWF	$50,000	X			X				

Table 22 Continued on Next Page *** Key for Implementation Leaders, Other Partners, and Potential Funding Source(s) on Page 196**

City of Jamestown - Local Waterfront Revitalization Program: Proposed Projects Implementation Matrix												
		Implementation Leader(s)*	Other Partners*	Potential Funding Source(s)*	Estimated Project Cost	Implementation Priority			Implementation Timing			
						High	Med	Low	Near	Mid	Long	Ongoing
NEQ 7	Eliminate Illegal Dumping at Monroe and Clinton Streets	City	DPW	City	$10,000		X		X			
NEQ 8	Address Debris Accumulation at Warner Dam	City	DEC	DEC	$25,000	X			X			
NEQ 9	Redevelopment of Vacant Parcels on Foote Avenue	City	Land Owner, Developers	Private, BOA	TBD		X		X			
Green Infrastructure Opportunities												
NEG 1	Complete Streets and Green Streets	City, DPW	DOT/CCDOT	TEP, SRTS, EFCSRF	TBD		X					X
Additional Strategies												
AD 1	Continue to Advance the Jamestown Urban Design Plan	City	JRC	CDBG	TBD	X						X
AD 2	Continue Planning and Advocacy	City	DOS, JRC	CDBGTA	TBD	X						X
AD 3	Integrate Greenspace into Redevelopment Projects	City	Developers	Private	TBD	X						X
AD 4	Focus Industrial, Light Industrial and High Tech Businesses in the East End	City, CCIDA	Developers	Private	$0	X						X
AD 5	Create a Self-Sustaining Brownfield Program	City	CCIDA, County	USEPA, TAG	$200,000	X			X			
AD 6	Incorporate the Waterfront into the City's Branding/Marketing Efforts	City	JRC, CCIDA	CDBG, LWRP	$50,000	X			X			

Key:					
BOA	NYS DOS Brownfield Opportunity Area Program	DOE	New York State Department of Education	NYMS	NY Main Street Grant
BPU	Jamestown Board of Public Utilities	DOS	New York State Department of State	RSTRNY	Restore NY Grant
CARTS	Chautauqua Area Regional Transit System	DOT	New York State Department of Transportation	RTCAP	Rivers, Trails, and Conservation Assistance Program
CCDOT	Chautauqua County Division of Transportation	DPW	Jamestown Department of Public Works	RTP	NYSOPRHP Recreational Trails Program
CCECC	Cornell Cooperative Extension of Chautauqua County	EFCSRF	NYS Environmental Facilities Corp. State Revolving Fund	RTPI	Roger Tory Peterson Institute
CCHN	Chautauqua County Health Network	EPABG	USEPA Brownfield Grants	SRTS	Safe Routes to School
CCIDA	Chautauqua County Industrial Development Agency	EPF	NYS Environmental Protection Fund	STERA	Southern Tier Extension Railroad Authority
CCVB	Chautauqua County Visitor's Bureau	GIGP	NYS EFC Green Innovation Grant Program	TAG	NYS DOS Technical Assistance Grant
CDBG	Community Development Block Grant	JAMA	Jamestown Area Medical Associates	TEP	Transportation Enhancement Program
CDBGTA	Community Development Block Grant Technical Assistance	JAS	Jamestown Audubon Society	TIGER	USDOT's Transportation Investment Generating Economic Recovery Program
City	City of Jamestown	JCC	Jamestown Community College	TRC	The Resource Center
CLA	Chautauqua Lake Association	JRC	Jamestown Renaissance Corporation	USDA	US Department of Agriculture
COTA	NYS Council on the Arts Grant Program	JURA	Jamestown Urban Renewal Agency	USEPA	United States Environmental Protection Agency
County	Chautauqua County	LWRP	Local Waterfront Revitalization Program	USFWS	United States Fish and Wildlife Service Grants
CRT	Chautauqua Rails-to-Trails	Nearby Communities	Village of Celoron, Village of Lakewood, Village of Falconer, Town of Ellicott, Town of Ellery, Town of Busti	WCA	Jamestown WCA Hospital
CWC	Chautauqua Watershed Conservancy	NFWF	National Fish and Wildlife Foundation	WNYPR	Western New York and Pennsylvania Railroad
DEC	New York State Department of Environmental Conservation	NOAA	National Oceanic & Atmospheric Administration Habitat Restoration Grants	WNYUA	Western New York Urology Associates, LLC

Table 22 Notes:
1) The cost estimates were based on existing planning and grant documents, engineering estimating techniques, online research, and other sources. Estimated project costs should not be used for design considerations and should be more closely evaluated on a case-by-case basis during the preparation of grant applications, funding requests, and project design.
2) In some cases the costs for revitalization and redevelopment projects cannot be estimated because the details of the actual development are not currently available.
3) Details about the various grant programs can be found in "Table 23. Potential Grant Assistance Programs" in *Section 5.5 Financial Resources Necessary to Implement the LWRP*.

LABELLA Associates, D.P.C.

300 STATE STREET
ROCHESTER, NY 14614
P: (585) 454-6110
F: (585) 454-3066
www.labellapc.com

CITY OF JAMESTOWN

LOCAL WATERFRONT REVITALIZATION PROGRAM

Proposed Economic Development Projects Map

Vacant Big Box Store
The Eatery
Anderson Cleaners
Advance the Cleanup and Redevelopment of Brownfield Sites on Washington Street:
C&B Cleaners
Dunn Wright Building
Pelican Site
Properties North and West of Weitsman Scrap Yard
Automatic Voting Machine Corp - Close Lister St / Suite Kote RR Spur
55 Jones & Gifford Ave
19 Jones & Gifford Ave
Trolley Building
Former Gas Station on 3rd Street
Broadhead Mills
Arts Center
Crescent Tool - Parking Lot
Redevelopment of East 1st Street - Arts and Heritage Corridor:
D&S Storage
Van Stee Parking
Van Stee Building
Union National
Jamestown Royal
Redevelopment of Dahlstrom Complex:
Dahlstrom Building
Dahlstrom Parking
100 Blackstone
Essex Hope
Road House Bar & Grill
Vacant Building on E. 2nd St
Parking on Minsker
Titan X Parking
Bull Frog Tavern & Inn
Jamestown Mattress
Crawford
Bush
0 Allen St
Develop River Street Industrial Park:
Genco Machine
Southern Tier
Star Tubing
D. C. Rollforms (Dow Craft)
Vacant Parking on River St.
Art Metal
Vacant Parking on Chandler
5th Wheel Bar
Atlas Furniture
CCIDA/United Lumber Sites:
United Lumber
CCIDA
Mason Carving Storage Building
Medical Area Opportunity Zone / Medical Corridor
Lennox Property
Train Car Repair Shed
Proposed National Comedy Center and Festival Lawn Park
Downtown Riverfront Opportunity Zone
Jamestown Cycle Shop
Friendly's
Oriental Star Buffet
Vacant Building and Parcels on Institute St
Harrison/ Briggs Block
Vacant Parcels on Foote Ave
NW Corner of Harrison & Foote

Chadakoin River

LWRP Study Area
City Corporate Limits
Railroad

Economic Dev. Project Types

- Economic Opportunity Zones
- Enhance Existing Waterfront Businesses
- Address Vacant & Underutilized Waterfront Properties
- Riverfront Tourism Attraction - National Comedy Center
- Key Medical Corridor Dev. Sites
- Potential Sites for Inclusion in Inventory of Shovel-Ready Sites
- Potential Brownfield Sites to Convert to Open Space
- Improve Utilization of Underutilized and Brownfield Sites
- Key Brownfield Dev. Projects

Sources:
1. City of Jamestown Local Waterfront Revitalization Program Work Plan Map - Edited by LaBella to reflect steering committee revisions
2. Base Map: 2012 Chautauqua County Orthoimagery obtained from NYSGIS Clearinghouse

0 1,000 Feet
1:15,000

This map was prepared for the New York State Department of State with funds provided under Title 11 of the Environmental Protection Fund.

Path: I:\Jamestown Urban Renewal Agency\212251\Drawings\LWRP\MAP 2014 01 29 ProposedEconomicProjects.mxd

Figure 22. Proposed Economic Development Projects Map



LABELLA Associates, D.P.C.

300 STATE STREET
ROCHESTER, NY 14614
P: (585) 454-6110
F: (585) 454-3066

CITY OF JAMESTOWN

LOCAL WATERFRONT REVITALIZATION PROGRAM

Proposed Quality of Life Improvement Projects Map

- LWRP Study Area
- City Corporate Limits

Quality of Life Improvement Projects

Develop Continuous Riverwalk
- Existing Riverwalk Trail Network
- Funded Riverwalk Trail Extensions
- Recommended Near/Mid-Term Riverwalk Trail Extensions

Improve North-South Connections
- Potential Pedestrian Bridges
- Existing Viaducts to Rehab

Develop New / Improve Existing Parks
- Potential New Park Boundary
- Existing Park Land
- City-owned Properties
- Privately Owned Properties

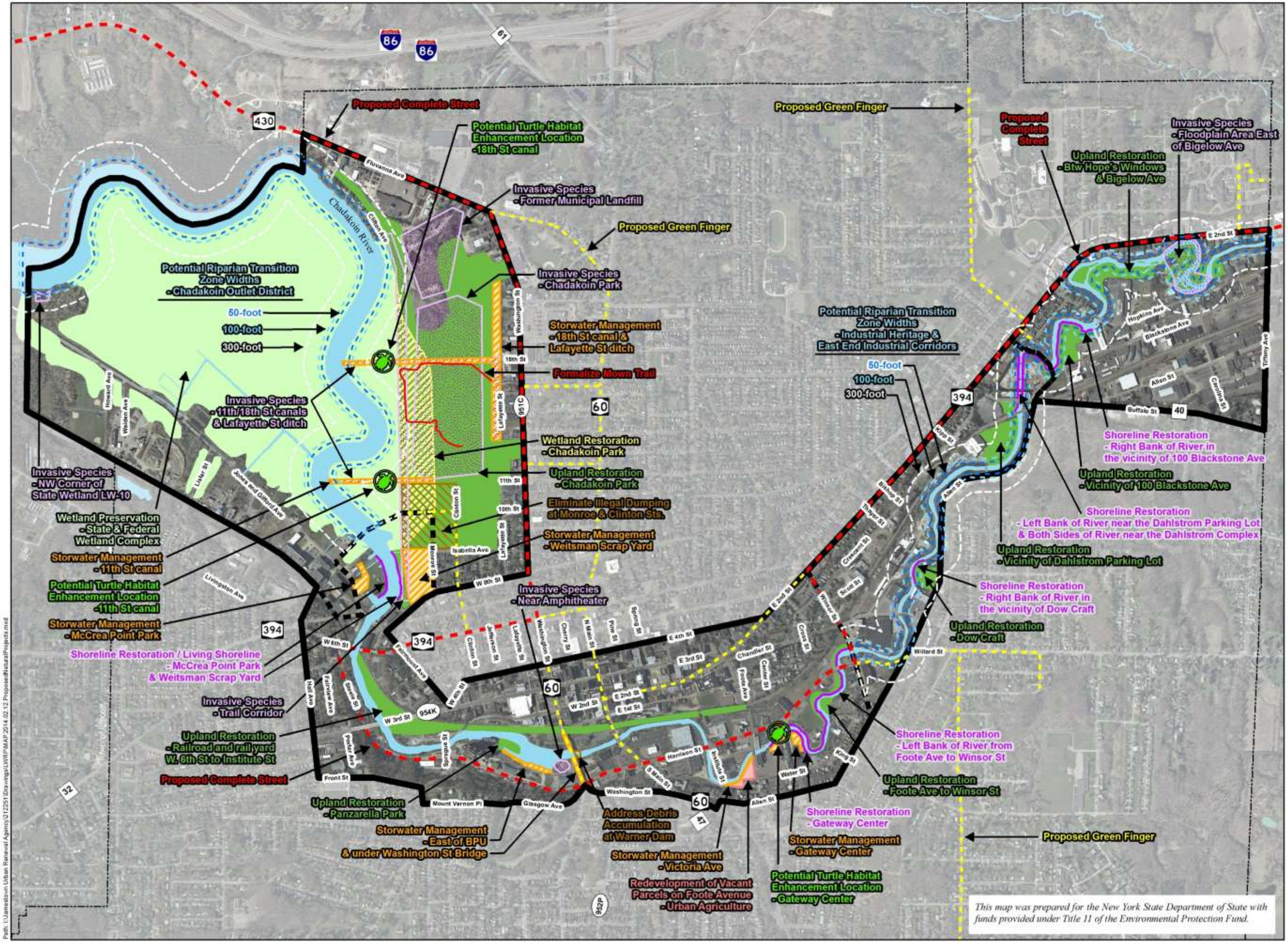
Amenities
- Potential Formalized Portage
- Potential Waterfront Program Site
- Potential Location for Educational and/or Interpretive Center

Sources:
1. City of Jamestown Local Waterfront Revitalization Program Work Plan Map - Edited by LaBella to reflect steering committee revisions
2. Base Map: 2012 Chautauqua County Orthoimagery obtained from NYSGIS Clearinghouse

0 1,000 Feet

1:15,000

Figure 23. Proposed Quality of Life Improvement Projects Map



LABELLA Associates, D.P.C.
300 STATE STREET
ROCHESTER, NY 14614
P: (585) 454-6110
F: (585) 454-3066

CITY OF JAMESTOWN

LOCAL WATERFRONT REVITALIZATION PROGRAM

Proposed Natural/Environmental Enhancement & Improvement Projects Map

- LWRP Study Area
- Sub Area Boundaries
- City Corporate Limits
- Surface Water
- 50-ft Riparian Transition Zone
- 100-ft Riparian Transition Zone
- 300-ft Rip. Transition Zone (white)
- Invasive Species Removal & Management
- Wetland Preservation
- Wetland Restoration & Management
- Formalize Mown Trail
- Upland Restoration
- Shoreline Restoration
- Stormwater Management
- Potential Turtle Habitat Enhancement Locations
- Clean-up Projects
- Urban Agriculture
- Proposed Complete Streets
- Proposed Green Fingers

Sources:
1. City of Jamestown Local Waterfront Revitalization Program Work Plan Map - Edited by LaBella to reflect steering committee revisions
2. Base Map: 2012 Chautauqua County Orthoimagery obtained from NYSGIS Clearinghouse

0 1,000 Feet

1:15,082

This map was prepared for the New York State Department of State with funds provided under Title 11 of the Environmental Protection Fund.

Path: I:\Jamestown Urban Renewal Agency\212251\Drawings\LWRP\MAP 2014 02 12 Propose\NaturalProjects.mxd

Figure 24. Proposed Natural/Environmental Enhancement & Improvement Projects Map

ECONOMIC DEVELOPMENT

A variety of economic development opportunities have the potential to improve the City of Jamestown Waterfront Revitalization Area, and these include the proposed projects described below, listed in the Implementation Matrix (Table 22), and depicted in Figure 22.

ENHANCE EXISTING AND FOSTER NEW DEVELOPMENT OPPORTUNITIES

Enhance Existing Waterfront Businesses
A number of properties along the River have been developed with uses that are consistent with a vibrant waterfront. Such examples include the Jamestown Cycle Shop and restaurants including Friendly's and Oriental Star Buffet. However, these and other waterfront-related businesses could increase their exposure to the River. For example, the restaurants could create outdoor seating near the River, Friendly's could create a window to sell ice cream to those using the Riverwalk Trail, and the bicycle shop could rent bicycles, kayaks, and canoes. The City should work with property and business owners interested in expanding their contact with the waterfront and help to foster such development.

Address Vacant and Underutilized Waterfront Properties
A significant number of vacant and otherwise underutilized properties exist within the City of Jamestown Waterfront Revitalization Area, a number of which are located immediately adjacent to the River. These sites include 0 Allen Street (a vacant parking area), the vacant building and parcels on Institute Street, the Dahlstrom parking lot, 100 Blackstone (a vacant parking area), the vacant building on East 2nd Street, as well as many others. To increase the overall aesthetics and appeal of the waterfront, attention must be paid to these properties in the near-term. Although the goal of each project should be long-term development, in many cases the long-term use of each property may not be achieved in the short- and mid-term. Rather than waiting to address each site in an extended time-frame, interim uses should be found and created. For example, the vacant parking area on Allen Street could be repurposed for green space using native vegetation that would buffer views of the nearby industrial landscape, offer habitat to native species, and eliminate the poor aesthetics associated with the site's current condition.

Transition Sites
The banks of the Chadakoin River were historically developed for a variety of uses, and many of these uses are no longer consistent with uses that make for a vibrant waterfront. While a number of such properties are vacant and open for redevelopment, some properties within strategic areas of the City, such as the *Downtown Riverfront Opportunity Zone* and the *Medical Corridor*, still include operating, successful businesses. As the Waterfront Revitalization Area transitions into a vibrant waterfront, existing businesses with inconsistent uses may opt to take advantage of the increased property values to relocate to other, more appropriate areas of the City (such as the **Industrial Heritage Corridor** and **East End Industrial**

Corridor). When these situations arise, the City should work closely with these business owners to assist with the selection of new property within the City that meets the needs of the businesses as well as is consistent with the vision for the redevelopment of the City. Until market conditions improve to the point where businesses with inconsistent uses are encouraged to relocate, buffering techniques should be utilized, wherever appropriate, to separate the inconsistent uses from view of the waterfront.

Advance the Downtown Riverfront Opportunity Zone Concept

The Downtown Riverfront Opportunity Zone encompasses the heart of the downtown Riverwalk, both north and south of the River; portions of downtown (including the Ice Arena, the Lucy-Desi Center, and the Erie Railroad Station which is slated to house the proposed National Comedy Center); and commercial areas along Washington and Main Streets (Figure 25). The evolution of this area will be critical to:

- Reinforcing downtown as a vibrant environment that can continue to attract activity and investment.
- Reinforcing the Riverwalk as a downtown riverfront amenity – following a wave of recent investments (e.g., a new public plaza and Panzarella Park on the south bank of the River, a pocket park along Main Street on the north bank of the River) that have significantly strengthened this area as a community destination.
- Connecting the City's downtown business district with the waterfront.

The type and character of future development within this Opportunity Zone will be important. Zoning code updates, described later in Section 5.2 of this Report, will help to encourage uses with potential to activate the Riverwalk (e.g., restaurants, stores, a small hotel) and reinforce downtown as a walkable environment. The Urban Design Analysis in Supporting Document 3 also discusses this concept in greater detail.

Focus Appropriate Development/Redevelopment of Key Sites within the Downtown Riverfront Opportunity Zone

Development along the riverfront within the Downtown Riverfront Opportunity Zone should incorporate a mix of uses with a particular focus on residential development, entertainment uses, tourism facilities and open space (Figures 26 and 27). Efforts to enhance this portion of the riverfront and improve public access should improve prospects for development of these properties. The City should play an active role in ensuring appropriate development, redevelopment, and/or repurposing of key properties within this area. Figures 28 and 29 depict the vibrancy of the waterfront after appropriate development/redevelopment of key sites within the Downtown Riverfront Opportunity Zone has occurred.

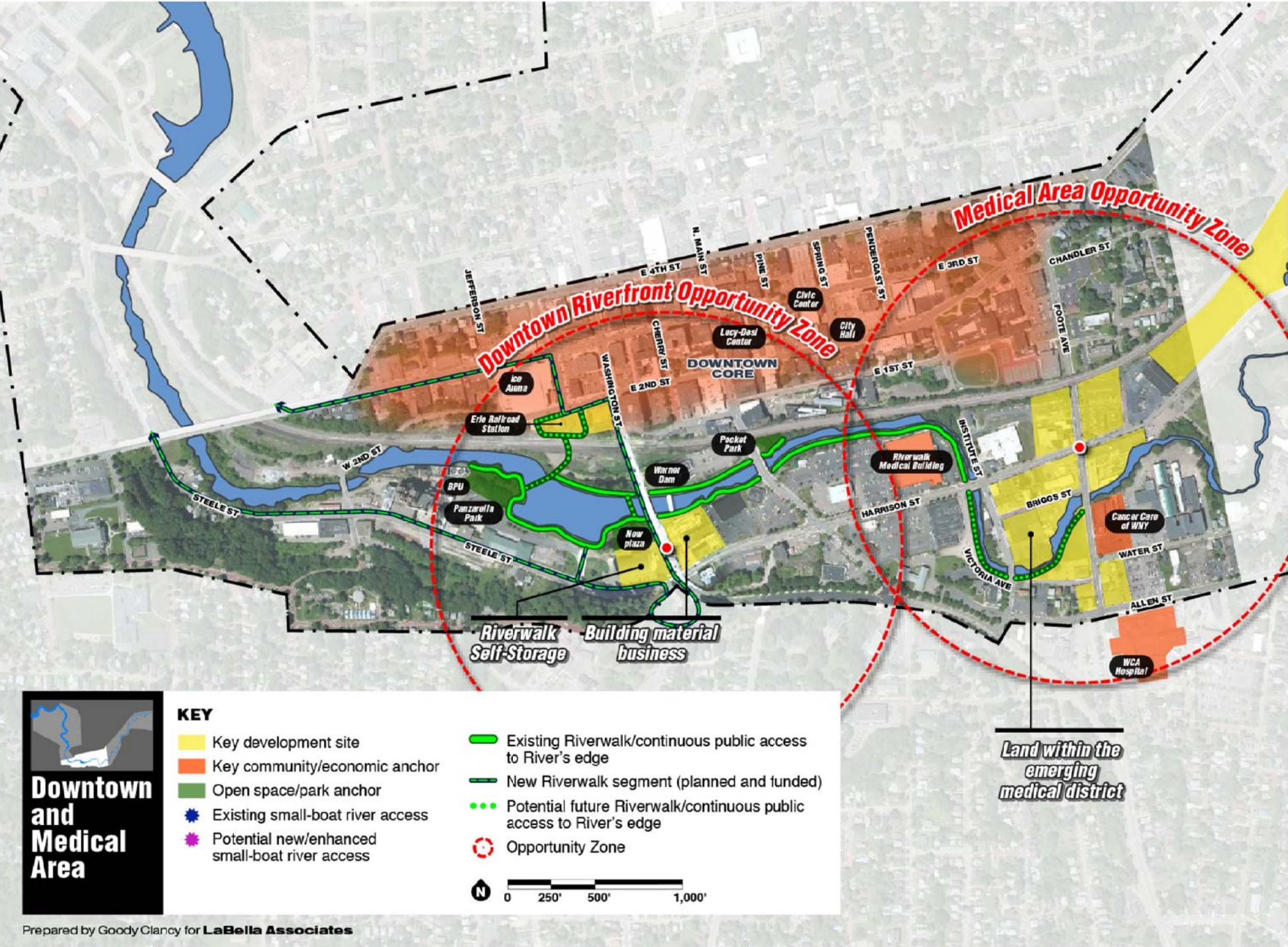


Figure 25. Downtown Riverfront & Medical Area Opportunity Zones

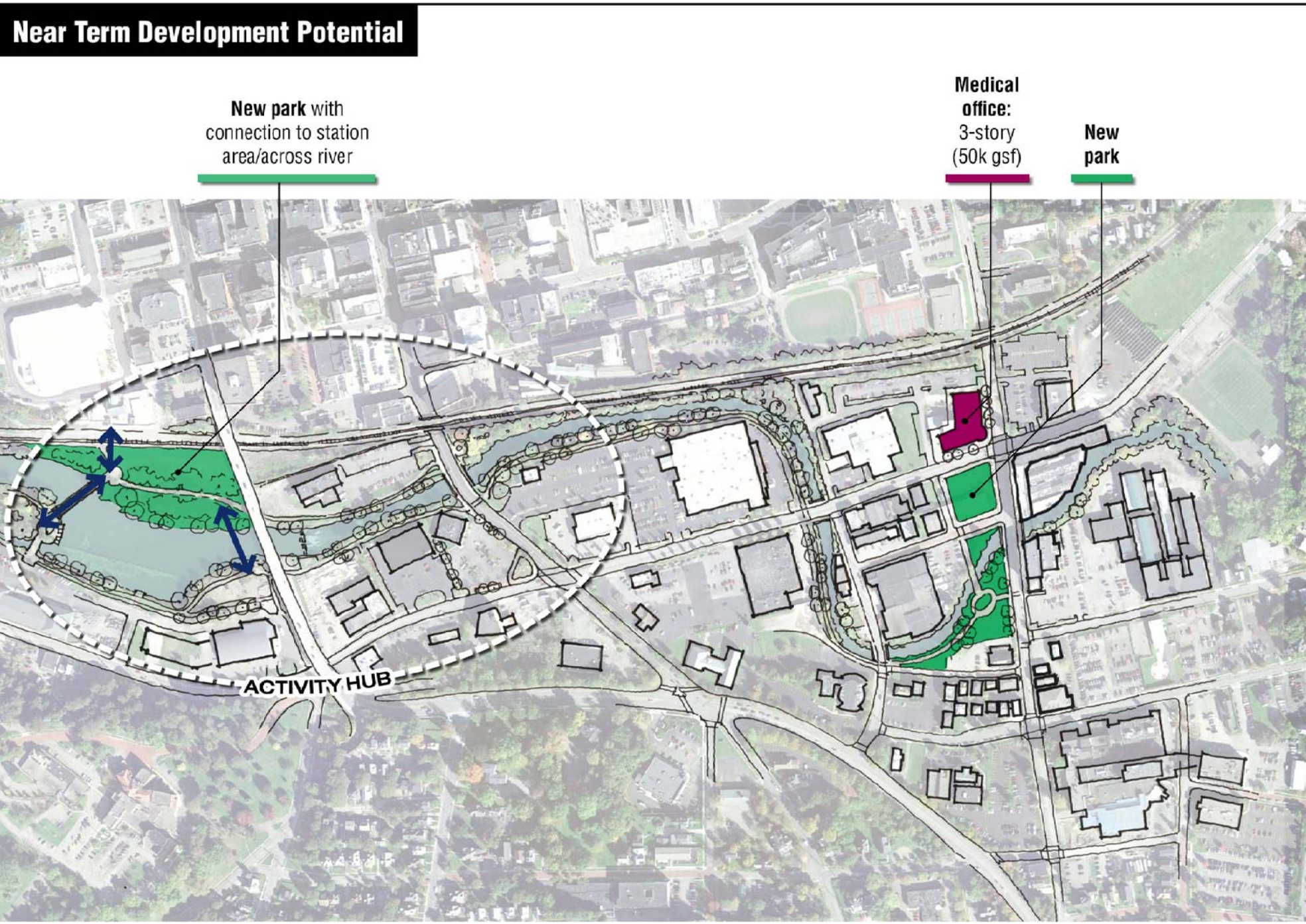


Figure 26. Downtown Riverfront & Medical Area Opportunity Zones Near-Term Development Potential

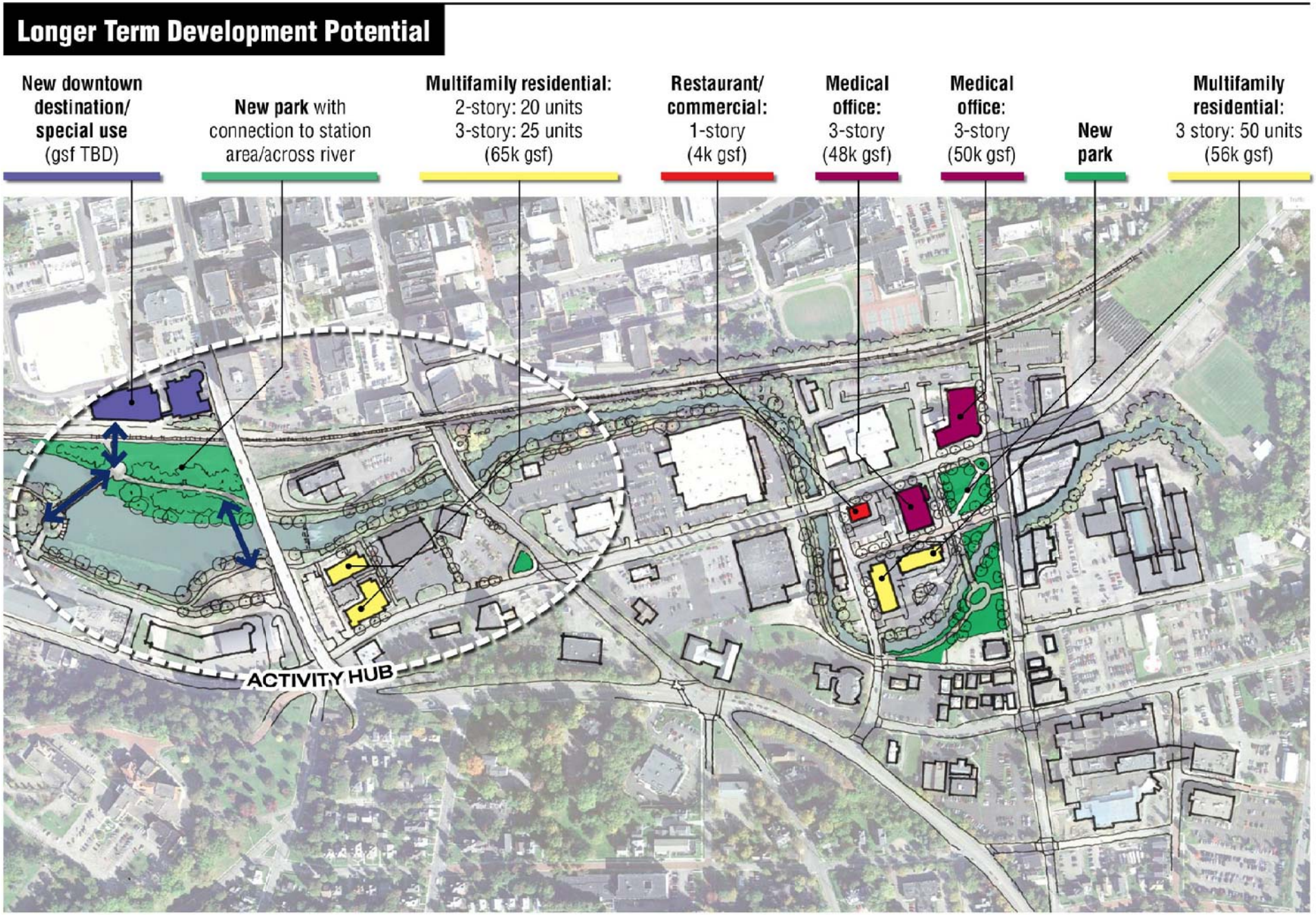


Figure 27. Downtown Riverfront & Medical Area Opportunity Zones Long-Term Development Potential

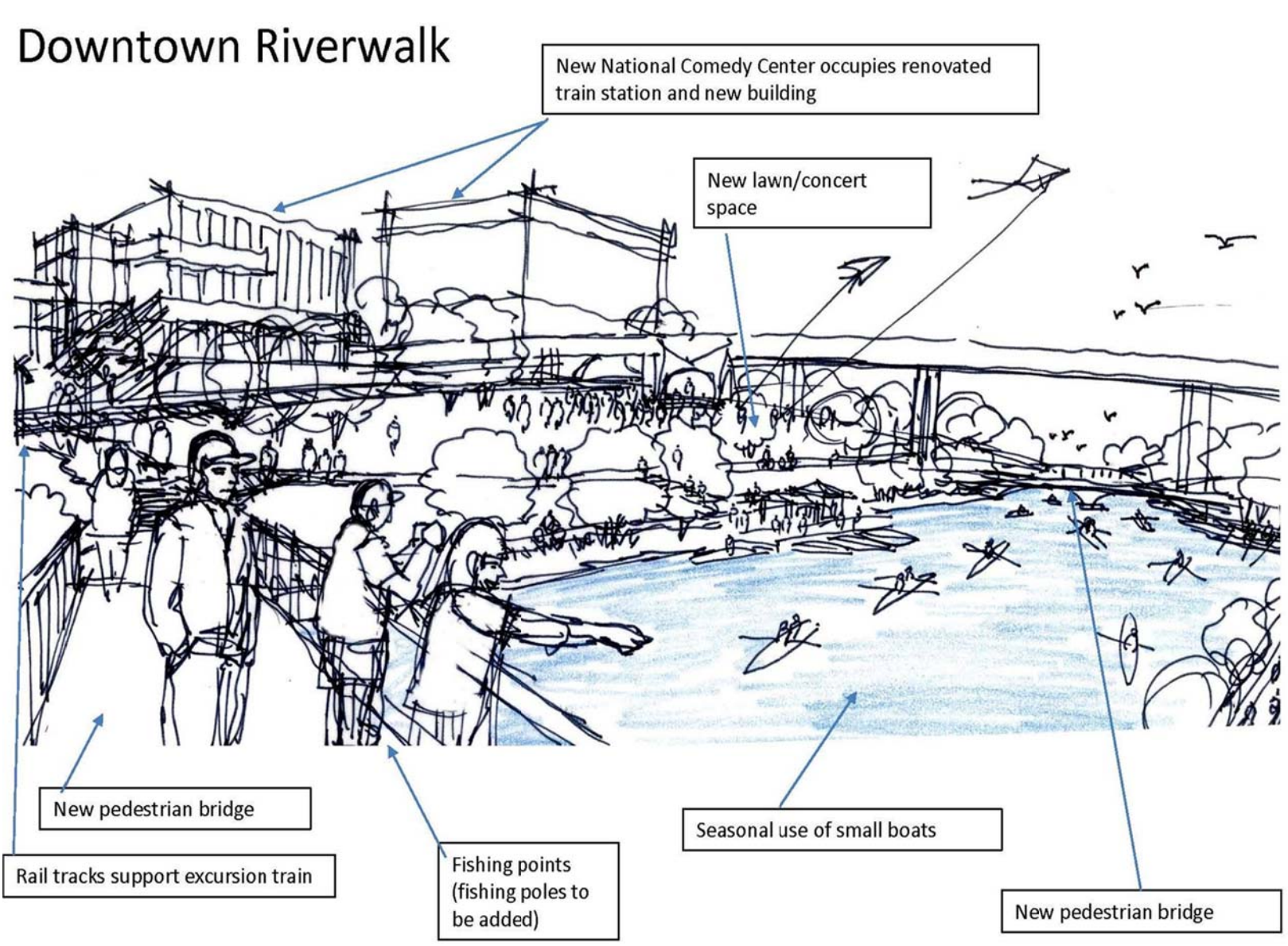


Figure 28. Potential Development Pattern View of Downtown Riverwalk North Shore

Downtown Riverwalk

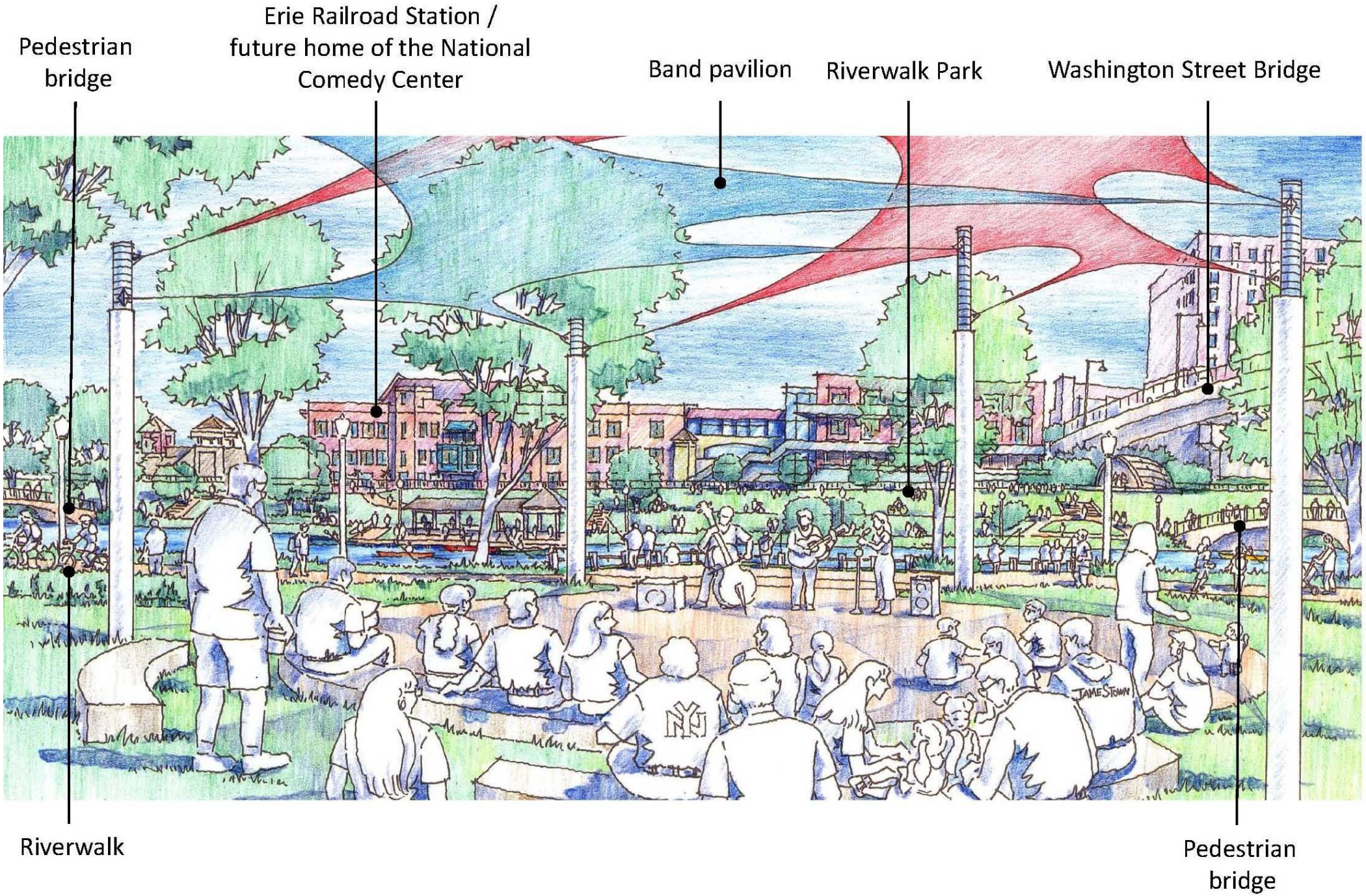


Figure 29. Potential Development Pattern - View of Downtown Riverwalk from South to North Shore

Establish a Riverfront Tourism Attraction – National Comedy Center

Previous planning studies have identified the riverfront as the best location to develop a new tourism attraction that could serve as a magnet for attracting visitors to downtown Jamestown. This facility must be of sufficient scale to serve as a major draw to the downtown area attracting at least 100,000—250,000 visitors annually, significantly more than other current attractions within the area. One promising location for such a development is the area that bridges the City's commercial downtown and the downtown portion of the waterfront. Additional analysis and feasibility assessment will be needed to determine the precise program/financial feasibility of such an attraction and to determine what type of facility could be most beneficial to Jamestown. Potential uses could vary widely between museums or other culturally focused facilities and commercial uses such as a carousel or water park.

The City, in collaboration with the Lucy-Desi Center for Comedy, have recently begun analyzing the feasibility and preparing the preliminary plans and designs to use ***the Erie Railroad Station*** and several adjoining parcels to create the *National Comedy Center* (NCC). Preliminary results of a study of the NCC being performed by AECom shows the overall NCC project could draw 100,000-200,000 visitors through the region annually. Combined with the results of a market analysis by Paradigm Economics which showed the 2011 Lucille Ball Festival of Comedy attracted 13,000 people and generated a direct economic impact of $3.6 million of the City and County over a five day period, the NCC can generate direct economic benefits of $20 to $25 million per year.

The NCC would include exhibits to learn about comedians from the past and both indoor and outdoor performance space to watch current and up-and-coming comedians. The project will be completed in phases. The Lucy-Desi Center applied for a 2013 EPF grant to fund a portion of Phase 1 of the NCC project. Phase 1 primarily focuses on connecting the Erie Railroad Station with the existing Riverwalk Trail system, creating an area for residents and visitors to (re)discover the River (Figure 30). Project components of Phase 1 include:

- Construction of pedestrian access stairs from the west-end of the train station (2nd Street) down to the Gateway Train Station Plaza
- Construction of the Gateway Train Station Plaza (at-grade with the Railroad)
- Construction of approved at-grade pedestrian railroad crossing system
- Creation of public park (Festival Lawn Area) to include trail connecting at-grade railroad crossing with existing Phase IV of the Riverwalk Trail system.

Although the Lucy-Desi Center was not awarded the grant, significant interest in the project, pledges of both monetary and service donations, and cooperation among key stakeholders including the City, Lucy-Desi Center, Gebbie Foundation, WNY&PA Railroad, and Jamestown Renaissance Corporation will ensure the project continues to move forward as long as the project remains feasible. Preliminary designs of the completed NCC project includes a new building to house portions of the NCC, a pedestrian corridor and bridge connecting the new building to the Erie Railroad Station, outdoor performance spaces, a boat dock, and two pedestrian bridges to tie into the southern portion of the Riverwalk Trail System (Figure 31).

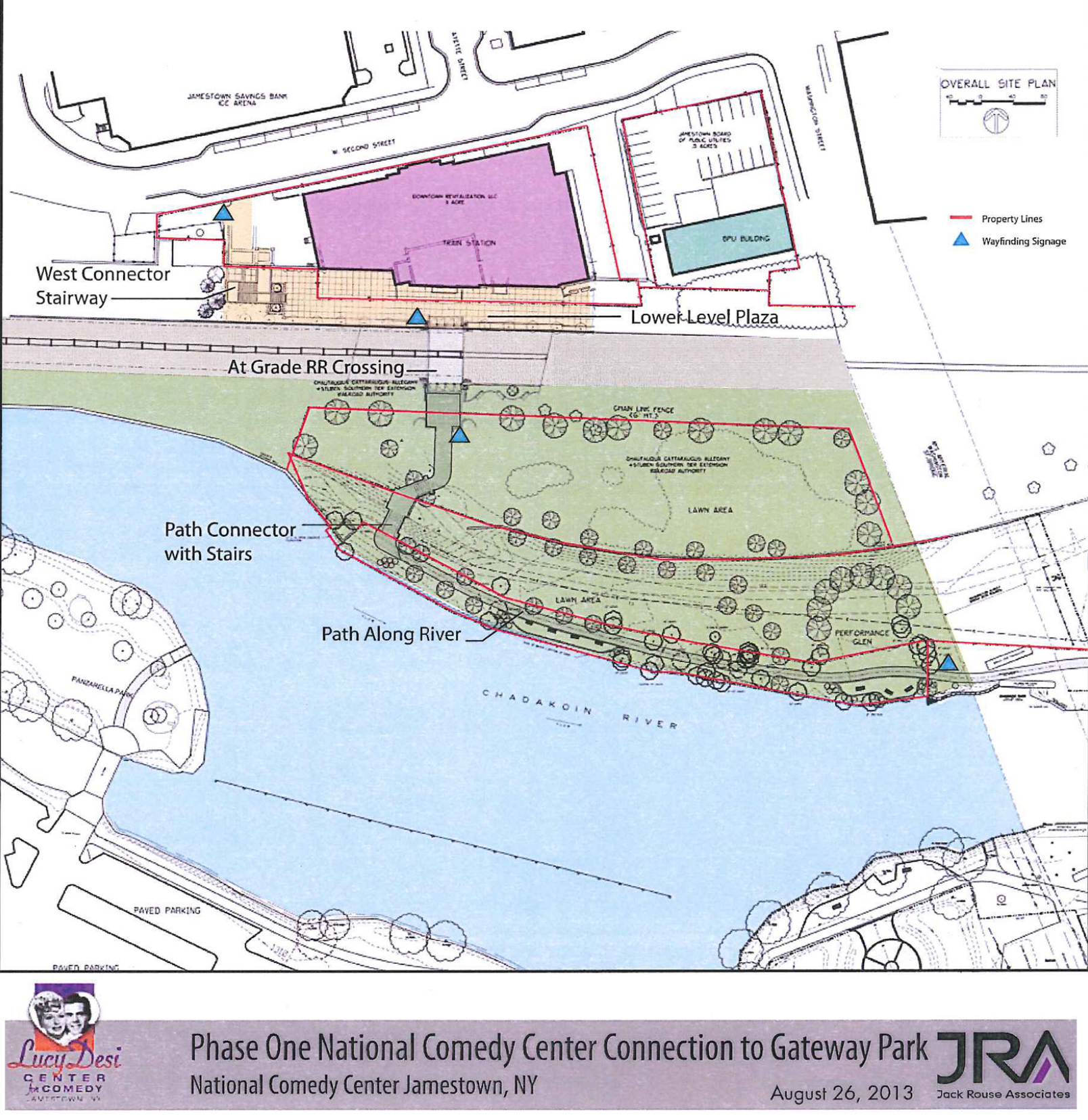
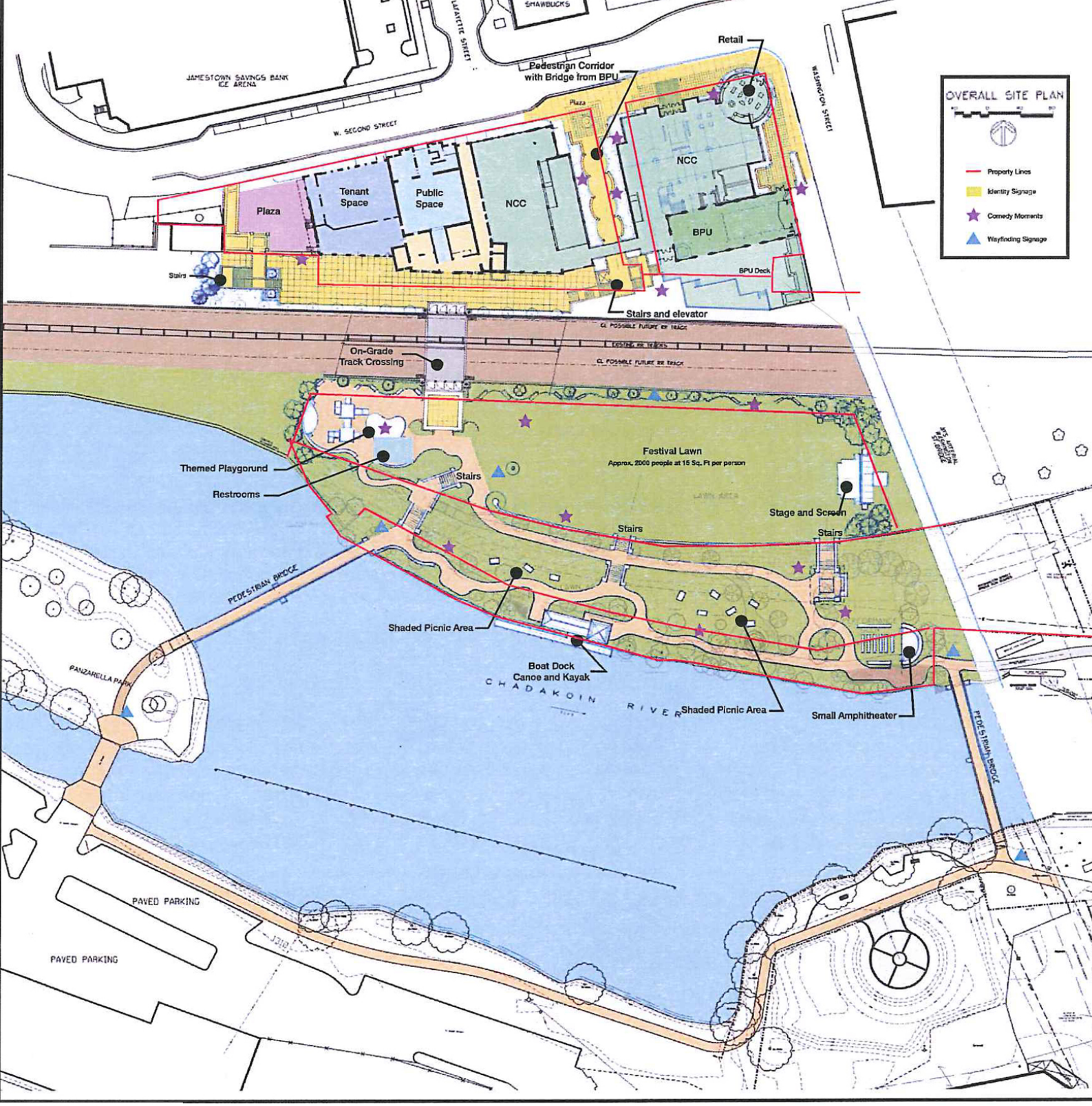


Figure 30. Phase 1 National Comedy Center - Preliminary Site Plan



Lucy Desi CENTER for COMEDY

Complete Build Out National Comedy Center and Gateway Park

National Comedy Center Jamestown, NY

August 26, 2013

JRA Jack Rouse Associates

Figure 31. Complete Build Out of the National Comedy Center - Preliminary Site Plan

Create an Excursion Train Connection to Buffalo/Niagara Falls
As described previously in the *Public Infrastructure* section of this Report, the Western New York Railway Historical Society, Inc., in partnership with the City of Jamestown, applied for a TIGER V grant to bring passenger rail service back to the City of Jamestown, ultimately connecting the City with Buffalo/Niagara Falls. Although the City was not awarded the grant, they should continue to search for funding and partnerships to make this idea a reality.

Foster Specialty Retail in the Downtown Core
Although the Market Analysis (Supporting Document 1) determined that the Waterfront Revitalization Area is unlikely to attract chain retailers, it did conclude that an opportunity exists for the development of Specialty Retail in the area. This type of retail is best located in the pedestrian-friendly, Downtown Core north of the River (Figure 21). Likely tenant-types include arts and craft stores, outdoor stores, and youth-oriented, "hip" accessory stores. The City should create a program to recruit such retailers and work to help identify appropriate locations for each. The development of a concentrated area of such shops in one or more proximal buildings should be considered. Underutilized properties could be retrofitted to house such uses.

Create Additional Professional Office Space
The Market Analysis (Supporting Document 1) concluded that the Study Area has the potential to capture 20 to 30 percent of the County's new office-inclined employment. This translates into 22,000 to 33,000 square feet of new office space by 2020. Industries that typically occupy office space include information, finance and insurance, real estate, professional and business services, and other religious, social, and fraternal organizations. A number of underutilized properties located throughout the Study Area (most of which; however, are located within the Downtown Core – Figure 21) offer excellent potential for adaptive reuse of existing buildings for such a purpose. The City should work with property owners and local and state developers and development agencies to identify which locations are most appropriate for redevelopment, and create a program to reach out to potential developers and tenants to realize this increase in office space. Many of these properties will require minimal rehabilitation while others will require substantial work in order to meet the standards of professional office space.

Advance the Medical Area Opportunity Zone Concept
This concept encompasses the Harrison-Foote-Institute area where a growing cluster of major medical facilities are located: the Riverwalk Medical Center, the Cancer Care of WNY center, and the WCA Hospital (Figure 25). The WCA Hospital is an Economic Development Anchor and Engine for Jamestown. For the Hospital to become more competitive it must attract more private paying patients and offer state-of-the-art quality health care. An important contributor to the Hospital's success is the strength of its related local health care and social service cluster. The Study Area's redevelopment can be a critical component of this cluster's success. Creating an attractive, vital and functional mix of uses in the Central section of the Study Area will make it a more attractive investment location for medical, social and technical businesses. The Medical Corridor concept recognizes that a strong cluster

of uses in an enhanced physical environment is necessary to successfully compete in the coming decade. Jamestown's leadership has envisioned the Medical Corridor as extending along Foote Avenue, Harrison Street and the River, linking the Riverwalk Medical Center, the Cancer Care center, and the WCA Hospital, as well as other health and social service related resources in the area. However, no formal plans yet guide investments in this area, or support its development as a coherent district. Medical districts nationally – for instance, the Buffalo Niagara Medical Complex in Buffalo and the Longwood Medical Area in Boston – are generally guided by development plans that involve a consortium of medical and health-related institutions within the district. These plans identify coordinated approaches for addressing:

- The range of medical and support services located within the district
- Sites for future expansion
- Circulation, parking and transit links
- Growth of the area as a cohesive and easily navigable district with a strong pedestrian environment

Coordinated planning, the type and character of future development within this area, and the quality of the physical environment are important factors in Jamestown's ability to preserve and strengthen its position as a regionally competitive medical district. Today, the medical and health-related facilities within this Opportunity Zone are interspersed among a range of small- to mid-sized commercial establishments, industrial businesses, homes, and vacant buildings and parcels, the wide distribution of which provides a less-than-optimal environment for growth among any of the active uses within the area. Because the Medical Area Opportunity Zone would benefit from a plan that addresses the needs of all types of uses within this area, the City should work with community organizations to create a plan for the successful development of the Medical Corridor. The Urban Design Analysis in Supporting Document 3 also discusses this concept in greater detail.

Focus Appropriate Development/Redevelopment of Key Sites within the Medical Area Opportunity Zone

Development within the Medical Area Opportunity Zone should incorporate a mix of uses with a particular focus on medical office space, support service uses, green space, residential uses, restaurant/commercial uses, and pedestrian infrastructure (Figures 26 and 27). Efforts to enhance this area, improve public access, and create a cohesive corridor should improve prospects for development. While there are many brownfield and underutilized properties within this zone, the City should play an active role in ensuring appropriate development, redevelopment, and/or repurposing of the following key properties:

- **Vacant Parcels on Foote** – Located on the south bank of the Chadakoin River between Institute Street and Foote Avenue, this site is currently largely underutilized riverfront open space with a small paved parking lot utilized by the adjacent church. The City should work with the owner of the site to evaluate the possibility of creating a formalized park with a

pedestrian foot bridge connecting to the north bank of the river. Community gardening could be included within the new park.

- **Briggs Street** – The large site located between Institute Street, Briggs Street, and the north bank of the river provides an opportunity to create one large or a number of smaller medical-related developments.
- **Harrison/Briggs Block** – Located between Briggs Street, Institute Street, Harrison Street, and Foote Avenue, this site is composed of 13 parcels which house various entities as well as parking and vacant lots.
- **Northwest Corner of Harrison and Foote** – Located between Foote Avenue, Harrison Street, Institute Street, and the railroad to the north, this site is composed of six parcels which house various entities.

Create New Medical Office and Social Service Space

The Market Analysis (Supporting Document 1) concluded that the area will support new medical office and social service space development, notably in the Central section of the Study Area near the Hospital. The Jamestown Area contains 58 percent of Chautauqua County's health care and social service jobs. WCA Hospital accounts for just over one quarter of the Jamestown Area's health care and social service jobs. The Resource Center also accounts for a significant share of the social service jobs in the Jamestown Area. The Market Analysis concludes that the Study Area has the potential to capture 30 to 40 percent of the space demanded by the County's growth in the ambulatory and social assistance industries, which amounts to 47,000 to 63,000 square feet. The City should work with developers to identify the most appropriate locations for such development, and focus these efforts on the aforementioned Medical Corridor. If possible, this space should be located at brownfield and underutilized sites within the area such as the Northwest Corner of Harrison and Foote and Harrison/Briggs Block.

Foster Additional Eating and Drinking Establishments

The Market Analysis (Supporting Document 1) indicated that there is an opportunity to continue to grow Downtown's eating and drinking cluster. The eating and drinking options around Jamestown are quite weak. Capturing 20 percent of the area's eating and drinking trade will justify another 5,000 square feet of eating and drinking space, and, when a high amenity, walkable Medical Corridor evolves, there will be additional eat/drink opportunities. For planning purposes, an additional 5,000 to 7,000 square feet of eating and drinking space is reasonable by 2020.

McCrea Point is a potential location for a small café, if made visible from Fairmount Avenue. This location could capitalize on the bike trail, activities on the River like rowing, and McCrea Point Park. A riverview location on the Riverwalk within easy walking distance to WCA Hospital would also be a strong location. Finally, the Downtown Core (Figure 21) is a good location for additional eating and drinking establishments. The City should create a program to recruit such establishments and work to help identify appropriate locations for each.

INDUSTRIAL, FORMER INDUSTRIAL, AND OTHER BROWNFIELD SITES

The City of Jamestown Waterfront Revitalization Area contains a significant number of industrial properties, as well as many former industrial and other types of brownfield sites. In order to achieve successful revitalization of the Waterfront Revitalization Area, these problematic properties will need to be inventoried, assessed, and redeveloped.

One excellent opportunity relative to this issue is that the manufacturing industry still plays an important role in the Jamestown economy, and the eastern portion of the Study Area is an important industrial area to the region. The western portion of the Waterfront Revitalization Area also offers good access, available and affordable land, and short rail. Importantly, the BPU offers power that is particularly inexpensive. Soon there will be a fiber-optic loop that will allow redundancy -- key to data centers and other high-tech user groups. Finally, the Mason Industrial Park due west of the Study Area does not have much land available for new businesses. It will be important to have shovel-ready sites available (and potentially incentive packages) in the eastern portion of the Study Area.

Create an Inventory of Shovel-Ready Sites
Currently, very little information exists regarding the actual development potential and environmental conditions of many of the vacant, underutilized, and brownfield sites within the City of Jamestown Waterfront Revitalization Area. These sites have been inventoried under the NYS LWRP and the BOA Programs, but information on the actual environmental and physical conditions of the sites is not currently available. Developers prefer properties with some existing information which helps to make decisions on whether to proceed, and to help development occur quickly. Therefore, the key is for the community to have Shovel-Ready sites available to existing, growing businesses or new businesses.

To create an inventory of Shovel-Ready sites, the City should create a program to first assess each of the properties, starting with the highest priority sites first, to obtain the information developers need. The program should also include methods to update the inventory periodically and reprioritize as properties are redeveloped and new properties become available. Following the acquisition of the appropriate information, the City should take any additional steps necessary to create Shovel-Ready sites to facilitate redevelopment. Potential sites for inclusion in the Shovel-Ready inventory include, but are not limited to, those depicted in Figure 22.

Convert Brownfield Sites to Low-Maintenance Open Space as Interim Uses
Open spaces can be readily converted to development projects. Conversion to open space in interim is good because it removes eyesores, makes the area safer, and gives potential interested parties improved ability to envision successful development project. Brownfield properties primed for such conversion include, but are not limited to, areas north and west of the Weitsman Scrap Yard, the Trolley Building, portions of the Lennox property, the Train Car Repair Shed, and the Vacant Parking on River Street.

Improve Utilization of Underutilized and Brownfield Sites
A number of underutilized and brownfield sites throughout the Study Area are in use but are not fully productive and/or do not contain the highest and best uses. These properties present an opportunity to improve the productivity and aesthetics of the area, as well as help property owners maximize their revenues from these properties. Efforts should be made to work with the property owners to increase utilization of the buildings and properties through evaluation of potential rail connections, creation of higher quality storage space, and/or conversion of portions or all of the space to new appropriate uses. Specific sites include, but are not limited to, those depicted in Figure 22.

Focus on Development/Redevelopment of Key Brownfield Sites
While there are many brownfield properties throughout the Waterfront Revitalization Area, the City should play an active role in ensuring appropriate development, redevelopment, and/or repurposing of the key brownfield properties that will spur the redevelopment of other, nearby properties. Such properties include:

- Automatic Voting Machine Corporation
- Washington Street Brownfield Sites
- East 1st Street Brownfield Sites
- CCIDA/United Lumber
- River Street Brownfield Sites
- Dahlstrom Complex

Detailed descriptions about potential development/redevelopment projects for each of the above key sites can be found below.

Automatic Voting Machine Corp – Close Lister Street
Suit Kote Corp is a privately owned asphalt products manufacturer, road construction and maintenance, and asphalt applications engineering company headquartered in Cortland, New York with a satellite office and minor manufacturing plant in Jamestown. Suit Kote currently owns a large tract of land roughly bound by Jones and Gifford Avenue, Lister Street, the railroad, and the western half of the Automatic Voting Machine Corp brownfield site. Suit Kote has expressed interest in potentially adding a rail spur to their property, which would allow the firm to significantly increase their Jamestown operations (most likely expanding to the east on the other half of the Automatic Voting Machine Corp brownfield site) creating a major manufacturing plant and adding jobs to the area. The existing railroad bounds the southwest side of the Suit Kote property, crossing a through-street (Lister Street) at-grade. The spur would create another at-grade crossing of Lister Street. The New York State Department of Transportation (NYSDOT) discourages the creation of new, at-grade street crossings but encourages the reduction of the number of existing at-grade crossings where possible. Also of note, the topography of Lister Street creates safety concerns. Lister Street is relatively flat north of the railroad; however, south of the railroad, it climbs up a steep hill. During colder months there is the very real concern that vehicles

travelling down Lister Street will be unable to stop at the existing railroad due to slippery conditions.

It is recommended that Lister Street be closed to through traffic by creating cul-de-sacs on either side of the rail. Doing this will remove an existing at-grade crossing as supported by the NYSDOT, allow installation of the railroad spur thereby stimulating growth of the Suit Kote operations, and address safety concerns relating to the topography of Lister Street.

Advance the Cleanup and Redevelopment of Brownfield Sites on Washington Street

Redevelopment of the Pelican, Dunn Wright, and C&B Cleaners brownfield sites will require addressing serious environmental concerns. C&B Cleaners was formerly used as a dry cleaner. Following closure of the business, Chautauqua County acquired the property and demolished the building, removed two underground storage tanks, and completed an investigation of soil and groundwater. High concentrations of solvents (PCE) were found on-site and on the downgradient Dunn Wright and Pelican Sites. The cleanup of the C&B Cleaners is in process with the groundwater contamination to be addressed in 2016. Cleanup of the Pelican site has been completed. The Dunn Wright cleanup is pending. Once cleanup is complete on the C&B and Dunn Wright sites, all three properties should be consolidated into one larger property and marketed for redevelopment.

Redevelopment of East 1st Street – Arts and Heritage Corridor

Multiple brownfield and underutilized properties are located on East 1st Street between Main and Institute Streets, just south of the downtown core. The Broadhead Mills site (located on the south side of East 1st Street) once housed a textile mill and later a furniture manufacturing company. After a structural fire destroyed a large portion of the main building in 2004, the site was left with four large masonry structures in fair condition. Currently several small businesses are located in the buildings; however, the site remains largely underutilized. The Arts Center is largely located on the north side of East 1st Street with a couple parcels on the south side and a couple parcels on Institute Street. This site currently includes an unused art studio space with adjoining warehouse, several small residential properties (some for sale and one condemned), and several vacant properties. In total there are six buildings in fair to poor condition at this site.

Building upon the Urban Design Plan's vision of this area, both the Broadhead Mills and Arts Center sites should be reused and repurposed to create a portion of an Arts and Heritage Trail which connects key locations throughout the downtown. Minor improvements could be made to the Broadhead Mills buildings which should then be aggressively marketed as a small business incubator, studio space, and/or residential uses. The Arts Center properties should be assembled to further the creation of the Arts and Heritage corridor. The current art studio/warehouse should include upper floor residential units, retail frontage, and café with outdoor courtyard while the houses should be demolished and combined with vacant lots to create community gardens, greenspace, and an industrial heritage park.

CCIDA/United Lumber Sites

A focus on several key sites through the City of Jamestown Waterfront Revitalization Area would likely advance ongoing efforts by the City and the Chautauqua County Industrial Development Agency (CCIDA) to retain existing businesses within this area as well as to attract new ones. Larger, higher visibility sites that have been cleared and where remediation efforts are underway or already complete may offer the most suitable sites for redevelopment. For example, the CCIDA Development Site and the adjacent United Lumber Site represent a relatively large, high-visibility development area close to downtown, the medical area, and the industrial corridor that extends to the east. This site should be certified as a Shovel Ready site and aggressively marketed as such.

Develop River Street Industrial Park

A number of the properties along River Street are occupied by underutilized, outdated structures that are in relatively poor condition. These properties include the Vacant Parking Lot on Chandler Street, Art Metal, Star Tubing, Southern Tier, and Genco Machine. Redevelopment of these properties for industrial purposes conforms to the surrounding land uses. Therefore, an opportunity exists to assemble the properties into a larger site that could be converted into an industrial park. The park could include the development of speculative industrial buildings, multi-tenant facilities, and incubator facilities or could be certified as a Shovel-Ready site. First steps in the development would include gathering environmental information about the sites and evaluating potential transfer of ownership.

Redevelopment of the Dahlstrom Complex

The Dahlstrom Complex includes three properties on the north side of Buffalo Street between East 2nd Street and Blackstone Avenue and one property on the south side of Buffalo Street. The properties on the north side once included an enormous manufacturing building which was used to manufacture metal fireproof doors. Recently, large portions of this building were demolished as they were outdated and unsafe. Other, safer portions of this building are used by a computer memory storage company. Additionally, there is a smaller building in the northern most section of the complex which is used for manufacturing purposes. The property on the south side of Buffalo Street previously was and currently is still used as a large, underutilized parking area.

Based on findings from the Market Analysis (Supporting Document 1), two development potential concept plans have been created for redevelopment of the Dahlstrom Complex (Figures 32 and 33). In both instances, a mixture of existing buildings and new buildings will house light industrial and high tech uses. A riverfront trail will extend along both sides of the river on an easement obtained by the City from the current property owners in exchange for financial help with demolishing the unsafe portions of the building. Additionally, green infrastructure storm water management infrastructure, green space, and surface parking will fill the remainder of the property. Development Potential A includes three new buildings (one of which is located in the current parking area on the south side of Buffalo Avenue) totaling 43,000 square feet; while Development Potential B includes three new buildings (all of which are on the north side of Buffalo Avenue)

totaling 46,000 square feet. Figure 34 provides an oblique view of the development potential for the Dahlstrom site while Figure 35 depicts the potential vibrancy of the site and activity along the River activated by the influx of new businesses.

In addition to these development opportunities, the Ecological Conditions and Living Infrastructure Framework (Supporting Document 2) recommends a number of modifications to improve the quality of the River. These recommendations include the modification of the dam to facilitate migration of aquatic species and naturalizing flow paths, flood plains and stream banks. These modifications can be made in concert with the economic redevelopment of the Dahlstrom Site to create a productive property that contributes to the aesthetics and quality of the riverfront.

HOUSING

Foster the Development of New/Adaptive Re-Use Housing Units

The Market Analysis (Supporting Document 1) concluded that the area can support the development of 50 to 90 new/adaptive re-use housing units over the next five to seven years. In Jamestown there is a shortage of new housing. Over 60 percent of the housing stock in Jamestown is over 70 years old. Only 1 percent of the City's housing stock was built in the last decade. The Jamestown Area's housing stock is primarily comprised of old, large single family homes. These homes were not designed for the tastes and lifestyles of today's Jamestown household. Two-thirds of Jamestown's households are one- and two-person households. Less than 20 percent of households have "full-nest" lifestyles.

New urban housing tends to attract three primary household types:

- Young households, either singles or couples with urban lifestyle characteristics
- Empty-nester households with urban lifestyle characteristics
- Households with urban lifestyle characteristics

Given the character of these household types and the magnitude of the moving market, there is a market for the following housing mix in the Study Area over the next 5 to 7 years:

- 10-20 new, small houses or townhouses (1,000 to 1,500 square feet) in a neighborhood setting
- 10-15 luxury condominiums in the Core of Downtown either new or adaptive reuse multi-family lofts
- 30-55 new multi-family rental housing units

There are strong adaptive re-use opportunities in the Downtown Core of the Study Area (Figure 21). Over the longer term, the Broadhead Mills site could potentially be re-used for-rent residential. The City should work with property owners and developers to facilitate the development of new, adaptive re-use housing to attract those in the demographics listed above.

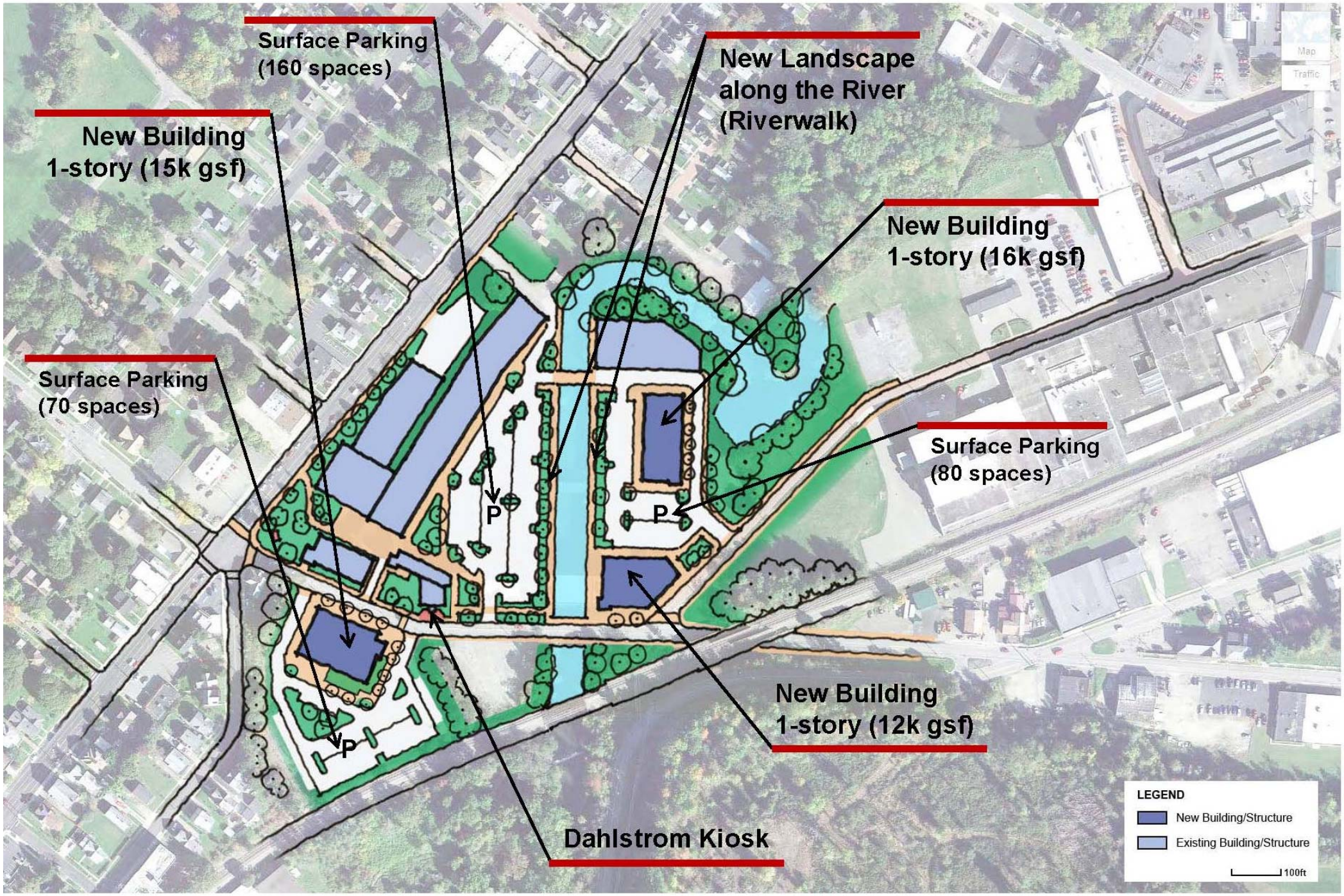


Figure 32. Dahlstrom Complex Development Potential - Option A

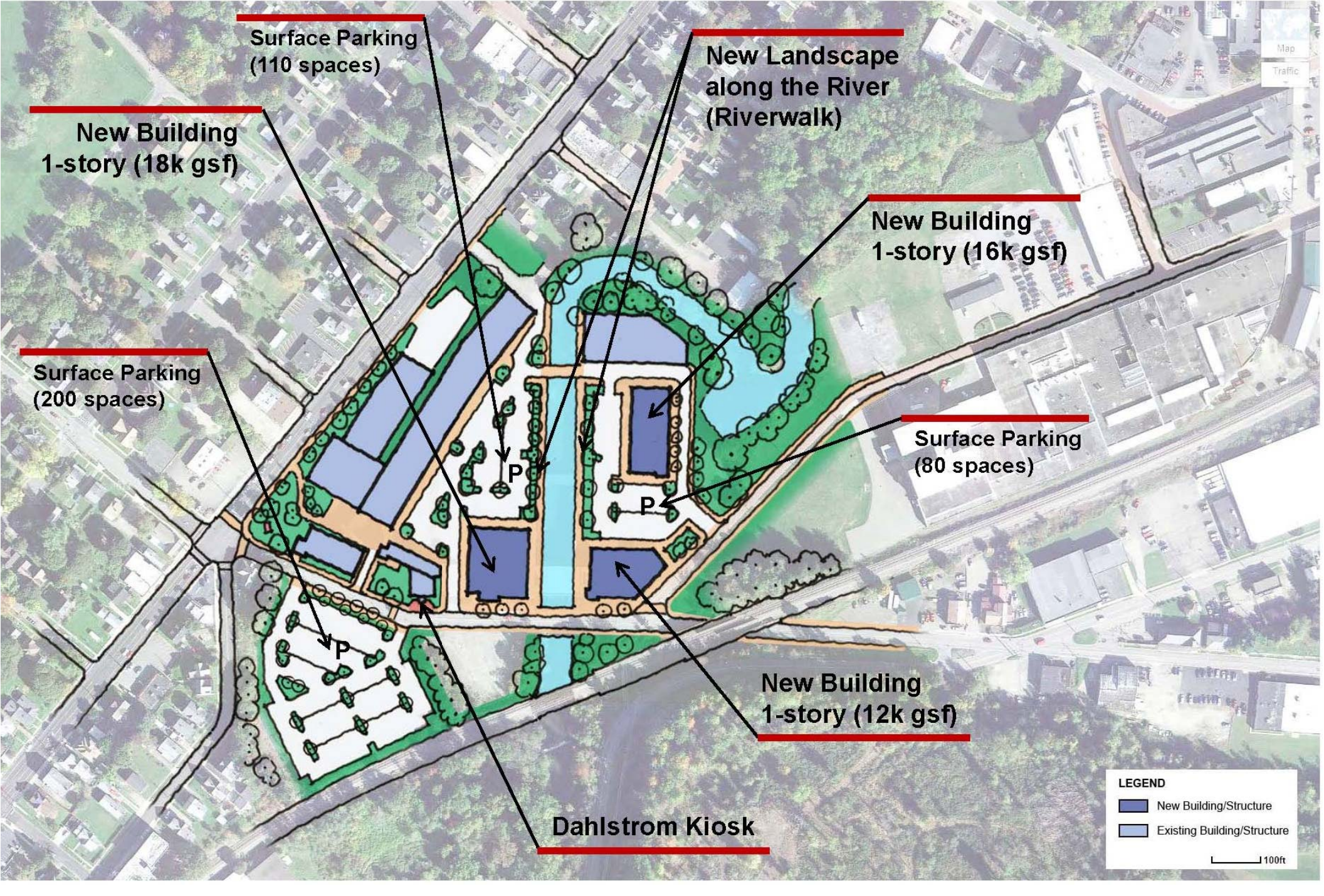


Figure 33. Dahlstrom Complex Development Potential - Option B

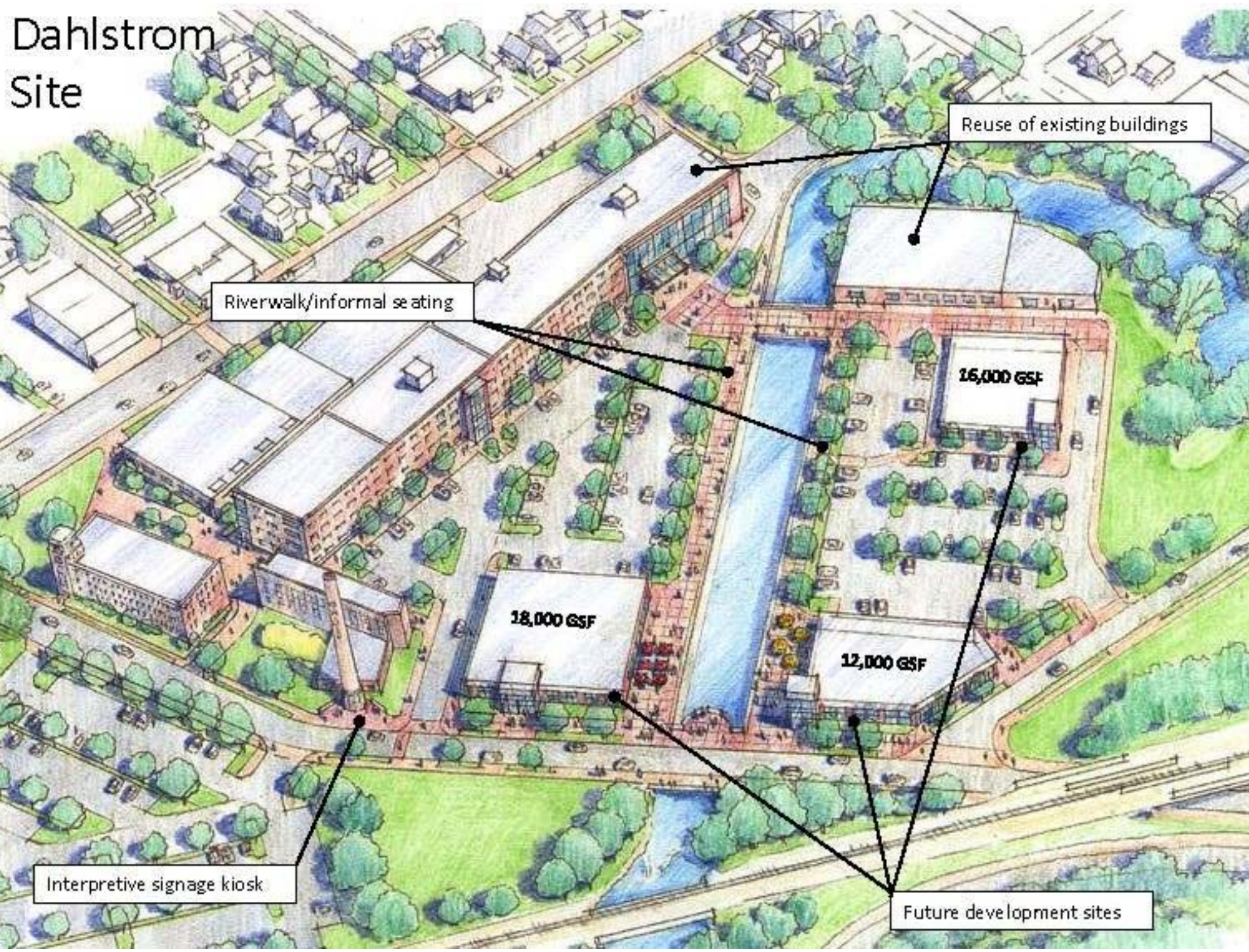


Figure 34. Dahlstrom Complex Development Potential – Oblique View

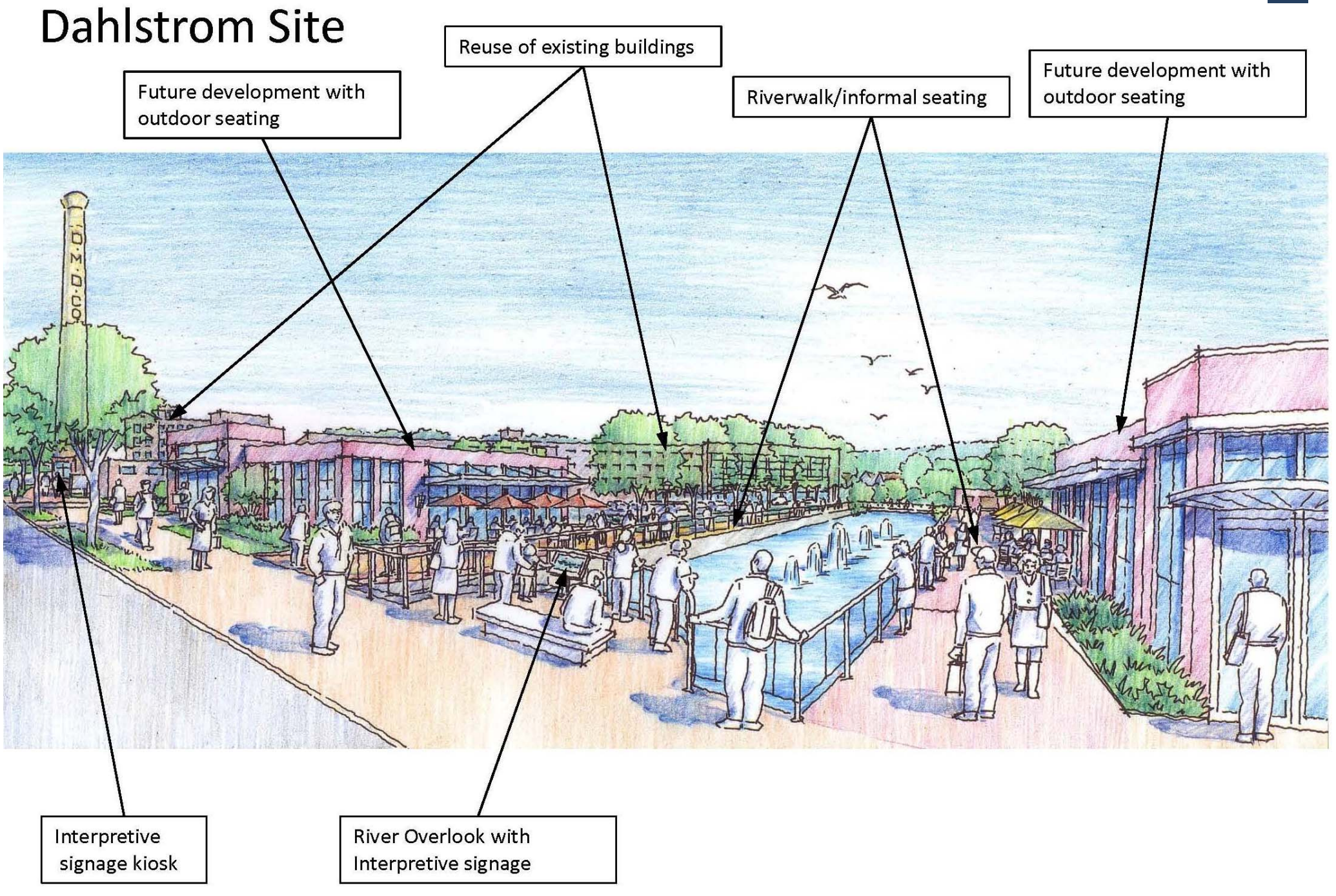


Figure 35. Dahlstrom Complex Development Pattern - Street Level View

QUALITY OF LIFE IMPROVEMENTS

The last decade has been one of notable successes within Jamestown. Successes include strengthening downtown; growth of the City's medical cluster; clean-up of several vacant industrial sites; and expanded public access to the River. Each of these relates to the well being of the City and the quality of life of its citizens. This history of positive change provides a foundation for 'next steps'; Jamestown can build off what's already working well, and reinforce progress to date.

Efforts to improve public access to the River have been particularly successful. Over the past decade, Jamestown has expanded the downtown Riverwalk, provided new and enhanced parks and plazas along it, formally extended the boundaries of a large neighborhood park (Chadakoin Park) to meet the edge of the River, and added new features to McCrea Point, a city-wide destination for River recreation. These improvements have strengthened the River as a community amenity, with areas that are actively used for kayaking, canoeing, rowing, fishing, or simply sitting or walking beside.

Improvements in the quality of life offerings will serve to bring more people into the City of Jamestown Waterfront Revitalization Area, which will ultimately result in more investment and employment opportunities. As described earlier in this section of the Report, the goals of this project include increasing the eroded tax base of the City, and the following proposed projects relate in various ways to improving quality of life within the City in order to achieve that goal. Proposed quality of life projects are described below, listed in the Implementation Matrix (Table 22), and depicted in Figure 23.

IMPROVE CONNECTIVITY

Much of the public input obtained during the course of this Study identified connectivity as a key to successful revitalization of the City. The long-term goal must be to seamlessly connect the City to the River and ultimately to Chautauqua Lake so that the lakefront extends through the heart of the downtown area. Additional connections will be necessary to unite neighborhoods to the downtown and the River using modes of transportation other than automobiles. The following proposed projects focus on creating pedestrian and bicycle connections throughout the City.

Continue to Develop a Continuous Riverwalk

The City is committed to the phased development of the Riverwalk Trail system linking downtown to adjacent communities to the east and west, as well as to neighborhoods within the City. To date a number of sections of this anticipated network have been completed while others have been funded and are awaiting construction (as described in the *Pedestrian and Bicycle Infrastructure* Section of this Report and depicted in Figure 19). The Riverwalk is anticipated to comprise of public walkways along the River a minimum of 10 feet wide. Ongoing efforts involve

securing commitments from landowners to allow public access and securing funds for development of walkways. Over time the Riverwalk will become an increasingly important public amenity as access points from neighborhoods are increased and new sections of the walk are completed, enhancing its viability as a recreation network (see Figure 36 which depicts a street-level view from the corner of Fairmount Avenue and West 8th Street looking southwest, highlighting the trailhead connection point of the proposed *Phase V of the Riverwalk Trail* – ***Chadakoin Park Bike Trail*** and proposed *Phase VI of the Riverwalk Trail* in the vicinity of the Trolley Building site). The ultimate success of the Riverwalk will depend on how it becomes established as an amenity that enhances the attractiveness of development along the River. The City should continue to seek funding and work with partners to ensure the development of a continuous Riverwalk throughout the City.

Active public use of the Riverwalk and the riverfront parks is a credit to City staff, which does an excellent job maintaining parks and public spaces, both new and old, in an environment of tightly constrained resources. Further expansion will need to be mindful of maintenance burdens.

Specific Riverwalk extension projects (that have been discussed but not yet funded) and obstacles to said extensions are described below:

- *Extension of the Riverwalk Trail from the existing western Trail terminus along the northern bank of the River towards McCrea Point.* As described previously, this connection is most likely to occur as part of the phased development of the National Comedy Center (NCC). Phase 1 of the NCC project includes an iconic public staircase along the west side of the Erie Railroad Station, connecting West 2nd Street down to the proposed Gateway Train Station Plaza. From the proposed Gateway Train Station Plaza, the trail will cross the railroad via a state-of-the-art at-grade crossing system and continue through the proposed Festival Lawn public park to the existing western trail terminus (Figure 30). Later project phases will likely include an additional staircase and elevator connection along the eastern side of the Erie Railroad Station, a pedestrian bridge connection from the north bank of the River to Panzarella Park, and a pedestrian bridge connection from the north bank of the River to the South in the vicinity of the Washington Street Bridge (Figure 31).
- *Extension of the Riverwalk Trail from Panzarella Park towards McCrea Point.* The Jamestown Electric Generating Station (and its associated traffic and above ground and below ground infrastructure) and a storage building owned by the City's Department of Public Works at the Sprague Street intersection are two of these obstacles. Residences and businesses fronting Steele Street and abutting the River from Sprague Street to West Sixth Street add to the challenge of extending Riverwalk along the River's edge. Because a number of obstacles make it impractical for Riverwalk to extend along the shoreline, the proposed *Phase VI of the Riverwalk Trail* will utilize and improve the existing sidewalk network to extend the southern Riverwalk Trail in a westerly direction (see Figure 19).

Multi-use Trail at the Trolley Site

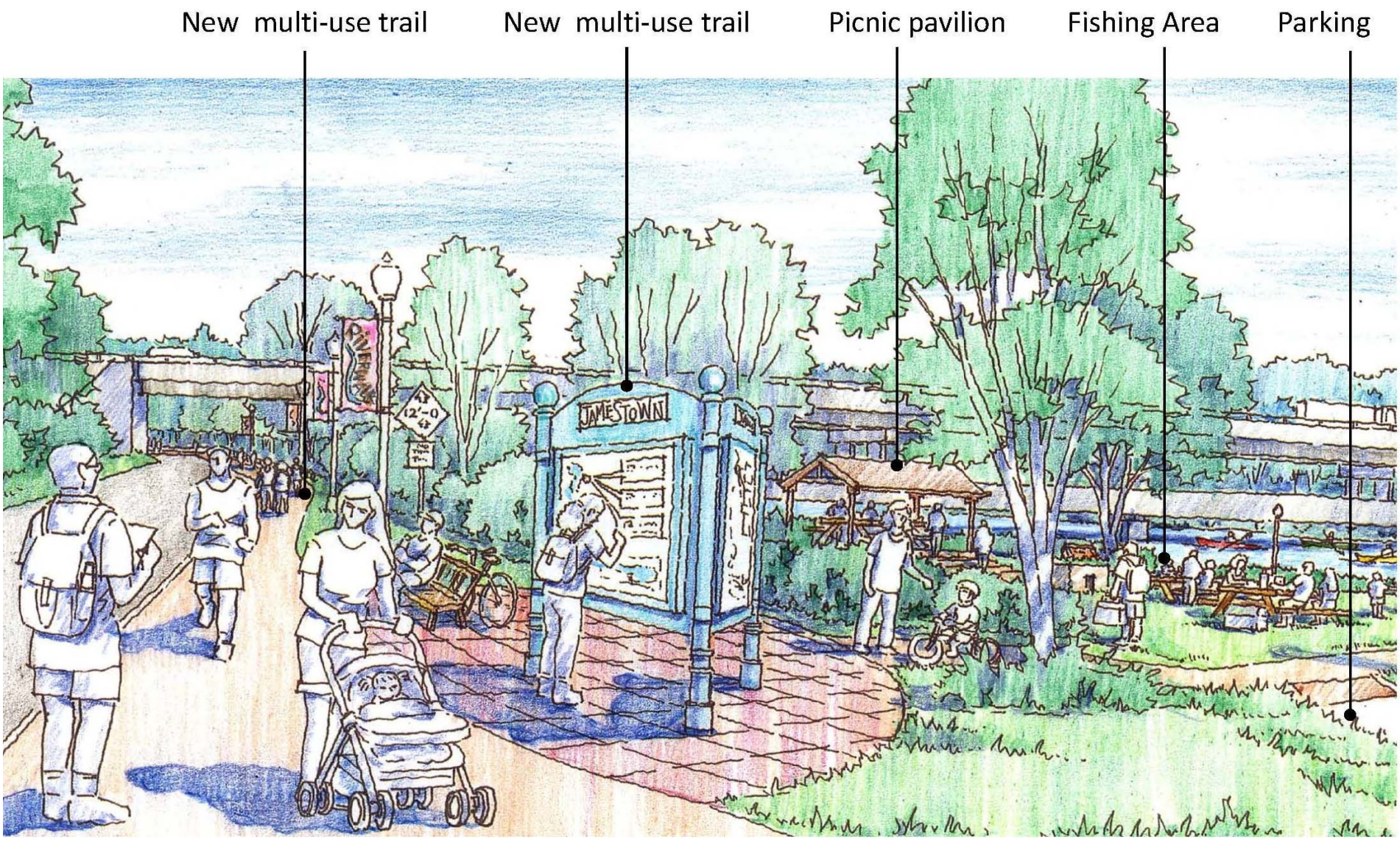


Figure 36. Riverwalk Trailhead at Trolley Building Site - Street Level View

- *Extension of the Riverwalk Trail from Keelboat Landing to the east*. The extension of the trail along the northern bank of the River in an easterly direction is complicated by the Railroad's presence along the bank's edge, so a pedestrian bridge to connect to the Jamestown Area Medical Associates and a pedestrian staircase to connect to East 1st Street would be needed. A more likely route would cross the Harrison Street Bridge to the eastern side of the Chadakoin River, and then split to both the north and south. The northern split would run northerly along the west side of Institute Street through a reconstructed viaduct under the railroad to provide a linkage with the Jamestown High School. The southern split would run southerly along the west side of Institute Street. It would then cross the Institute Street Bridge to the southern bank of the Chadakoin River and follow along a portion of Victoria Street and through privately owned property, ideally including the Vacant Parcels on Foote (see Site 25 in Figure 11), the WNY Urology Association, and the Gateway Center.

Develop the East End Nature Trail and Park

The connection of a continuous Riverwalk to the **East End Industrial Corridor** will likely not occur for many years due to the vast distance and numerous obstacles. However, the many neighborhood residents and industrial workers within the **East End Industrial Corridor** could greatly benefit from a riverfront trail in the near future. It is therefore recommended that this stretch of Riverwalk be completed in the near- to mid-term despite its disconnection with the downtown portions of Riverwalk. The Trail should extend along the River from the Dahlstrom parking lot to a new pocket park located at Bigelow Street. The pocket park would be maintained as woodland and floodplain with limited access to the River at this sensitive location. Additionally, Hope's Windows maintains a private nature trail and the City would need to work with Hope's Windows to discuss the possibility of opening the private trail to the public in order to make this vision a reality.

Improve North-South Connections

The City of Jamestown is bisected into north and south sections by both the River and the railroad. Very few pedestrian and bicycle friendly connections exist between the north and south side of the City. Only several of the automobile bridges include sidewalks and often the sidewalks are so narrow, pedestrians and bicyclist do not feel safe utilizing them. As such, pedestrian bridges over the River and railroad and pedestrian viaducts under the railroad should be placed at key locations throughout the City. Potential pedestrian bridge locations include:

- Panzarella Park across the River to the north shore (see NCC project)
- Across the River just west of the Washington Street bridge (see NCC project)
- Across the River and then across the railroad from Brooklyn Square to East 1st Street in the vicinity of Broadhead Mills
- Across the River from Brooklyn Square to Institute Street north of Harrison Street
- Across the River from the proposed park on Foote Avenue/Institute Street to Briggs Street
- Across the River from King Street to the Fire Training Center
- Across the River from Hope's Windows to James Avenue

- Across the River from Bigelow Avenue to Niagara Avenue

Viaducts under the railroad already exist at Fairmount Avenue and Institute Street; however, the Fairmount Avenue viaduct is in need of substantial rehabilitation and the Institute Street viaduct has been closed off to the public for safety reasons for many years. It too is in need of substantial rehabilitation.

Reutilize Porter Avenue Park

Jamestown leadership has explored the potential for reutilizing and expanding Porter Avenue Park, creating a continuous band of parkland from the residential neighborhood near the Armory to the Steele Street riverfront south of 3rd Street. Implementation of this concept would involve development of a formal path through the steep wooded hillside now served by informal paths. Challenges would include:

- Acquisition of approximately a dozen properties along Steele and Front Street, including seven homes and businesses.
- The significant change in grade between Front Street at the top of the hill and Steele Street below.
- Because Steele Street exists between the targeted residential neighborhood and the River, the park would lie on both sides of the road, necessitating a carefully planned, safe cross-walk.
- The presence of the BPU plant, which would preclude continuous riverfront access between West 2nd Street and the downtown Riverwalk to the east.

This ambitious initiative could enhance neighborhood River access. In the near term, given the likely cost and complexity, it may be most desirable to focus on continuing to enhance neighborhood access to McCrea Point and to the downtown Riverwalk, with expansion efforts shifting toward a Porter Avenue Park in the longer term.

Develop a Bicycle Infrastructure Network

The *Jamestown Bicycle and Pedestrian Plan* contains a variety of recommendations related to the development of bicycle routes and trails. These projects include the construction of bike lanes on existing roadways, installation of sharrow markings on many roads, and completion of various feasibility studies related to bicycle infrastructure. The City should actively seek funding to implement the proposed recommendations in phases based on project priority and financial feasibility.

Intersection Enhancements

The *Jamestown Bicycle and Pedestrian Plan* recommends enhancements at a number of intersections throughout the City of Jamestown Waterfront Revitalization Area. The recommendations include the installation of high visibility crosswalks, curb ramps, share the road signage, bike lane signage, pavement markings, potential signalized stop light, count-down timers for crosswalks, and/or bike box turning lanes at these locations. The implementation of these enhancements will help fulfill the vision for the waterfront as a walkable/bike-able, connected place, making it more attractive to visitors. The City should actively seek funding to implement the proposed recommendations in phases based on project priority and financial feasibility.

Street Improvements
The *City of Jamestown: Traffic and Streetscape Enhancement Plan* included a series of recommendations to improve the traffic flow in the City and create more appealing, walkable streets. Such recommendations include:

- Creating public open spaces with information kiosks for pedestrian wayfinding
- Creating character-defining downtown feature (like a clock tower)
- Evaluate feasibility of road diets
- Creating bicycle lanes
- Enhancing pedestrian walkways and streetscape amenities including banners, pedestrian amenities, and landscaping
- Creating additional pedestrian connections to the River
- Converting some one-way streets to two-way streets

As with intersection enhancements, the implementation of these enhancements will help fulfill the vision for the waterfront as a walkable/bike-able, connected place, making it more attractive to visitors. The City should actively seek funding to implement the proposed recommendations in phases based on project priority and financial feasibility.

AMENITIES

Develop New Fishing Access Sites and Improve Existing Sites
Fishing is a growing pastime in the City of Jamestown. With the recent extension of Riverwalk, fishermen can almost always be spotted along the Downtown stretch of the River on a nice day. Fishermen can also be found at numerous informal locations throughout the City as described in *Section 2.4 Public Access and Recreation*. Efforts should be made to improve access to and increase the number of formal fishing locations, particularly in informal areas already frequented by fishermen as depicted in Figure 12.

Develop New Boating Access Sites and Improve Existing Sites
Canoeing and kayaking are growing in popularity, although few locations in the City allow for formal launching (Figure 12). Due to this lack of formal boat launches, an informal launch has been created at Clifton Avenue. Efforts should be made to formalize this launch. Additionally, a kayak/canoe launch could be created in the vicinity of the Washington Street Bridge. An existing local business (such as the Jamestown Cycle Shop) or a new business within the vicinity of the Washington Street Bridge could then rent kayaks and canoes for scenic trips up the Chadakoin River Outlet. Lastly, opportunities for a formalized portage for kayaks and canoes around the Warner Dam should be explored.

Protect Existing, Develop New, and Improve Unsightly Scenic Vistas
In many places throughout the City, the view of the River is limited due to vegetation and/or topography. However, certain locations (particularly along many of the City's bridges) offer fabulous views of the River and surrounding valley. In

other locations, potential scenic vistas are spoiled due to a large number of unsightly industrial, commercial, and abandoned properties along and/or near the waterfront. Scenic views of the River would improve if these sites were properly screened and/or cleaned up. The City should work with property owners and volunteer groups to protect existing, develop new, and improve unsightly scenic vistas as described in *Section 2.5 Historic and Cultural Resources* and depicted in Figure 16.

Waterfront Programming

Programming located along the waterfront (and potentially in the River) including live music, films, festivals, outdoor markets, regattas, and other events will draw people to the waterfront. A small outdoor public venue was recently created at the Riverwalk Self Storage site located on the south side of the River. As other Downtown Core businesses along the waterfront begin to transform into and support water dependent and enhanced uses, waterfront programming can potentially be located at these locations as well. In the long term, opportunities to locate these programs in other areas of the City should be explored.

Educational and/or Interpretive Center(s)

Many existing plans for the Jamestown waterfront include a project or two to create a Nature/Education Center, Wetlands Interpretive Center, Historical Interpretive Center, Historical Industrial Center, Transportation Museum, and/or Visitor's Center. The City is fortunate to contain a number of entities that could contribute to such a center, including the Chautauqua Watershed Conservancy, Jamestown Audubon Center & Sanctuary, Roger Tory Peterson Institute of Natural History, and Jamestown Community College.

There are a couple of potential locations suitable for these uses. One such location is the old Erie Railroad Station which has been recently rehabilitated and includes a Visitor's Center. This building is perhaps the best location to place a transportation museum due to its historic ties with the railroad. However, this building is the proposed site for the National Comedy Center (NCC) so room for such a use is likely limited.

Another possible location for such a use would be somewhere in the vicinity of McCrea Point Park. The McCrea Point Park area would lend itself well to building a Nature and Educational Center which could include all of the above discussed natural, historical, and cultural aspects: it is a historically and culturally significant site (for transportation, industry, and community development) and it is located along/near the Chadakoin River and wetland complex (making tangible connections with nature possible). Additionally, it currently acts as a natural transportation hub between boat users from the Lake, automobile users, and pedestrians/bicyclists. The proposed **Lucy Trail** (sidewalk and on-street bicycle improvement project to Celoron) and two proposed Riverwalk Trail extension projects (trail connections to the Downtown and Clifton Avenue, **McCrea Point Park Trail**, and dock and parking improvements at McCrea Point Park) only act to strengthen the appropriateness of the Park to house such a use. If housed at McCrea Point Park, the City should analyze the feasibility of creating some sort of public transportation connection

between the Center and other key destination points within the Downtown. Additionally, consideration should be given to amphibious tour boats that could be stationed at McCrea Point Park and transport users to parts of the Lake as well as downtown and other areas of interest.

The Center/Museum could include any combination of informational displays, hands on exhibits, and replicas relating to nature, wetlands, local history (including Native Americans, French explorers, and early settlers' use of the River), industrial history, and transportation history (potentially including a full size keelboat replica). The site (depending on its location) could also provide boat rentals, fishing gear, eating facilities, etc. Additionally, consideration should be given to amphibious tour boats that could be stationed at McCrea Point Park and transport users to parts of the Lake as well as downtown and other areas of interest.

Figure 37 provides an oblique view of the development potential for McCrea Point Park and surrounding area while Figure 38 depicts the potential vibrancy of and activity at the Park activated by the Nature and Educational Center and improved transportation connections.

NATURAL/ENVIRONMENTAL ENHANCEMENTS AND IMPROVEMENTS

Despite the City's rich industrial heritage, the City contains some incredible natural resources, most notably the Chadakoin River, associated wetland complexes, and a vast variety of plant and animal species. Natural Resources were characterized and evaluated during the performance of this LWRP, and the Ecological Conditions and Living Infrastructure Framework document (Supporting Document 2) discusses recommendations for ecological enhancements and improvements in more detail. Proposed natural/environmental enhancements and improvements projects are described below, listed in the Implementation Matrix (Table 22), and depicted in Figure 24.

ENVIRONMENTAL QUALITY IMPROVEMENTS

Development/Riparian Transition Zones
Because of the unique wetland habitat within the Study Area and the ecosystem services provided by the wetlands and the River, the Ecological Conditions and Living Infrastructure Framework (Supporting Document 2) recommends the establishment of transition zones between the River and developed land. Every effort should be made to protect the Chadakoin River and the existing wetland complexes in the western portion of the City. The **Chadakoin Outlet District**, the **Industrial Heritage Corridor**, and the **East End Industrial Corridor** provide ample opportunity for the creation of such riparian transition zones, while the City has determined that the **Downtown District** does not appear to lend itself to such development, as discussed below.

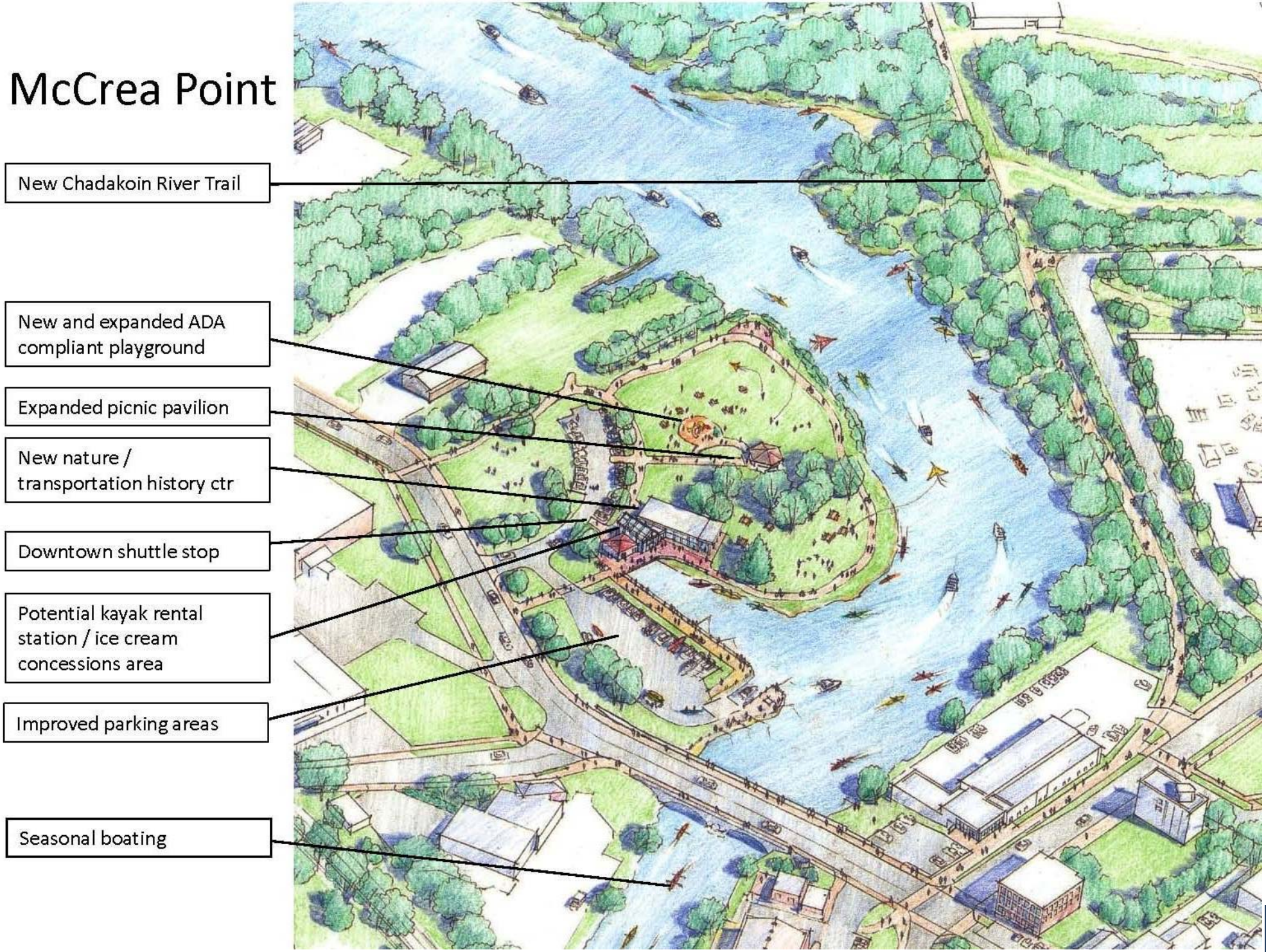


Figure 37. M cCrea Point Park Development Potential – Oblique View

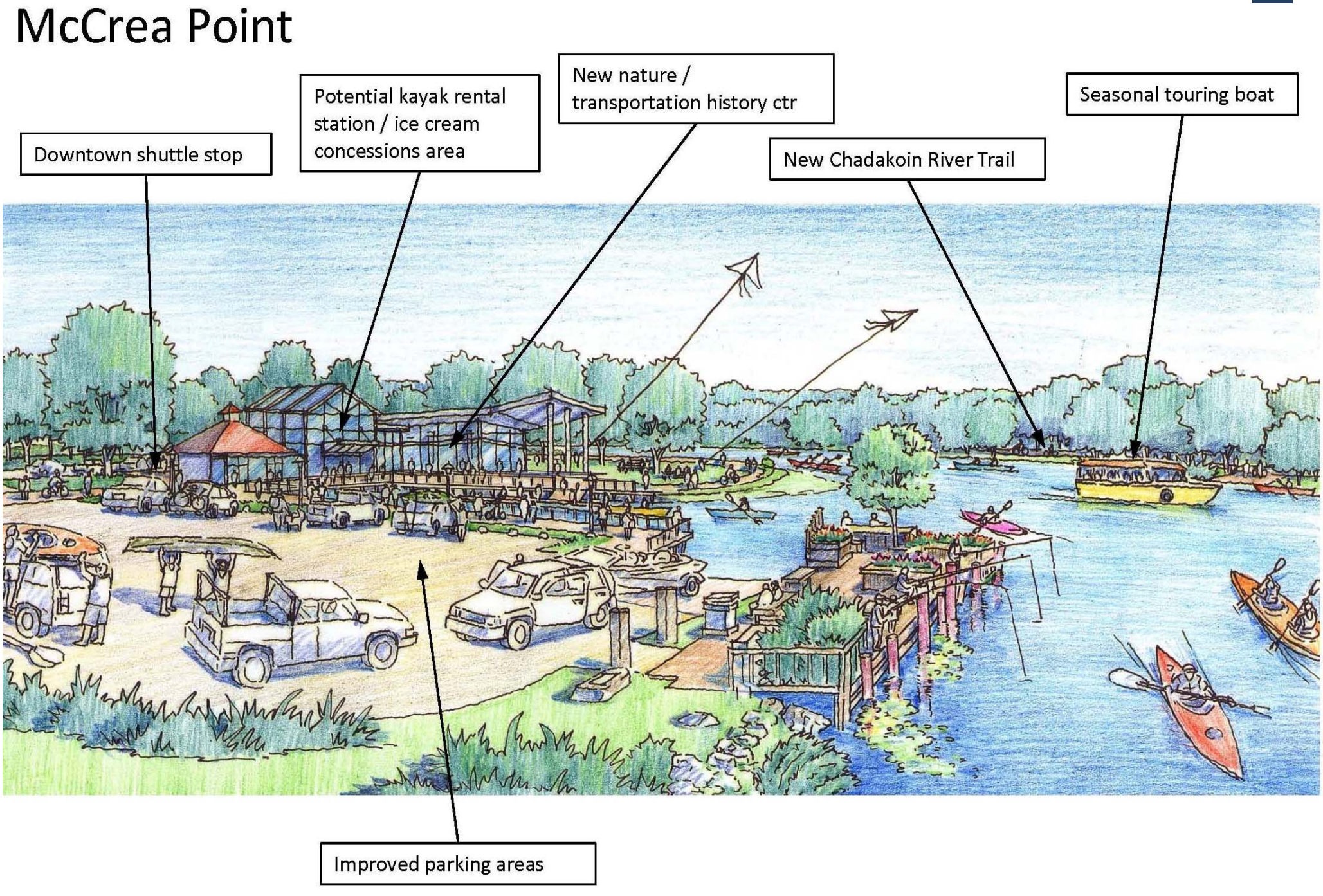


Figure 38. McCrea Point Park Development Potential – Street Level View

Although water quality and habitat quality are critically important, the Chadakoin River itself is not protected by any state or local riparian buffer ordinance. A riparian buffer is a permanent naturally vegetated area located adjacent to a stream, river, lake, pond or wetland. Riparian buffers provide important habitat and shelter for native aquatic and terrestrial wildlife, capture and filter stormwater runoff, and serve as "rights-of-way" for dynamic stream and river systems. Their creation, conservation, and protection are critical to watershed health and management. Protection of wetlands, riparian areas and watercourses is needed to protect functions such as:

- Provide flood conveyance and storage capacity which reduces downstream flood hazards by absorbing peak flows, slowing the velocity of flood waters, and regulating base flow;
- Reduce the need for costly engineering solutions for flooding and erosion such as rip rap, retention basins, and dams;
- Reduce the amount of nutrients, sediment, organic matter, pesticides, and other harmful substances that reach watercourses, wetlands, or subsurface water bodies;
- Stabilize the banks of water courses to reduce bank erosion and downstream transport of sediments eroded from watercourse banks;
- Protect remaining large contiguous environmentally sensitive areas from activities which would alter their ecological integrity, balance or character;
- Provide stormwater detention and purification;
- Retain areas of annual flooding, floodplains, water areas, and wetlands in their natural state to the maximum possible extent to preserve water quality and protect water retention, overflow, and natural functions.
- Provide living, breeding, nesting and feeding environments for many forms of wildlife including waterfowl, shorebirds, salamanders, and frogs by maintaining diverse and connected riparian vegetation;
- Enhance habitat quantity and quality for the Eastern spiny softshell turtle, a species of State Special Concern;
- Treat polluted surface/subsurface waters through biological degradation and chemical oxidation;
- Reduce additional nonpoint pollution of waters by providing buffers;
- Protect nursery grounds and sanctuaries for fish;
- Help maintain water temperatures and oxygen levels in rivers, streams, lakes, ponds, and other waters;
- Identify and maximize the retention of existing natural plant communities which constitute significant wildlife habitat and upland habitat for threatened and endangered plant and wildlife species and species of special concern, a valuable natural resource of the community;
- Provide recreation areas for hiking, fishing, bird watching, biking, photography and other recreation uses; and
- Reduce community flood, erosion, and other natural hazard losses.

In dense urban areas like downtown Jamestown, the design of development/ riparian transition zones may vary due to a variety of constraints, such as property

ownership, existing development and infrastructure and economic development concerns. In these areas, every effort should be made to integrate living infrastructure into the urban landscape within the riparian buffer to provide habitat, stormwater runoff treatment, and river protection, while being cognizant of development goals, property ownership rights, and increased public access. Because of these issues, the City has determined that riparian transition zones should be instituted where appropriate in the **Chadakoin Outlet District**, the **Industrial Heritage Corridor**, and the **East End Industrial Corridor** while the interface between the River and uplands should be more hardscaped in the **Downtown District**.

The riparian transition zones will be incorporated into the zoning code for in the **Chadakoin Outlet District**, the **Industrial Heritage Corridor**, and the **East End Industrial Corridor** as an overlay district, which will include specific dimensions and other requirements for the buffers. The Ecological Conditions and Living Infrastructure Framework (Supporting Document 2) recommends riparian buffer widths of 100 to 300 feet. However, other constraints make these widths difficult to achieve. Although smaller size buffers (50 to 100 feet) will not provide ideal wildlife habitat, they will provide some bank stabilization, aquatic habitat, water temperature modification, as well as, reductions in sediment loading. Although structures currently exist within the 100- and 50-foot buffers, the establishment of a regulated city buffer ordinance could limit future encroachment and provide requirements for a native vegetation zone, shoreline treatments, approved native plant species, and turtle nesting habitat. Appendix D includes the adopted overlay zoning code.

Suggested plant species to be planted within the riparian buffer for restoration purposes are available in Section 3 of the Ecological Conditions and Living Infrastructure Framework document (Supporting Document 2). Where possible, an enhanced wooded (vegetation only) buffer is the preferred approach.

Invasive Species Removal and Management

Within the **Chadakoin Outlet District**, immediate invasive species removal and management should occur in the northwest corner of State Wetland LW-10 and on the edge of the former municipal landfill where it meets the Chadakoin River. Japanese knotweed was observed at both of these locations. Immediate invasive species removal and management should also occur in Chadakoin Park where common reed patches were observed. Additional invasive plant species were observed in the wetlands; however, they were limited to the River's edge on tussocks and stumps and should therefore be addressed through long-term invasive species management.

Within the **Downtown District**, areas along the railroad and River between the 6th Street Bridge and the Washington Street Bridge should periodically be controlled for invasive plant species. In areas along the River from the Washington Street Bridge to the Winsor Street Bridge, invasive plant species were prevalent where the riparian edge is narrow. These areas should be addressed through long-term invasive species management.

Within the **Industrial Heritage Corridor** and the **East End Industrial Corridor** many invasive plant species were observed, some becoming quite prevalent along the River shoreline the further east one traveled. Many of these areas, especially those along the River by Harrison Street before Winsor, Allen Street, Buffalo Street, and Blackstone Avenue are candidates for long-term invasive species management. In the floodplain area to the east of Bigelow, both north and south of the River, invasive species management is recommended, as the floodplain seems functional but is in need of an invasive species management plan.

Wetlands Restoration and Management

Due to its historic land use as part of the lake outlet wetland complex coupled with the inability to support recreational activities on such saturated soils, the western portion of Chadakoin Park should be managed or restored to wetlands, fostering more passive ecologically focused forms of recreation. The palustrine forested wetland on the western edge of the park should be expanded, allowing wet areas in the south and east to naturally transition to wetland habitat creating a stronger ecological buffer for wildlife and wetlands species along this corridor.

An existing mown trail around the northern portion of Chadakoin Park could be maintained, expanded, and perhaps formalized as a nature trail/boardwalk loop along the wetland fringe, and meadow complexes in the area allowing park users controlled access to the wetland complex.

A wide variety of grant programs exist for wetlands restoration such as those offered by federal programs through USEPA, NOAA, and US Fish & Wildlife Service, as well as private entities such as the Corporate Wetlands Restoration Partnership and Restore America's Estuaries.

Upland Restoration/Shoreline Restoration/Living Shorelines

There are several areas throughout the City which would benefit from upland restoration, shoreline restoration, and/or living shorelines. Upland restoration typically involves allowing areas to naturally (or in some cases helping areas) transition back to a more natural state. Many of these upland areas slope down to the River where shoreline restoration can be beneficial. The typical purpose of shoreline restoration is to stabilize the shoreline. Through the use of a method known as living shorelines (which involves the planting of native plants, including grasses, trees and shrubs), mown and eroding shorelines can be stabilized with the added benefit of aesthetic beauty and increased plant/animal habitat. Living shorelines can also be incorporated along armored shorelines. Where bulkheads are to remain, living seawall habitat techniques, such as steel/mesh baskets, can be anchored to the structure and planted with submerged or emergent vegetation to provide cover and support an invertebrate food base for fish. Overall the vegetation palette can be diversified and expanded to include denser plantings of native species and to provide better shoreline stabilization for the River with a more natural approach. Working generally from west to east, particular recommendations include:

- Within Chadakoin Park, some of the playing fields contain areas of standing water or are completely overgrown with vegetation. These should be restored as natural areas, while existing fields not in the floodplain can be enhanced to provide active recreation space in addition to the existing playground and skatepark.
- Living shoreline techniques should be utilized along the mown and eroding shorelines on both sides of the River in the vicinity of McCrea Point Park. Living seawall habitats including fishing friendly structures should be anchored to the existing bulkheads in McCrea Point Park.
- The rails are a prominent part of the northern shore between the 6th Street Bridge and Institute Street. By working with the rail users and owners there may be ways to retrofit the rails including low plantings (e.g., sedum) between the rails (a green alternative to the traditional stone fill). If there are portions of the rails or associated rail yards that are no longer in use there may be a way to plant them for pollinator habitat.
- Panzarella Park is lacking diverse vegetative structure. Adding more native vegetation and a greater diversity of size and species will help strengthen this park's ecological function as a corridor patch and recreation spot. The boardwalk edge along the southern tip could use some enhancement or improvement and this might be an ideal location for floating wetlands or living seawalls for enhanced habitat value and educational/wildlife observance. Any enhancements will need to also consider security at the adjacent Jamestown Board of Public Utilities (BPU) facility.
- Shoreline and upland restoration (with a specific focus on habitat restoration) should occur along the right bank of the River in the vicinity of the Gateway Center east of Foote Avenue. Other candidates for shoreline and upland restoration include the left bank of the River from Foote Avenue to Winsor Street, the right bank of the River in the vicinity of D.C. Rollforms (Dow Craft), the left bank of the River near the Dahlstrom parking lot, both sides of the River near the Dahlstrom building, the right bank of the River near the vacant parking lot at 100 Blackstone Ave, and the right bank of the River between Hope's Windows and Bigelow Avenue.

Stormwater Management

While traditional methods of stormwater management (involving collection and piping of water) have been useful in the past, future stormwater management projects within the Study Area should be accomplished (at least in part) through the use of living infrastructure practices when feasible. These practices typically rely on vegetated/soil techniques to collect and filtrate stormwater (bioswales, bioretention, tree pits, etc). Other techniques include permeable road surfaces (such as bricks or permeable pavement) and water harvesting using cisterns or rain barrels. Some specific stormwater management recommendations include:

- Significant stormwater runoff from sites to the north, south, and east of Chadakoin Park should be treated by retrofitting the existing ditches (18th Street Canal, 11th Street Canal, and Lafayette Street ditch) running parallel to said properties.

- Stormwater best management practices (BMPs) should be implemented at the Weitsman Scrap Yard as it appears there are no existing stormwater management measures currently on-site and stormwater is free to move to adjacent streets and properties and eventually the Chadakoin River. Stormwater BMPs have been developed specifically for scrap recycling facilities and could be employed on-site and/or in between the facility and the Chadakoin.
- Stormwater management techniques should be employed at McCrea Point Park as needed.
- Stormwater management should be incorporated into the area east of the Jamestown Board of Public Utilities (BPU) facility in order to capture runoff from the neighboring parking and storage lots before reaching the River.
- Another particularly interesting space is the area under the Washington Street Bridge overpass just west of the Warner Dam where stormwater from the overpass drains directly onto the pavement near the supports. Instead the stormwater should be treated in vegetated stormwater planters that help shape an interesting gathering and social space below the underpass. The planting scheme and stormwater management practices implemented at this location should then be expanded through enhanced streetscape design for streets that connect to the River/Chadakoin Park at other locations (13th St, 17th St., Main St., Steele St., Victoria Ave., Foote Ave., Allen St., Hopkins Ave., Blackstone Ave., Buffalo St.).
- There is potential along Victoria Avenue for stormwater management before it enters the River. Additionally, the area directly behind the Gateway Center would be an ideal location to work with the landowner to remove unused sections of the impervious parking lot aiding in stormwater management.
- There is evidence of brick streets throughout the project area. Restoring some of these brick roadways as part of streetscape improvements would support an urban ecological design aesthetic and sustainable approach through the reuse of local materials and a permeable pavement option (stormwater management). Based on their position near the River, Harrison and Steele Street would provide excellent opportunities for such restoration, if technically feasible.
- Lastly, stormwater management practices should be implemented in parking lots, especially within the industrial sections of the City.

Special attention to stormwater management should be incorporated into the review of site plans to ensure that the techniques described above are implemented to the greatest extent possible.

Eastern Spiny Softshell Turtle Habitat Enhancement

The Chadakoin River is home to the Eastern spiny softshell turtle (a species of State Special Concern). This species of turtle typically excavate nests within 300 feet of the shoreline in sand or gravel substrate where there is little to no vegetation growing. However, throughout the densely developed sections of the River, natural shoreline and buffer access are limited, thus turtles are forced to nest in less than ideal locations or congregate in areas with easier floodplain access although nesting

substrate may not be ideal. Active turtle breeding areas should be identified, buffers should be expanded in these areas, and habitat enhancement should occur.

Evidence of the nesting habitat of the Eastern spiny softshell turtle was found along the 18th Street and 11th Street canals, providing an opportunity and need for habitat enhancement. The City intends to encourage the creation of turtle habitat and nesting areas along reaches of the River, in the **Lake Outlet District**, the **Industrial Heritage Corridor**, and the **East End Industrial Corridor** and discourage such development in the **Downtown District**.

An important aspect of any turtle habitat enhancement project will include educating the local residents so that they can better understand the importance of the local ecology. The community has expressed interest and care shown for the wildlife along this River corridor, most importantly the waterfowl and turtles, and therefore there is an investment in wildlife health and survival among residents that can be strengthened in terms of stewardship and care of habitat areas. Interpretive signage, informational kiosks or maps should be placed at key locations throughout the River corridor providing insight into the history of the Chadakoin, the importance of watershed protection, and the resident Eastern spiny softshell turtles that inhabit the area. US Fish & Wildlife has a number of grant programs that could be utilized to enhance habitat within and along the River.

Eliminate Illegal Dumping at Monroe and Clinton Streets
Many parcels along Monroe and Clinton Street, north of the scrap yard have become prone to illegal dumping. These poor current conditions in the Monroe-Clinton Street area have a detrimental impact on the adjacent residential neighborhood and on Chadakoin Park. As there appears to be limited demand for additional residential or commercial development in this area, one approach to addressing clearance, clean-up, and prevention of dumping would be to incorporate these parcels into Chadakoin Park.

Address Debris Accumulation at Warner Dam
A number of comments made during the various project outreach activities identified the accumulation of debris and other garbage in the vicinity of the Warner Dam as an issue that would reduce the enjoyment of users of the Riverwalk. Therefore, a debris boom/debris removal system should be constructed to prevent debris accumulation behind the Warner Dam.

Redevelopment of Vacant Parcels on Foote Avenue
Just to the west of Foote Avenue there is ample opportunity on vacant and underutilized land to create an expanded urban agriculture, permaculture, and/or productive garden space that ties into an extension of the Riverwalk from its current end point at Harrison Street, mainly on the south shore of the River. The portion of the River along Victoria Avenue is channelized and lacks a vegetated buffer. An extension of the Riverwalk could bring native vegetation along a new trail, expanded pedestrian access, and better connections to the River from the neighborhood to the South. The existing expanse of green space invites an expansion of the "Free Garden" concept started by St. James Church at the corner of Victoria Avenue. This

space along Victoria Avenue and Foote Avenue (and across from the Cancer Care Center of Western New York) could provide ample space for raised bed gardening, meditative gardens, even an orchard if the soils are suitable. These activities are often associated with general wellness and would provide a valuable link between the hospital and the northern portion of the proposed Medical Corridor.

Stormwater management could be integrated and an increased tree cover along Foote Avenue could provide further benefit for the River's health and function, as well as the surrounding neighborhood. This expanded urban agriculture and participatory landscape node will be an important habitat location for pollinators (e.g., butterflies and bees) and birds as well.

GREEN INFRASTRUCTURE OPPORTUNITIES

Complete Streets and Green Streets

Redesign of key major roadways (which connect to the River and Chadakoin Park) as complete streets will improve the environmental quality and human experience of the River corridor (Figure 24). Complete streets incorporate pedestrians, bicyclists, drivers, and transit users in a safe manner, while incorporating stormwater management and native vegetation in street and curb design. Specific techniques to create complete streets include narrowing driving lanes, enhancing/adding pedestrian infrastructure (such as sidewalks, painted crosswalks, and crosswalk timers), enhancing/adding bicycle infrastructure (such as bike lanes, sharrows, and signage), integrating stormwater management (such as tree pits and infiltration swales), adding curb extensions, and increasing the tree canopy. Complete streets will breathe new life into the adjacent spaces, as well as improve ecological and visual connections to the River and Chadakoin Park.

Redesign of a few of the secondary neighborhood streets that lead to the River, parks, and Riverwalk as green streets will create further connections between residents and their valuable public spaces (Figure 24). Green streets utilize sustainable streetscape designs, promoting ecological function along the street through integrated stormwater management, native vegetation, and improved access to green space.

ADDITIONAL STRATEGIES

In addition to the proposed projects listed above and the policies in Section III, a number of broad actions would help the City to realize the ultimate revitalization of its waterfront.

Continue to Advance the Jamestown Urban Design Plan
The Jamestown Urban Design Plan (UDP) provides a framework for continued improvements within the portion of downtown just north and south of the River, and for advancing the significant successes already achieved and underway. The recommendations throughout this LWRP are consistent with the UDP and the two plans are complementary. Redevelopment efforts within the City of Jamestown Waterfront Revitalization Area should continue to be pursued as feasible to advance community goals identified within the Urban Design Plan.

Continue Planning and Advocacy
Riverfront transformation on the scale that is anticipated here can take decades to fully complete, extending through many economic cycles and several political administrations at the local, state and federal levels. Many of the most successful efforts have been advanced through public private partnerships with focused missions and long term perspectives. Establishment of such an organization–and an individual who will champion this effort–will be necessary to transform the Chadakoin Riverfront. The Waterfront Advisory Committee currently fills this role and should continue and expand its successful work in this area.

Integrate Greenspace into Redevelopment Projects
Much of the historical commercial and industrial development along the River occurred right up to the banks of the River, leaving no space for people to enjoy the waterfront and no greenspace and habitat. During the redevelopment of brownfield sites, the City should work with property owners to create trails, greenspace, and other amenities to allow better use of the waterfront. This may occur in the form of easements or other such agreements that facilitate development. One example of such a situation is the Dahlstrom complex, where the property owners granted the City an easement along the waterfront in response to the City's assistance with the funding of the demolition of a number of the on-site structures.

Focus Industrial, Light Industrial and High Tech Businesses in the East End
As described in the Market Analysis in Supporting Document 1, employment projections anticipate that the Jamestown Area will lose industrial employment between now and 2020. At the same time, there are programs currently underway at Jamestown Community College targeted to support existing industry in their labor needs over time. The industrial sector of the Jamestown economy is large and important.

The **East End Industrial Corridor** is very well suited for industrial, light industrial and high tech businesses. The area has strong road access, rail availability, and soon, redundant fiber optic cable. Because of BPU, the area is uniquely advantaged with

low cost power. The **East End Industrial Corridor** should be maintained as a center for industry. Underutilized properties which could house these uses with minimal building retrofitting required would include Jamestown Mattress, Crawford Furniture, and Bush Industries. Other underutilized properties which could potentially lend themselves well for build-to-suit industrial infill development include 100 Blackstone (a vacant parking lot), Parking on Minsker, and Titan X Parking.

Create a Self-Sustaining Brownfield Program

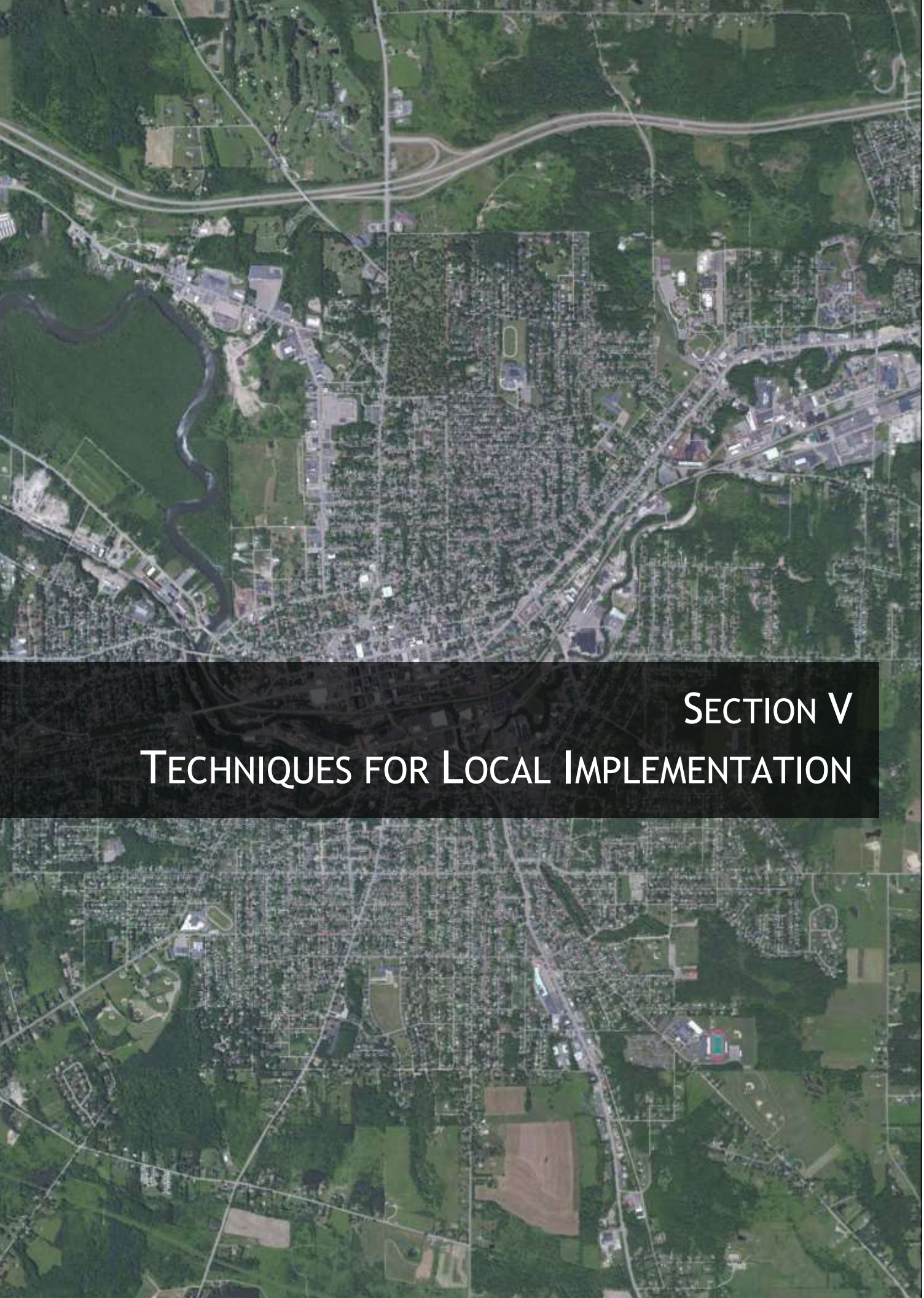
Like Jamestown, communities throughout the Country wrestle with brownfield issues. Brownfield properties are unproductive, are often tax delinquent, blighted, and drain the vitality of communities. Most properties will need some form of municipal involvement to jump start the redevelopment process. The City of Jamestown has already initiated a brownfield program through the NYS Brownfield Opportunity Area Program that included identifying and prioritizing sites within the two BOA Study Areas (which, when combined, nearly coincide with the boundaries of the City of Jamestown Waterfront Revitalization Area). However, Jamestown should work towards taking the next steps, which include assessing the sites, characterizing environmental conditions at the sites, evaluating potential remedial actions, and in some cases, performing site remediation. Communities that have developed strong Brownfield Programs usually identify one person as the primary Brownfield Coordinator to shepherd projects through the various programs and act as a point of contact for developers interested in redeveloping brownfields. These successful communities also obtain funding from a variety of public and private sources, including grants and tax increment financing, to sustain their programs.

Incorporate the Waterfront into the City's Branding/Marketing Efforts

The City initiated a branding and marketing program in 2010. The campaign is called "**Jamestown Up Close & Wonderful**" and is funded via a New York Department of State Environmental Protection Fund Local Waterfront Redevelopment Program grant as well as other funding sources such as the Chautauqua County Occupancy Tax Program. The program included preparation of a Tourism Branding Study and Marketing Action Plan (completed September 2010), a tourism website http://www.jamestownupclose.com/ (launched February 2011), and an interactive tourism attractions map to be located at several locations around the City (completed in August 2012).

These branding efforts focus on the City's many attractions such as the Lucy Desi Center for Comedy, Jamestown Savings Bank Ice Arena, and the Roger Tory Peterson Institute, and the comprehensive website also provides a calendar of events and identifies places to stay, dine, and shop. The tourism attractions map suggests locations to visit and routes to take, but these routes do not pay much attention to the River. As Riverfront amenities improve and programming increases, the **Jamestown Up Close & Wonderful** branding campaign should be updated to not only include the waterfront but to extol the virtues of the Chadakoin River, the Riverwalk, waterfront services, and water-related uses.

This page intentionally left blank.



SECTION V
TECHNIQUES FOR LOCAL IMPLEMENTATION



SECTION V – TECHNIQUES FOR LOCAL IMPLEMENTATION

5.1 EXISTING LAWS

The following list presents a brief overview of the City of Jamestown laws that pertain to waterfront development within the City of Jamestown Waterfront Revitalization Area.

CHAPTER 57 – PARKS, RECREATION AND CONSERVATION COMMISSION

The Parks, Recreation and Conservation Commission was created to construct, maintain and operate all public parks and recreational facilities and to conserve the environment of the City of Jamestown. Specific powers and duties regarding all matters involving the reclamation, preservation, utilization, development, public access and management of the Chadakoin River, riverbanks and watershed that traverses the City of Jamestown and all other matters affecting the preservation, development, management and use of the natural and man-made features and conditions of the City of Jamestown insofar as beauty, quality, biologic integrity and other environmental factors are concerned and, in the case of man's activities and developments, with regard to any major threats posed to environmental quality, are to be effectuated by the Riverfront Management Council so as to enhance the long-range value of the Chadakoin River basin and the overall environment to the people of the City of Jamestown.

CHAPTER 61 – PLANNING COMMISSION

The City Planning Commission was created to exercise the powers and perform the duties vested in it by the Code of the City of Jamestown and Sections 26 through 39 of the General City Law. Some of these powers include the authority to approve plats, authority to change zoning regulations, and authority to hold official proceedings.

CHAPTER 68 – PUBLIC WORKS

The office of Director of Public Works was created in order to place jurisdiction of the highways, sidewalks, pavements, sewers, public places and parks, the maintenance of all other public properties of the City, and the power to perform such other duties as may be prescribed by the City Council to the Director of Public Works.

CHAPTER 80 – STRATEGIC PLANNING AND PARTNERSHIPS COMMISSION

The Strategic Planning and Partnerships Commission was created to continuously consider, develop and make recommendations for strategic initiatives to the City Council and other organizations within the City of Jamestown. It is the duty and responsibility of the Commission to consider, develop and make recommendations for strategic initiatives to the City Council and other organizations within the greater Jamestown area with respect to issues involving economics, the quality of life, equity and opportunity and to develop and establish community-wide goals and objectives for the future and to make recommendations to the City Council and other organizations within the greater Jamestown area to accomplish such goals and objectives.

CHAPTER 135 – ENVIRONMENTAL QUALITY REVIEW

This chapter was adopted pursuant to § 8-0113 of the Environmental Conservation Law for the purpose of implementing the provisions of Article 8 of the Environmental Conservation Law which provides for state environmental quality review (SEQR). The basic purpose of SEQR is to incorporate environmental factors into the existing planning and decision making processes of state, regional and local agencies at the earliest possible time. In adopting SEQR, it was the Legislature's intention that all agencies conduct their affairs with an awareness that they are stewards of the air, water, land and living resources and that they have an obligation to protect the environment for the use and enjoyment of this and all future generations.

CHAPTER 145 – FLOOD DAMAGE PREVENTION

Flood Damage Protection requirements were adopted to minimize the threat of potential and/or actual damages from flooding and erosion that may be a problem to the residents of the City of Jamestown.

CHAPTER 149 – FRESHWATER WETLANDS

The Freshwater Wetlands Protection Ordinance was adopted to preserve, protect and conserve freshwater wetlands and the benefits derived therefrom, to prevent the despoliation and destruction of freshwater wetlands and to regulate the development of such wetlands in order to secure the natural benefits of freshwater wetlands consistent with the general welfare and beneficial economic, social and agricultural development of the City of Jamestown. This chapter sets forth local permit procedures to conduct a regulated activity in any freshwater wetland or adjacent area.

CHAPTER 193 – PARKS AND PUBLIC LANDS

This chapter gives control to the Director of Parks, Recreation and Conservation over all grounds classified as parks, parkways, street parking, street lawns and playgrounds. It also creates rules and regulations regarding use of these grounds as well as penalties for offenses.

CHAPTER 215 – PROPERTY REHABILITATION AND CONSERVATION

This Chapter is broken into two Parts. The purpose of Part 1 is to provide basic and uniform standards, in terms of performance objectives implemented by specific requirements, governing the condition, occupancy and maintenance of residential, nonresidential, commercial and industrial buildings, structures or vacant areas and combinations thereof and to establish reasonable safeguards for the safety, health and welfare of the occupants and users thereof. These standards include space, structural, fire safety, equipment, and property maintenance requirements. The purpose of Part 2 is to establish powers and duties for the basic and uniform administration of and compliance with the applicable standards of this chapter and to establish the responsibility of the parties concerned therewith.

CHAPTER 240 – SEWERS

This Chapter is broken into three Articles. The first Article defines and regulates a system of proportioning operation and maintenance costs (sewer rents) required to operate and maintain the City's wastewater collection and treatment facilities among the contributors who benefit by its use and a system of proportioning debt retirement costs required to design and construct City wastewater collection and treatment facilities among the contributors who benefit by its use. The second Article creates a monthly service charge, payment process, and penalties for late payment. The third Article creates rules and regulations regarding the usage of the public sewers.

CHAPTER 252 – STREETS AND SIDEWALKS

This Chapter is broken into four Articles. The first Article creates rules and regulations regarding obstructions, excavations, and restoration of street surfaces. The second Article discusses other miscellaneous provisions such as removal of snow and ice, block parties and festivals, and skateboards, roller skates and blades. The third Article outlines penalties for offenses. The fourth Article declares a Complete Streets policy and outlines complete streets guidelines.

CHAPTER 260 – SUBDIVISION OF LAND

This Chapter is broken into three Articles. The first Article provides definitions and declares the purpose of the chapter; namely, the regulations are adopted for the purpose of providing for the sound growth and development of the City and of affording adequate sites and facilities for transportation and for the safety, health and welfare of its population and for providing reasonable and equitable requirements in the interest of developers, investors and homeowners so as to ensure stable property values, all pursuant to Article 3 of the General City Law. The second Article spells out the subdivision pre-application procedure, preliminary layout requirements, final map requirements, and time limitations. The third Article outlines design and construction standards and basic improvements required for all subdivision.

CHAPTER 280 – TREES AND SHRUBS

The City Council of the City of Jamestown finds it to be in the best interests of the public health, safety and welfare to provide for the planting, protection, maintenance and removal of trees in the public parkways, public terraces and other municipally owned property within the City of Jamestown and further finds that the proper maintenance of trees and woody shrubs enhances real property values and preserves the quality and character of neighborhoods. This chapter was created with the intent to provide for the proper planting, protection, maintenance and removal of trees in the public parkways, public terraces and other municipally owned property within the City of Jamestown.

CHAPTER 300 - ZONING

This chapter was created to require that all future public and private development within the City of Jamestown be required to conform to the regulations of this chapter for the purpose of promoting public health, safety and general welfare and prescribing the most desirable use for the land in each district while conserving the value of land throughout the City. This chapter places regulations and restrictions pertaining to the height, bulk and location of buildings and other structures; the area of yards, courts, setbacks and other open spaces; the density of population and intensity of use of buildings and land; the use, conservation and development of unique waterfront areas; and the use of structures and land for residential, recreational, industrial, commercial, institutional or other purposes.

This Chapter is broken into twelve Articles:

Article 1 provides general provisions including purpose and definitions.
Article 2 provides general regulations including fences and flood prone areas.
Article 3 establishes the zoning districts and provides district regulations.
Article 4 establishes the Historic Overlay District and provides regulations.
Article 5 provides automotive use areas and off-street parking regulations.
Article 6 creates nonconforming use regulations.
Article 7 creates sign regulations.
Article 8 creates planned unit residential development and provides regulations.
Article 9 creates and outlines site plan review including a special provision regarding the Chadakoin River Area.
Article 10 outlines administration and enforcement of the zoning rules and regulations.
Article 11 creates the Board of Appeals and outlines their authority.
Article 12 outlines the amendments procedure.

5.2 PROPOSED LOCAL LAWS NECESSARY TO IMPLEMENT LWRP

CONSISTENCY REVIEW LAW

Actions to be directly undertaken, funded, or permitted by the City within the waterfront revitalization area must be consistent with the policies and purposes set forth in the City of Jamestown LWRP. Through the adoption of the LWRP Consistency Review Law, the City has established the legal framework required for the review of proposed direct and indirect actions within the waterfront revitalization area. The LWRP Consistency Review Law and Waterfront Assessment Form are included in Appendix A.

In addition, all proposals for land development in the Waterfront Revitalization Area are subject to the City's land use regulations.

ZONING

Although portions of the City's existing zoning regulations are consistent with the intent of the LWRP and address waterfront development, to fully support the policies set forth in Section III and to implement the proposed actions and projects presented in Section IV, additional regulations for waterfront development have been incorporated into the City's zoning ordinance.

Additional measures should be adopted; including a zoning overlay entitled the Waterfront Development Overlay District to serve as a supplement to the underlying zoning districts. The Waterfront Development Overlay District will foster development within the district in accordance with the vision described in the LWRP, the intent of which is to promote and enhance the development and recreational use of the City's waterfront; to encourage the aesthetics of the existing buildings and waterfront area; to provide an integrated, cooperative approach to the protection of wetlands, riparian areas, and watercourses including but not limited to wetlands, riparian areas, and the Chadakoin River; to preserve and enhance the natural and scenic values of the waterfront; increase the potential for public access to the waterfront; and to permit new construction in a manner which complements and enhances the existing form of the district.

The Waterfront Development Overlay District zoning regulations are included in Appendix D.

5.3 OTHER PUBLIC AND PRIVATE ACTIONS NECESSARY TO IMPLEMENT THE LWRP

As with many municipalities across the Country, the City of Jamestown does not have ample funding to take on multiple large revitalization and redevelopment projects using only local funding. The formation, maintenance, and expansion of partnerships with state and federal agencies and local, regional, and national foundations are a key to the ultimate success of the revitalization of the City's waterfront. Without funding from outside sources, many of the proposed projects will have little chance of reaching fruition. Therefore, the City must continue its diligent pursuit of partnerships and funding for the LWRP.

Additionally, and even more importantly, the involvement of the private sector is critical to the success of the City of Jamestown Waterfront Revitalization Area. The private investment in properties along the waterfront will serve to reinvigorate use of the waterfront, bringing people to the River and providing employment opportunities and increasing the tax base. The City will need to work with private developers and landowners to bring in the much needed private investment, and include local, regional, state, and federal development agencies to assist in securing this private investment.

5.4 MANAGEMENT STRUCTURE FOR IMPLEMENTING THE LWRP

A number of City of Jamestown entities are responsible for management and coordination of the LWRP and are directly involved in ensuring that consistency reviews are completed for projects within the Jamestown Waterfront Revitalization Area. These agencies or officials, with their responsibilities are:

- **Mayor** - The Mayor is the chief elected official of the City. As such, the Mayor will provide overall supervision and management of the LWRP including implementation of projects and programs to advance the LWRP.
- **City Clerk** - The City Clerk will be responsible for handling correspondence, communications, and record keeping for City government actions pertaining to implementation of the LWRP. The City Clerk will also be responsible to distribute the Waterfront Assessment forms.
- **City Council** - The City Council is Jamestown's policy-making body. The Council plays a key role in the development and funding of municipal programs and services. The Council has the sole power to adopt and amend legislation. The Council, in coordination with the Mayor, shall apply for funding for project and programs identified in the LWRP.

- **Planning Commission** – The Planning Commission will be responsible for undertaking site plan review for new development within the waterfront revitalization area. The Planning Commission will coordinate review of actions in the City's waterfront area for consistency with the LWRP, and will advise, assist and make consistency recommendations to other City agencies in the implementation of the LWRP, its policies and projects, as well as, coordinate with State agencies regarding consistency review of their actions.

- **Department of Development** – The Director of the Department of Development will serve as the LWRP Implementation Coordinator and will be responsible for:

    - Grant writing and administration of funding for LWRP projects;
    - Identification of prioritized activities and projects and their implementation;
    - Providing technical and financial assistance to private sector participants;
    - Technical project review regarding compatibility of proposed projects with the LWRP and SEQR policies, as well as other local laws and regulations; and
    - Staff coordination as needed for implementation efforts.

- **Department of Public Works** - The Director of Public Works is responsible for the management, maintenance, and operation of all public works and physical properties within the waterfront revitalization area.

- **Jamestown Renaissance Corporation** - The JRC, as an organization that supports downtown and neighborhood revitalization, is responsible for creating the strategy for waterfront programming and the scheduling and coordination of waterfront events.

- **Parks, Recreation, and Conservation Commission** - The Parks, Recreation and Conservation Commission was created to construct, maintain and operate all public parks and recreational facilities and to conserve the environment of the City of Jamestown. As such, the Commission will provide recommendations to the Planning Commission regarding proposed activities that impact parklands, recreational space, and open space within the waterfront revitalization area.

- **Code Enforcement Personnel** - The City's Code Enforcement Personnel are part of the Department of Development and are responsible for enforcing

the zoning regulations and will issue summonses for violations of the City of Jamestown Waterfront Consistency Review Law.

- **Zoning Board of Appeals** - The Zoning Board of Appeals hears and determines matters regarding appeals including appeals for interpretation, variances, and special use permits. The Zoning Board of Appeals will hear and render decisions on variance applications and appeals involving property or activities within the waterfront revitalization area.

5.5 FINANCIAL RESOURCES NECESSARY TO IMPLEMENT THE LWRP

There are three main funding implications associated with implementation of the City's LWRP. These include administrative costs associated with local management of the LWRP, capital and revenue costs associated with project implementation and costs related to the maintenance and upkeep of projects.

Management costs and technical assistance support will be undertaken by the City offices discussed in Section 5.4 using existing funding sources.

The second funding implications involve costs associated with capital projects and the implementation of projects identified in Section IV. Although the City will need to take the lead in achieving the implementation of these projects, it is unlikely that the City will be able to provide the financial resources necessary to implement these projects without significant, additional assistance from other entities or as part of a public/private partnership.

A key element in obtaining funding from outside sources is the ability of the City to provide a local match. This match is essential in leveraging money from both the public and private sector. The local match can generally take a number of different forms, including funding from the City, the provision of materials or labor from the City and the use of volunteers and staff time to provide a monetary equivalent. It is also advantageous to link LWRP projects with other capital improvement projects that are current, or planned within the City, whenever possible, as it will help to stretch the benefits of limited public funding and achieve multiple objectives.

There are a number of financial resources available for the acquisition of lands; site improvements; facility development; job creation; economic development; environmental conservation; brownfield assessment and cleanup; and circulation system improvements, including pedestrian bicycle networks (see Table 23). Federal, state and local funding resources should be considered and combined for maximum benefit to the City for the implementation of recommendations and policies within the LWRP.

The availability of many funding sources varies greatly from year-to-year, and therefore must be monitored closely. Maintaining up-to-date information regarding qualification criteria, application schedules, requirements and procedures are necessary to take full advantage of all grant monies available.

Table 23. Potential Grant Assistance Programs

PROGRAM	PURPOSE	DUE DATE
Neighborhood / Downtown Redevelopment		
NY Empire State Development Restore NY (RSTRNY)	Provides grants for the revitalization of vacant or underutilized commercial, residential and mixed-use properties to encourage economic development and neighborhood revitalization.	Available Periodically
NY Office of Community Renewal (OCR) Main Street (NYMS)	Rehabilitation of commercial and residential buildings in downtown areas.	Annual
NYS DOS Local Waterfront Revitalization Program (LWRP)	Provides matching grants to municipalities adjoining designated coastal or inland waterways for planning, design, and construction project which revitalize hamlet, downtown and urban waterfront areas.	Annual
Housing		
NYS OCR Community Development Block Grant (CDBG)	Homeownership assistance, housing rehabilitation for low and moderate income households.	Annual
Economic Development		
NYS OCR Community Development Block Grant (CDBG)	Provides funding for public facilities, infrastructure and/or capital designed to stimulate job creation or the retention of existing employment.	Open Submission
Environmental Remediation		
NYS DOS Brownfield Opportunity Area Program (BOA)	Provides funds for the development of revitalization plans and implementation strategies for areas or communities affected by the presence of brownfield sites, and site assessments for strategic sites.	Open Submission
USEPA (EPA) Brownfield Grants	Provides funding for brownfields assessment, cleanup, revolving loans, and environmental job training.	Annual
NYS DOS Technical Assistance Grant (TAG)	Technical assistance to help grant recipients understand existing environmental data that characterize existing sites, comment on site remedial activities and proposals, and share this information with the public.	Open Submission
Infrastructure		
NYS OCR Community Development Block Grant (CDBG)	Water supply, sanitary sewer, storm water. Must primarily benefit households with low and moderate incomes.	Annual
NYS Environmental Facilities Corp. (EFC) State Revolving Fund (EFCSRF)	Financial assistance for water supply (DWSRF) and sanitary sewer projects (CWSRF).	Varies, based on programs
NYS EFC Green Innovation Grant Program (GIGP)	Grants for projects eligible for CWSRF. Projects must conserve water, reduce runoff, or reduce energy use.	Periodically

Transportation		
NY DOT Transportation Enhancements Program (TEP)	Provides funding for non-traditional forms of transportation (i.e. sidewalks, bicycle paths, hiking trails, etc.) designed to achieve regional transportation goals.	Available Periodically
NY DOT Safe Routes to School (SRTS)	Provides funding to assist communities in developing and implementing projects that increase bicycle, pedestrian, and traffic safety.	Available Periodically
NY DOT Transportation Investment Generating Economic Recovery Program (TIGER)	Provides funding to assist multi-modal, multi-jurisdictional road, rail, transit and port projects that have a significant impact on a region	Annual

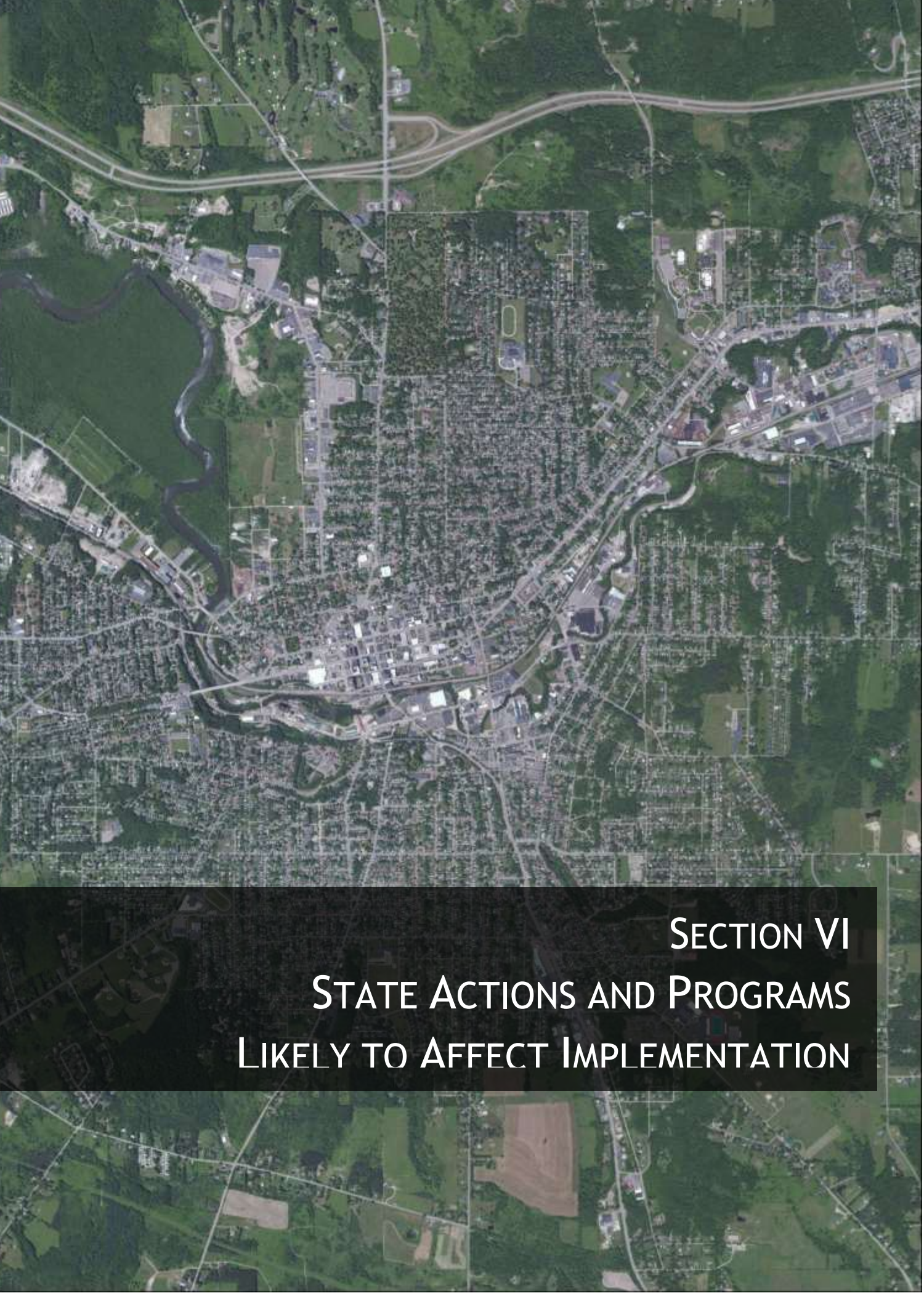
Parks & Recreation		
NYSDEC Environmental Protection Fund (EPF)	Provides funding for acquisition, planning and development of sites for parks and recreation use, as well as the restoration of designated historic structures and sites.	Annual
NYSOPRHP Recreational Trails Program (RTP)	A matching grant program for the acquisition, development, rehabilitation, and maintenance of trails and trail-related projects.	Available Periodically
National Park Service Rivers, Trails, and Conservation Assistance Program (RTCAP)	Provides technical assistance to locally-led outdoor recreation projects, including trails, rivers, and parks.	Open Submission
NYS DOS Local Waterfront Revitalization Program (LWRP)	Provides matching grants to municipalities adjoining designated coastal or inland waterways for planning, design, and construction project which revitalize public waterfront facilities including land and water based trails.	Annual

Natural & Environmental Enhancements		
US Department of Agriculture (USDA)	Various grant programs that provide funding for invasive species management and eradication.	Annual
NOAA Habitat Restoration Grants (NOAA)	Various grant programs that fund restoration of fishing habitat, floodplains, riparian zones, wetlands, as well as education and outreach programs.	Annual
US Fish and Wildlife Service Grants (USFWS)	Various grant programs that fund restoration of habitat and wetlands.	Annual
National Fish and Wildlife Foundation (NFWF)	Provides funding on a competitive basis to projects that sustain, restore, and enhance our nation's fish, wildlife, and plants and their habitats. Other funding sources include invasive species eradication programs.	Annual

Planning		
Community Development Block Grant Technical Assistance (CDBGTA)	Planning assistance for area-wide, neighborhood, downtown, and infrastructure projects.	Available Periodically
NYS DOS Local Waterfront Revitalization Program (LWRP)	Provides matching grants to municipalities adjoining designated coastal or inland waterways for general and site specific planning including preparation of local or regional waterfront revitalization programs or strategies, lakewide or watershed revitalization plans, and community resilience strategies.	Annual
Council on the Arts (COTA)	Provides funding for projects related to planning and community design, design of public spaces (including plazas), open space planning, streetscapes, and transportation linkages.	Annual

5.6 LOCAL REGULATORY CHANGES

Zoning and local law changes are the responsibility of the City of Jamestown, the majority of which are included in the annual budget for the Department of Development.



Section VI
State Actions and Programs Likely to Affect Implementation



SECTION VI – STATE ACTIONS AND PROGRAMS LIKELY TO AFFECT IMPLEMENTATION

State[2] actions will affect and be affected by implementation of a Local Waterfront Revitalization Program (LWRP). Under State law, certain State actions within or affecting the local waterfront 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 agencies is also likely to be necessary to implement specific provisions of the LWRP.

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 which are to be undertaken in a manner consistent with approved LWRPs. The following section presents the list of those State actions and programs that are the subject of this notification. Additional notification guidelines are included in Appendix B.

The State Waterfront Revitalization of Coastal Areas and Inland Waterways Act requires that an LWRP identify those elements of the program which 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 which may affect the achievement of the LWRP.

The second part of this section is a more focused and descriptive list of State agency actions which are necessary to further implementation of the LWRP. It is recognized that a State agency's ability to undertake such actions is subject to a variety of factors and considerations; that the consistency provisions referred to above, may not apply; and that the consistency requirements cannot be used to require a State agency to undertake an action it could not undertake pursuant to other provisions of law.

[2] Federal actions and programs are not applicable since the Chadakoin River is considered an inland waterway and is not in the NYS coastal zone.

6.1 STATE PROGRAMS THAT SHOULD BE UNDERTAKEN IN A MANNER CONSISTENT WITH THE LWRP

OFFICE FOR THE AGING

1.00 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 Programs
4.00 Permit and approval Programs

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

DIVISION 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)

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.

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 Corporation 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 De Novo 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 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 CORRECTIONAL SERVICES

1.00 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.

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.

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-Re-packer of Drugs and/or Devices
- 2.08 Storekeeper's Certificate

NEW YORK STATE ENERGY RESEARCH AND DEVELOPMENT AUTHORITY

1.00 Issuance of revenue bonds to finance pollution abatement modifications in power-generation facilities and various 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

5.00 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.

6.00 Marine Finfish and Shellfish Programs.
7.00 New York Harbor Drift Removal Project.
8.00 Permit and approval programs:

<u>Air Resources</u>
- 8.01 Certificate of Approval for Air Pollution Episode Action Plan
- 8.02 Certificate of Compliance for Tax Relief - Air Pollution Control Facility
- 8.03 Certificate to Operate: Stationary Combustion Installation; Incinerator; Process, Exhaust or Ventilation System
- 8.04 Permit for Burial of Radioactive Material
- 8.05 Permit for Discharge of Radioactive Material to Sanitary Sewer
- 8.06 Permit for Restricted Burning
- 8.07 Permit to Construct: a Stationary Combustion Installation; Incinerator; Indirect Source of Air Contamination; Process, Exhaust or Ventilation System

<u>Construction Management</u>
- 8.08 Approval of Plans and Specifications for Wastewater Treatment Facilities

<u>Fish and Wildlife</u>
- 8.09 Certificate to Possess and Sell Hatchery Trout in New York State
- 8.10 Commercial Inland Fisheries Licenses
- 8.11 Fishing Preserve License
- 8.12 Fur Breeder's License
- 8.13 Game Dealer's License
- 8.14 Licenses to Breed Domestic Game Animals
- 8.15 License to Possess and Sell Live Game
- 8.16 Permit to Import, Transport and/or Export under Section 184.1 (11-0511)
- 8.17 Permit to Raise and Sell Trout

8.18 Private Bass Hatchery Permit
8.19 Shooting Preserve Licenses
8.20 Taxidermy License
8.21 Permit - Article 15, (Protection of Water) - Dredge or Deposit Material in a Waterway
8.22 Permit - Article 15, (Protection of Water) - Stream Bed or Bank Disturbances
8.23 Permit - Article 24, (Freshwater Wetlands)

Hazardous Substances

8.24 Permit to Use Chemicals for the Control or Elimination of Aquatic Insects
8.25 Permit to Use Chemicals for the Control or Elimination of Aquatic Vegetation
8.26 Permit to Use Chemicals for the Control or Extermination of Undesirable Fish

Lands and Forest

8.27 Certificate of Environmental Safety (Liquid Natural Gas and Liquid Petroleum Gas)
8.28 Floating Object Permit
8.29 Marine Regatta Permit
8.30 Navigation Aid Permit

Marine Resources

8.31 Digger's Permit (Shellfish)
8.32 License of Menhaden Fishing Vessel
8.33 License for Non-Resident Food Fishing Vessel
8.34 Non-Resident Lobster Permit
8.35 Marine Hatchery and/or Off-Bottom Culture Shellfish Permits
8.36 Permits to Take Blue-Claw Crabs
8.37 Permit to Use Pond or Trap Net
8.38 Resident Commercial Lobster Permit
8.39 Shellfish Bed Permit
8.40 Shellfish Shipper's Permits
8.41 Special Permit to Take Surf Clams from Waters other than the Atlantic Ocean
8.42 Permit - Article 25, (Tidal Wetlands)

Mineral Resources

8.43 Mining Permit
8.44 Permit to Plug and Abandon (a non-commercial, oil, gas or solution mining well)
8.45 Underground Storage Permit (Gas)
8.46 Well Drilling Permit (Oil, Gas, and Solution Salt Mining)

Solid Wastes

8.47 Permit to Construct and/or Operate a Solid Waste Management Facility
8.48 Septic Tank Cleaner and Industrial Waste Collector Permit

Water Resources

8.49 Approval of Plans for Wastewater Disposal Systems

8.50 Certificate of Approval of Realty Subdivision Plans
8.51 Certificate of Compliance (Industrial Wastewater Treatment Facility)
8.52 Letters of Certification for Major Onshore Petroleum Facility Oil Spill Prevention and Control Plan
8.53 Permit - Article 36, (Construction in Flood Hazard Areas)
8.54 Permit for State Agency Activities for Development in Coastal Erosion Hazards Areas
8.55 State Pollutant Discharge Elimination System (SPDES) Permit
8.56 Approval - Drainage Improvement District
8.57 Approval - Water (Diversions for) Power
8.58 Approval of Well System and Permit to Operate
8.59 Permit - Article 15, (Protection of Water) - Dam
8.60 Permit - Article 15, Title 15 (Water Supply)
8.61 River Improvement District Approvals
8.62 River Regulatory District Approvals
8.63 Well Drilling Certificate of Registration
8.64 401 Water Quality Certification

9.00 Preparation and revision of Air Pollution State Implementation Plan.
10.00 Preparation and revision of Continuous Executive Program Plan.
11.00 Preparation and revision of Statewide Environmental Plan.
12.00 Protection of Natural and Man-made Beauty Program.
13.00 Urban Fisheries Program.
14.00 Urban Forestry Program.
15.00 Urban Wildlife Program.

ENVIRONMENTAL FACILITIES CORPORATION

1.00 Financing program for pollution control facilities for industrial firms and small businesses.

FACILITIES DEVELOPMENT CORPORATION

1.00 Facilities construction, rehabilitation, expansion, or demolition or the funding of such activities.

OFFICE OF GENERAL SERVICES

1.00 Administration of the Public Lands Law for acquisition and disposition of lands, grants of land, grants of easement and issuance of licenses for land underwater, including for residential docks over 5,000 square feet and all commercial docks, 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 of the Education Law regarding the 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.

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 Permit to Operate a Children's Overnight or Day Camp
- 2.11 Permit to Operate a Migrant Labor Camp
- 2.12 Permit to Operate as a Retail Frozen Dessert Manufacturer
- 2.13 Permit to Operate a Service Food Establishment
- 2.14 Permit to Operate a Temporary Residence/Mass Gathering
- 2.15 Permit to Operate or Maintain a Swimming Pool or Public Bathing Beach
- 2.16 Permit to Operate Sanitary Facilities for Realty Subdivisions
- 2.17 Shared Health Facility Registration Certificate

DIVISION OF HOUSING AND COMMUNITY RENEWAL AND ITS SUBSIDIARIES AND AFFILIATES

1.00 Facilities construction, rehabilitation, expansion, or demolition.

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.

HOUSING FINANCE AGENCY

1.00 Funding programs for the construction, rehabilitation, or expansion of facilities.

2.00 Affordable Housing Corporation

JOB DEVELOPMENT AUTHORITY
1.00 Financing assistance programs for commercial and industrial facilities.

MEDICAL CARE FACILITIES FINANCING AGENCY
1.00 Financing of medical care facilities.

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)

OFFICE OF MENTAL RETARDATION AND DEVELOPMENT 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

DIVISION OF MILITARY AND NAVAL AFFAIRS
1.00 Preparation and implementation of the State Disaster Preparedness Plan.

NATURAL HERITAGE TRUST
1.00 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.

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.
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
1.00 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.

THRUWAY AUTHORITY /CANAL CORPORATION/CANAL RECREATIONWAY COMMISSION (regional agency)
1.00 Acquisition, disposition, lease, grant of easement and other activities related to the management of land and other resources under the jurisdiction of the Thruway Authority, Canal Corporation, and Canal Recreationway Commission.
2.00 Facilities construction, rehabilitation, expansion, or demolition.
3.00 Permit and approval programs:
- 3.01 Advertising Device Permit
- 3.02 Approval to Transport Radioactive Waste
- 3.03 Occupancy Permit
- 3.04 Permits for use of Canal System lands and waters.

4.00 Statewide Canal Recreationway Plan

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 branchlines 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.

URBAN DEVELOPMENT CORPORATION and its subsidiaries and affiliates

1.00 Acquisition, disposition, lease, grant of easement or other activities related to the management of land under the jurisdiction of the Corporation.

2.00 Planning, development, financing, construction, major renovation or expansion of commercial, industrial, and civic facilities and the provision of technical assistance or financing for such activities, including, but not limited to, actions under its discretionary economic development programs such as the following:
- (a) Tax-Exempt Financing Program

(b) Lease Collateral Program
(c) Lease Financial Program
(d) Targeted Investment Program
(e) Industrial Buildings Recycling Program

3.00 Administration of special projects.
4.00 Administration of State-funded capital grant programs.

DIVISION OF YOUTH

1.00 Facilities construction, rehabilitation, expansion, or demolition or the funding or approval of such activities.

6.2 STATE PROGRAMS NECESSARY TO FURTHER THE LWRP

OFFICE OF GENERAL SERVICES

Prior to any development occurring in the water or on the immediate waterfront, OGS should be consulted for a determination of the State's interest in underwater or formerly underwater lands and for authorization to use and occupy these lands.

DEPARTMENT OF ECONOMIC DEVELOPMENT

1. Any action or provision of funds for the development or promotion of tourism related activities or development.
2. Any action involving the Seaway Trail.
3. Assistance is needed for the preparation of economic feasibility studies for the reuse of various deteriorated and unutilized structures, as well as for the siting or improvement of public facilities.

DEPARTMENT OF ENVIRONMENTAL CONSERVATION

1. Planning, development, construction, major renovation, or expansion of facilities in waterfront, including recreational improvement projects.
2. Advance assistance under the Small Communities and Rural Wastewater Treatment Grant Program and a subsequent construction grant subsidy.
3. Review of actions within National Register Districts pursuant to SEQR.
4. Investigation and remediation of brownfield sites through the Environmental Restoration Program and the Brownfield Cleanup Program.

DIVISION OF HOUSING AND COMMUNITY RENEWAL

1. Provision of funding under the Rural Preservation Company Program.
2. Approval of funding for Rural Area Revitalization Program projects.

JOB DEVELOPMENT AUTHORITY

1. Provision of low interest mortgage loans to local non-profit development corporations to finance commercial and industrial facilities.

OFFICE OF PARKS, RECREATION AND HISTORIC PRESERVATION

1. Planning, development, construction, major renovation or expansion of recreational facilities or the provision of funding for such facilities.

2. Provision of funding for State and local activities from the Land and Water Conservation Fund.
3. Planning, development, implementation or the provision of funding for recreation services programs.
4. Certification of properties within districts listed on the National Register of Historic Places.
5. Provision of funding for State and local historic preservation activities.
6. Review of Type I actions affecting a property listed on the National Register of Historic Places.
7. Activities under the Urban Cultural Park program.

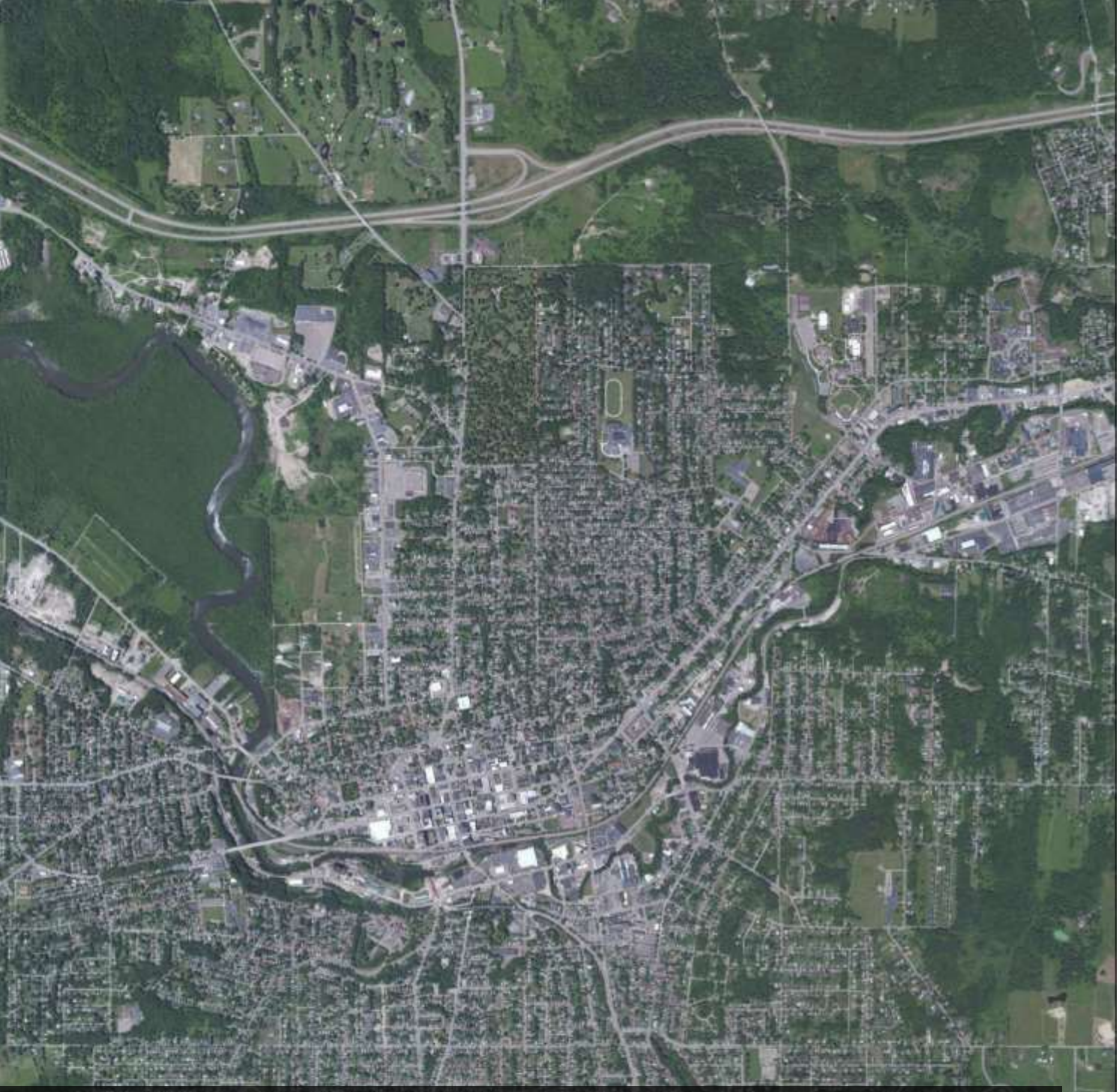
DEPARTMENT OF STATE

1. Provision of funding for the implementation of an approved LWRP.
2. Provision of funding under the Community Services Block Grant program.

DEPARTMENT OF TRANSPORTATION

1. Assistance for street repairs through the Consolidated Highway Improvements Program.

This page intentionally left blank.



Section VII
Local Commitment and Consultation

SECTION VII – LOCAL COMMITMENT AND CONSULTATION

7.1 LOCAL COMMITMENT

In the spring of 2012, the City of Jamestown established a Steering Committee (the Waterfront Advisory Committee) to oversee the development of the City's Local Waterfront Revitalization Program. The Waterfront Advisory Committee and project responsibility was largely undertaken through the City's Department of Development. Representatives from the Department served as the primary contacts during the project development and played an integral leadership role, including the organization of the Waterfront Advisory Committee. The selected Waterfront Advisory Committee membership reflects a range of expertise, interests and experience, including public works, environmental, economic development, private landowners, and the local business community.

With respect to preparation of the draft Local Waterfront Revitalization Program, the Waterfront Advisory Committee met on a regular basis with the designated consultant to review the various sections of the LWRP Report and offer comments and suggestions. The City offered the financial resources needed to secure the consultant selected to complete the LWRP Report, as well as provided considerable time for the review of the document. The City also attended Steering Committee meetings, focus group sessions and public open houses, and staff resources were utilized to provide all necessary information needed for the document. In addition to the regular Committee meetings, the City maintained contact with their designated representative from the NYS Department of State throughout the planning process, in order to maintain open communications regarding the progress of the draft document.

The City is dedicated to the development and improvement of their waterfront and is currently involved in enhancement efforts in addition to the LWRP. Recent efforts undertaken within the City include the continued expansion of the Riverwalk and many other infrastructure improvements.

7.2 CONSULTATION

LOCAL WATERFRONT REVITALIZATION PROGRAM PROMOTION

From the start of the Jamestown LWRP project, the Waterfront Advisory Committee worked to ensure that the project was well publicized. A Community Participation & Visioning Plan was developed for the project to create awareness of the project,

engage public participation, and to communicate and educate the public about the benefits of the Study. As part of these efforts, press releases were created for public meetings and appropriate media were notified. Local media including the Jamestown Post Journal, WRFA 107.9 FM Radio for the Arts, and YNN Cable 8 News attended meetings and provided stories on the project.

To complement and support the Community Participation & Visioning Plan, a project website, www.ChadakoinRevitalization.com, was created. The website provided information on the project so residents and businesses could review meeting minutes, agendas, public presentations, maps, LWRP information, steering committee members and the latest press releases and news stories regarding the Jamestown LWRP. Contact information was also provided on the website as well as opportunities for public input.

PUBLIC MEETINGS

Project public meetings were held on April 24, 2012 and October 2, 2012. The first meeting was held to describe the project to the community and to begin to obtain input on the Study. The purpose of this meeting was to introduce the public to the project, the State's Local Waterfront Revitalization Program, and inform those in attendance of the various methods by which the community could obtain project information and provide input. The October 2, 2012 meeting relayed the inventory results, the information obtained during stakeholder engagement, and the preliminary findings of the various project analyses. Each meeting also included the acquisition of public input through various question and answer methods.

The meetings were held at the Jackson Center on East Fourth Street and were advertised to the public through the local newspaper, mass e-mailings, fliers, and the project's website. Attendance at the first meeting exceeded 75 people while the second meeting was attended by more than 25 people.



Public Meeting – April 24, 2012.

STEERING COMMITTEE MEETINGS

Waterfront Advisory Committee (Steering Committee) meetings were held periodically during the course of the project, starting in February 2012. The meetings were held at the Lillian Vitanza Ney Renaissance Center and were designed to inform members of the progress of the Study and to obtain input on the direction of the project, information regarding the Study Area and local priorities, and feedback on the findings. The Waterfront Advisory Committee consisted of approximately 15 individuals representing the City of Jamestown, the Department of Public Works, the Board of Public Utilities, the Jamestown Renaissance Corporation, the Chautauqua Watershed Conservancy, Jamestown Community College, the Gebbie Foundation, local businesses and property owners, and partners such as the Department of State and the Department of Environmental Conservation. Key issues that the Waterfront Advisory Committee reviewed and provided guidance on included the creation of the Study Area boundaries; selection of strategic sites; and identification of proposed projects.



Waterfront Advisory Committee Meeting – April 25, 2012.

STAKEHOLDER ENGAGEMENT

An initial series of stakeholder interviews were conducted during the early phases of the LWRP Study on April 24 and 25, 2012. Stakeholders were presented with a basic description of the project and then had the opportunity to ask questions and offer comments. Each stakeholder generally outlined their own and their agency's/organization's role within the community and then discussed strengths, weaknesses, opportunities, and threats within the City of Jamestown Waterfront Revitalization Area. Land uses and key development sites were also identified.

The initial series of stakeholder interviews was a great success and 17 agencies/organizations were represented. Participants included the Mayor of

Jamestown and representatives of the Jamestown Urban Renewal Agency, the Jamestown Department of Public Works, the Board of Public Utilities, the Jamestown Renaissance Corporation, Jamestown Community College, the Chautauqua County IDA, the Chautauqua County Department of Planning and Economic Development, the Chautauqua County Health Network, the Chautauqua Watershed Conservancy, the New York State Department of Environmental Conservation, the Gebbie Foundation, the Health Care Action Team, the Lucy Desi Center for Comedy, and several local development corporations and business owners.

Additional stakeholder interviews were held throughout the project as the need arose. Participants at these later interviews included representatives of the City Council, the Downtown Jamestown Development Corporation, the Resource Center, the Chautauqua County Department of Planning and Economic Development, the New York Business Development Corporation, and the WNYP railroad.

APPENDICES

Appendix A: Local Waterfront Revitalization Program Consistency Review Law and Waterfront Assessment Form

Appendix B: Guidelines for Notification and Review

Appendix C: Determination of Significance and Compliance with SEQR

Appendix D: Waterfront Development Overlay District Zoning Regulations

Appendix A

Chapter XXX. Local Waterfront Revitalization Program Consistency Review Law and Waterfront Assessment Form

[HISTORY: Adopted by the City Council of the City of Jamestown as indicated in article histories. Amendments noted where applicable.]

Attachments: Waterfront Assessment Form

GENERAL REFERENCES

Chapter 57 – Parks, Recreation and Conservation Commission
Chapter 61 – Planning Commission
Chapter 68 – Public Works
Chapter 80 – Strategic Planning and Partnerships Commission
Chapter 135 – Environmental Quality Review
Chapter 145 – Flood Damage Prevention
Chapter 149 – Freshwater Wetlands
Chapter 193 – Parks and Public Lands
Chapter 215 – Property Rehabilitation and Conservation
Chapter 240 – Sewers
Chapter 252 – Streets and Sidewalks
Chapter 260 – Subdivision of Land
Chapter 280 – Trees and Shrubs
Chapter 300 - Zoning

Article I. Local Waterfront Revitalization Program Consistency Review Law
[Adopted DATE by Law Number]

§ XXX-1. Title.
This article will be known as the "City of Jamestown Local Waterfront Revitalization Program (LWRP) Consistency Review Law."

§ XXX-2. Authority and purpose.
A. This article 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 article is to provide a framework for the agencies of the City of Jamestown (City) to incorporate the policies and purposes contained in the City of Jamestown Local Waterfront Revitalization Program (LWRP) when reviewing applications for actions or direct agency actions located within the waterfront area; and to ensure that such actions and direct actions undertaken by City agencies are consistent with the LWRP policies and purposes.

C. It is the intention of the City that the preservation, enhancement and utilization of the natural and manmade resources of the waterfront area of the City occur in a coordinated and comprehensive manner to ensure a proper balance between protection of natural resources and the need to accommodate growth and economic development. Accordingly, this article is intended to achieve such a balance, permitting the beneficial use of waterfront resources while preventing: loss and degradation of living waterfront resources and wildlife; adverse impacts to historic structures; diminution of open space areas or public access to the waterfront; disruption of natural waterfront processes; impairment of scenic, cultural 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 article shall only apply while there is in existence a City of Jamestown Local Waterfront Revitalization Program that has been adopted in accordance with Article 42 of the Executive Law of the State of New York.

§ XXX-3. Definitions.
As used in this article, the following terms shall have the meanings indicated:

ACTION
Includes all the following, except minor actions:

A. Projects or physical activities, such as construction or any other activities that may affect natural, manmade or other resources in the waterfront area or the environment by changing the use, appearance or condition of any resource or structure, that:

(1) Are directly undertaken by an agency; or
(2) Involve funding by an agency; or
(3) Require one or more new or modified approvals, permits, or review from an agency or agencies.

B. Agency planning and policymaking activities that may affect the environment and commit the agency to a definite course of future decisions;

C. 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

D. Any combination of the above.

AGENCY
Any Council, agency, department, office, other body, or officer of the City of Jamestown.

CODE ENFORCEMENT OFFICER
The Building Inspector and/or Code Enforcement Officer of the City of Jamestown.

CONSISTENT
The action will fully comply with the LWRP policy standards, conditions and objectives and, whenever practicable, will advance one or more of them.

DIRECT ACTIONS
Actions planned and proposed for implementation by an applicant or agency, such as, but not limited to, a capital project, rule making, procedure making and policy making.

ENVIRONMENT
The physical conditions that will be affected by a proposed action, including land, air, water, minerals, flora, fauna, noise, resources of agricultural, archeological, historic or aesthetic significance, existing patterns of population concentration, distribution or growth, existing community or neighborhood character, and human health.

Environmental Assessment Form (EAF)
A form used in determining the environmental significance or insignificance or actions in accordance with the State Environmental Quality Review Act (SEQR).

Environmental Impact Statement (EIS)
Means a written "draft" or "final" document prepared in accordance with sections 617.9 and 617.10 of 6NYCRR. An EIS provides a means for agencies, project sponsors and the public to systematically consider significant adverse environmental impacts, alternatives and mitigation. An EIS facilitates the weighing of social, economic and environmental factors early in the planning and decision-making process. A draft EIS is the initial statement prepared by either the project sponsor or the lead agency and circulated for review and comment. An EIS may also be a "generic" in accordance with section 617.10, of 6NYCRR, a "supplemental" in accordance with paragraph 617.9(a)(7) of 6NYCRR or a "federal" document in accordance with section 617.15 of 6NYCRR.

LOCAL WATERFRONT REVITALIZATION PROGRAM (LWRP)
The Local Waterfront Revitalization Program of the City of Jamestown, approved by the Secretary of State pursuant to the Waterfront Revitalization of Coastal Areas and Inland Waterways Act (Executive Law Article 42), a copy of which is on file in the Office of the City Clerk of the City of Jamestown.

MINOR ACTION
Includes the following actions, which are not subject to review under this chapter:

A. Repaving or widening of existing paved highways not involving the addition of new travel lanes;

B. Street openings and right-of-way openings for the purpose of repair or maintenance of existing utility facilities;

C. Maintenance of existing landscaping or natural growth, except where threatened or endangered species of plants or animals are affected, or within Significant Coastal Fish and Wildlife Habitat areas;

D. Granting of individual setback and lot line variances, except in relation to a regulated natural feature or a bulkhead or other shoreline erosion protection structure;

E. Minor temporary uses of land having negligible or no permanent impact on waterfront resources or the environment;

F. Installation of traffic control devices on existing streets, roads and highways;

G. Mapping of existing roads, streets, highways, natural resources, land uses and ownership patterns;

H. 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 action;

I. Official acts of a ministerial nature involving no exercise of discretion, including building permits where issuance is predicated solely on the applicant's compliance or noncompliance with the relevant local building code;
J. Routine or continuing agency administration and management, not including new programs or major reordering of priorities that may affect the environment;
K. 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;
L. Collective bargaining activities;
M. Investments by or on behalf of agencies or pension or retirement systems, or refinancing existing debt;
N. Inspections and licensing activities relating to the qualifications of individuals or businesses to engage in their business or profession;
O. Purchase or sale of furnishings, equipment or supplies, including surplus government property, other than the following: land, radioactive material, pesticides, herbicides, storage of road de-icing substances, or other hazardous materials;
P. Adoption of regulations, policies, procedures and local legislative decisions in furtherance of any action on this list;
Q. 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 article have been fulfilled;
R. 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;
S. Adoption of a moratorium on land development or construction;
T. Interpreting an existing code, rule or regulation;
U. Designation of local landmarks or their inclusion within historic districts;
V. 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 article;
W. Local legislative decisions such as rezoning where the City of Jamestown determines the action will not be approved.

WATERFRONT AREA
The Waterfront Revitalization Area as delineated in the City of Jamestown Local Waterfront Revitalization Program (LWRP).

WATERFRONT ASSESSMENT FORM (WAF)
The form used by an agency to assist in determining the consistency of an action with the Local Waterfront Revitalization Program.

§ XXX-4. Management and coordination of LWRP.

A. The City of Jamestown Planning Commission (the "Planning Commission") shall be responsible for coordinating review of actions in the City's waterfront area for consistency with the LWRP,

and will advise, assist and make consistency recommendations to other City agencies in the implementation of the LWRP and its policies and projects, including physical, legislative, regulatory, administrative and other actions included in the program.

B. The Planning Commission shall coordinate with State agencies regarding consistency review of their actions.

C. The Planning Commission shall assist the City Council in making applications for funding from state, federal, or other sources to finance projects under the LWRP.

D. The Planning Commission shall perform other functions regarding the waterfront area and direct such actions or projects as the City Council may deem appropriate, to implement the LWRP.

§ XXX-5. Review of actions.

A. Whenever a proposed action is located within the City's waterfront area, each City agency shall, prior to approving, funding or undertaking the action, make a determination that it is consistent with the LWRP policy standards summarized in Subsection I of this section. No action in the waterfront area shall be approved, funded or undertaken by that agency without such a determination of consistency.

B. Whenever a City 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 area, the agency shall refer a copy of the completed WAF to the Planning Commission within 10 days of its receipt. Prior to making its consistency determination, the agency shall consider the recommendation of the Planning Commission with reference to the consistency of the proposed action.

C. After referral from an agency, the Planning Commission shall consider whether the proposed action is consistent with the LWRP policy standards set forth in Subsection I of this section. The Planning Commission shall require the applicant to submit all completed applications, WAFs, environmental assessment form (EAFs), and any other information deemed necessary to its consistency recommendation.

(1) The Planning Commission shall render its written recommendation to the agency within 30 days following referral of the WAF from the agency, unless extended by mutual agreement of the Planning Commission, the agency, and the applicant or, in the case of a direct action, the agency. The Planning Commission's recommendation shall indicate whether the proposed action is consistent with or inconsistent with one or more of the LWRP policy standards and shall elaborate in writing the basis for its opinion. The Planning Commission shall, along with a 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 or to greater advance them. In the event that the Planning Commission's recommendation is not forthcoming within the specified time, the agency shall make its consistency decision without the benefit of the Planning Commission's recommendation.

(2) The City shall maintain a file for each action made the subject of a consistency determination, including any recommendations received from the Planning Commission. Such file shall be kept in the office of the Department of Development and made available for public inspection upon request.

D. If an action requires approval of more than one City agency, decision-making will be coordinated between the agencies to determine which agency will conduct the consistency review, 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 City Council shall designate the consistency review agency.

E. Upon receipt of the Planning Commission's recommendation, the agency shall consider whether the proposed action is consistent with the LWRP policy standards summarized in Subsection I of this section. The agency shall consider the Planning Commission's consistency recommendation, the WAF, and other relevant information in making its written determination of consistency. No approval or decision shall be issued for an action in the waterfront area without a written determination of consistency having first been rendered by a City agency.

F. 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 Planning Commission 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 Environmental Impact Statement (EIS) is being prepared or required, the draft EIS must identify applicable LWRP policies standards in Subsection I of this section, and include a discussion of the effects of the proposed action on such policy standards.

H. In the event the Planning Commission'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 and state the manner and extent to which the action is consistent with the LWRP policy standards.

I. Actions to be undertaken within the waterfront area shall be evaluated for consistency in accordance with the following summary of LWRP policy standards, which are derived from and further explained and described in Section 3 of the City of Jamestown LWRP, a copy of which is on file in the City Department of Development office and available for inspection during normal business hours. Agencies which undertake direct actions must also consult with Section IV in making their consistency determination. The action must be consistent with the policies to:

(1) Foster a pattern of development within the City of Jamestown’s Waterfront Revitalization Area that enhances community character, preserves open space, makes efficient use of infrastructure, makes beneficial use of a waterfront location, and minimizes adverse effects of development. (LWRP Policy 1).

(2) Preserve historic resources within the City of Jamestown’s Waterfront Revitalization Area (LWRP Policy 2).

(3) Enhance visual quality and protect scenic resources throughout the City of Jamestown’s Waterfront Revitalization Area (LWRP Policy 3).

(4) Minimize loss of life, structures, and natural resources from flooding and erosion (LWRP Policy 4).

(5) Protect and improve water resources within the City of Jamestown's Waterfront Revitalization Area (LWRP Policy 5).

(6) Protect and restore ecosystem quality and function within the City of Jamestown's Waterfront Revitalization Area (LWRP Policy 6).

(7) Protect and improve air quality in the City of Jamestown's Waterfront Revitalization Area (LWRP Policy 7).

(8) Minimize environmental degradation in the City of Jamestown's Waterfront Revitalization Area from solid waste and hazardous substances and wastes (LWRP Policy 8).

(9) Provide for public access to, and recreational use of, the Chadakoin River, public lands, and public resources within the City of Jamestown's Waterfront Revitalization Area (LWRP Policy 9).

(10) Protect the City of Jamestown's water-dependent uses and promote siting of new water-dependent uses in suitable locations (LWRP Policy 10).

(11) Promote sustainable use of living freshwater resources within the City of Jamestown's Waterfront Revitalization Area (LWRP Policy 11).

(12) Protect agricultural lands within the City of Jamestown's Waterfront Revitalization Area (LWRP Policy 12).

(13) Promote appropriate use and development of energy and mineral resources within the City of Jamestown's Waterfront Revitalization Area (LWRP Policy 13).

§ XXX-6. Enforcement.

No action within the City's waterfront area which is subject to review under this article shall proceed until a written determination has been issued from a City agency that the action is consistent with the City's LWRP policy standards. In the event that an activity is being performed in violation of this article or any conditions imposed thereby, the City Code Enforcement Officer shall issue a stop-work order and all work must immediately cease. No further work or activity shall be undertaken on the project so long as a stop-work order is in effect. The City Attorney, Code Enforcement Officer and Police Department shall be responsible for enforcing this article.

§ XXX-7. Penalties for offenses.

A. A person who violates any of the provisions of, or who fails to comply with any condition imposed by, this article shall have committed a violation punishable by a fine not exceeding $350 for a conviction of a first offense and punishable by a fine of $2,000 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 City Attorney is authorized and directed to institute any and all actions and proceedings necessary to enforce this article. Any civil penalty shall be in addition to and not in lieu of any criminal prosecution and penalty. The City may also enforce this article by injunction or other civil proceeding.

§ XXX-8. Applicability.
This article shall supersede and repeal any previous local regulations regarding consistency with LWRP. This article 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.

§ XXX-9. Severability.
The provisions of this article are severable. If any provision of this article is found invalid, such finding shall not affect the validity of this article as a whole or any part or provision hereof other than the provision so found to be invalid.

XXX Attachment 1
City of Jamestown
Waterfront Assessment Form

A. INSTRUCTIONS (Please print or type all answers)

1. Applicants, or in the case of direct actions, City of Jamestown agencies, shall complete this WAF for proposed actions which are subject to the consistency review law. This assessment is intended to supplement other information used by the designated City agency in making a determination of consistency with the City of Jamestown Local Waterfront Revitalization Program.

2. Before answering the questions in Section C, the preparer of this form should review the policies and explanations of policy contained in the Local Waterfront Revitalization Program (LWRP), a copy of which is on file in the City Department of Development office. A proposed action should be evaluated as to its significant beneficial and adverse effects upon the waterfront area.

3. If any questions in Section C on this form are answered "yes", then the proposed action may affect the achievement of the LWRP policy standards contained in the consistency review law. Thus, the action should be analyzed in more detail and, if necessary, modified prior to making a determination regarding its consistency with the LWRP policy standards. If an action cannot be certified as consistent with the LWRP policy standards, it shall not be undertaken.

4 This form should be filled out by the applicant and submitted to the City of Jamestown Department of Development.

B. DESCRIPTION OF SITE AND PROPOSED ACTION

1. Type of City of Jamestown agency action (check appropriate response):
   (a) Directly undertaken (e.g. capital construction, planning activity, agency regulation, land transaction) _____
   (b) Financial assistance (e.g. grant, loan, subsidy) _____
   (c) Permit, approval, license, certification _____
   (d) Agency undertaking action _____
2. Describe nature and extent of action: _____
_____
_____
_____
3. Location of action (Street or Site Description. Please include the parcel(s) tax map number(s)):_____
_____
4. Size of site: _____
5. Present land use: _____
6. Present zoning classification: _____
7. Describe any unique or unusual landforms on the project site (i.e. bluffs, wetlands, ground depressions, other geological formations): _____
_____
_____
_____

_____
8. Percentage of site which contains slopes of 15% or greater: _____
9. Streams, lakes, ponds or wetlands existing within or continuous to the project area?
(a) Name _____
(b) Size (in acres) _____
10. Is the property serviced by public water? Yes _____ No _____
11. Is the property serviced by public sewer? Yes _____ No _____
12. If an application for the proposed action has been filed with the City of Jamestown agency, the following information shall be provided:
(a) Name of applicant: _____
(b) Mailing address: _____
(c) Telephone number: Area Code ( ) _____
(d) Application number, if any: _____
(e) Property tax number: _____
(Please attach copy of tax map with parcel highlighted)
13. 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? _____
_____

C WATERFRONT ASSESSMENT (Check either "Yes" or "No" for each of the following questions)

1. Will the proposed action be located in, or contiguous to, or have a potentially adverse effect upon any of the resource areas identified on the waterfront area map? ___ ___
(a) Significant fish or wildlife habitats? ___ ___
(b) Scenic resources of local or statewide significance? ___ ___
(c) Important agricultural lands? ___ ___
(d) Natural protective features in an erosion hazard area ___ ___
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.
2. Will the proposed action have a significant effect upon: YES NO
(a) Commercial or recreational use of fish and wildlife resources? ___ ___
(b) Scenic quality of the waterfront environment? ___ ___
(c) Development of future, or existing water dependent uses? ___ ___
(d) Stability of the shoreline? ___ ___
(e) Surface or groundwater quality? ___ ___
(f) Existing or potential public recreation opportunities? ____ ___
(g) Structures, sites or districts of historic, archeological or cultural significance to the City of Jamestown State or nation? ___ ___
3. Will the proposed action involve or result in any of the following: YES NO
(a) Physical alteration of land along the shoreline, land under water or watreways? ___ ___
(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 waterfront revitalization area? ___ ___
(d) Energy facility not subject to Article VII or VIII of the Public Service Law? ___ ___
(e) Mining, excavation, filling or dredging in waterfront waters? ___ ___
(f) Reduction of existing or potential public access

to or along the shore? ___ ___

(g) Sale or change in use of publicly-owned lands located on the shoreline or underwater? ___ ___

(h) Development within a designated floor or erosion hazard area? ___ ___

(i) Development on a beach, dune, barrier island or other natural feature that provides protection against flooding or erosion? ___ ___

(j) Construction or reconstruction of erosion protective structures? ___ ___

(k) Diminished surface or groundwater quality? ___ ___

(l) Removal of ground cover from the site? ___ ___

4. PROJECT

(a) If a project is to be located adjacent to shore: YES NO

(1) Will water-related recreation be provided? ___ ___

(2) Will public access to the foreshore be provided? ___ ___

(3) Does the project require a waterfront site? ___ ___

(4) Will it supplant a recreational or maritime use? ___ ___

(5) Do essential public services and facilities presently exist at or near the site? ___ ___

(6) Is it located in a flood prone area? ___ ___

(7) Is it located in an area of high erosion? ___ ___

(b) If the project site is publicly owned: YES NO

(1) Will the project protect, maintain and/or increase the level and types of public access to water-related recreation resources and facilities? ___ ___

(2) If located in the foreshore, will access to those and adjacent lands be provided? ___ ___

(3) Will it involve the siting and construction of major energy facilities? ___ ___

(4) Will it involve the discharge of effluents from major steam electric generating and industrial facilities into waterfront facilities? ___ ___

(c) Is the project site presently used by the community YES NO neighborhood as an open space or recreation area? ___ ___

(d) Does the present site offer or include scenic views or vistas known to be important to the community? ___ ___

(e) Is the project site presently used for commercial fishing or fish processing? ___ ___

(f) Will the surface area of any waterways or wetland areas be increased or decreased by the proposal? ___ ___

(g) Does any mature forest (over 100 years old) or other locally important vegetation exist on this site which will be removed by the project? ___ ___

(h) Will the project involve any waste discharges into waterways? ___ ___

(i) Does the project involve surface or subsurface liquid waste disposal? ___ ___

(j) Does the project involve transport, storage, treatment or disposal of solid waste or hazardous materials? ___ ___

(k) Does the project involve shipment or storage of petroleum products? ___ ___

(l) Does the project involve discharge of toxics, hazardous substances or other pollutants into waterways? ___ ___

(m) Does the project involve or change existing ice management practices? ___ ___

(n) Will the project affect any area designated as a tidal or freshwater wetland? ___ ___

(o) Will the project alter drainage flow, patterns or surface water runoff on or from the site? ___ ___

(p) Will best management practices be utilized to control storm water runoff into waterways? ___ ___

(q) Will the project utilize or affect the quality or quantity of sole source or surface water supplies? ___ ___

(r) Will the project cause emissions which exceed federal or state air quality standards or generate significant amounts of nitrates or sulfates? ___ ___

D. REMARKS OR ADDITIONAL INFORMATION (Add any additional sheets necessary to complete this form)

_____
_____
_____
_____

Preparer's Name (Please print) :_____
Title: _____
Agency: _____
Telephone Number: (_____)_____
Date: _____

If assistance or further information is needed to complete this form, please contact the Jamestown Department of Development at (716) 483-7541.

Appendix B - Guidelines for Notification and Review

New York State Coastal Management Program - Guidelines for Notification and Review of State Agency Actions Where Local Waterfront Revitalization Programs are in Effect

I. PURPOSES OF GUIDELINES

A. The Waterfront Revitalization of Coastal Areas and Inland Waterways 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 approved Local Waterfront Revitalization Programs (LWRPs). 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 situs local government whenever an identified action will occur within an area covered by an approved LWRP. These guidelines describe a process for complying with this notification requirement. They also provide procedures to assist local governments in carrying out their review responsibilities in a timely manner.

C. The Secretary of State is required by the Act to confer with state agencies and local governments when notified by a local government that a proposed state agency action may conflict with the policies and purposes of its approved LWRP. These guidelines establish a procedure for resolving such conflicts.

II. DEFINITIONS

A. Action means:
   1. A "Type 1" or "Unlisted" action as defined by the State Environmental Quality Review Act (SEQRA);
   2. Occurring within the boundaries of an approved LWRP; 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 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 an approved 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 an approved 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. Local Waterfront Revitalization Program or LWRP means a program prepared and adopted by a local government 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.

III. NOTIFICATION PROCEDURE

A. When a state agency is considering an action as described in II above, the state agency shall notify the affected local government.

B. Notification of a proposed action by a state agency:
   1. Shall fully describe the nature and location of the action;
   2. Shall be accomplished by use of either the State Clearinghouse, other existing state agency notification procedures, or through an alternative procedure agreed upon by the state agency and local government;
   3. Should be provided to the local official identified in the LWRP of the situs local government 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 with the local LWRP official should be considered adequate notification of a proposed action.)

C. If the proposed action will require the preparation of a draft environmental impact statement, the filing of this draft document with the chief executive officer can serve as the state agency's notification to the situs local government.

IV. LOCAL GOVERNMENT REVIEW PROCEDURE

A. Upon receipt of notification from a state agency, the situs local government will be responsible for evaluating a proposed action against the policies and purposes of its approved LWRP. Upon request of the local official identified in the LWRP, the state agency should promptly provide the situs local government with whatever additional information is available which will assist the situs local government to evaluate the proposed action.

B. If the situs local government cannot identify any conflicts between the proposed action and the applicable policies and purposes of its approved LWRP, it should inform the state agency in writing of its finding. Upon receipt of the local government's finding, the state agency may proceed with its consideration of the proposed action in accordance with 19 NYCRR Part 600.

C. If the situs local government does not notify the state agency in writing of its 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 municipality's approved LWRP.

D. If the situs local government notifies the state agency in writing that the proposed action does conflict with the policies and/or purposes of its approved 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 below shall apply. The local government 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 local government 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 a local government 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 a local government that a proposed action conflicts with its approved LWRP, the state agency should contact the local LWRP official to discuss the content of the identified conflicts and the means for resolving them. A meeting of state agency and local government 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 local government.
    2. If the discussion between the situs local government and the state agency results in the resolution of the identified conflicts, then, within seven days of the discussion, the situs local government 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 situs local government 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 within 15 days following the discussion between the situs local government 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 situs local government.
    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 NYS Department of State (DOS) & LWRP Consistency Review of Federal Agency Actions

I. DIRECT ACTIONS

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 direct action to the program coordinator (of an approved LWRP) 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 action.

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 municipality has "no opinion" on the consistency of the proposed direct federal agency action with local coastal policies.

D. If DOS does not fully concur with and/or has any questions on the comments and recommendations submitted by the municipality, DOS will contact the municipality to discuss any differences of opinion or questions prior to agreeing or disagreeing with the federal agency's consistency determination on the proposed direct action.

E. A copy of DOS' "agreement" or "disagreement" letter to the federal agency will be forwarded to the local program coordinator.

II. PERMIT AND LICENSE ACTIONS

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 program coordinator than will identify the Department's principal reviewer for the proposed action.

B. Within thirty (30) days of receiving such information, the program 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 action with local coastal policies.

C. When DOS and the program 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 program coordinator upon receipt.

D. Within thirty (30) days of receiving the requested additional information or discussing possible problems of a proposed action with the principal reviewer for DOS, whichever is later, the program coordinator will notify DOS of the reasons why a proposed action may be inconsistent or consistent with local coastal policies.

E. After the notification, the program coordinator will submit the municipality's written comments and recommendations on a proposed permit action 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 municipality has "no opinion" on the consistency of the proposed action with local coastal policies.

F. If DOS does not fully concur with and/or has any questions on the comments and recommendations submitted by the municipality on a proposed permit action, DOS will contact the program coordinator to discuss any differences of opinion prior to issuing a letter of "concurrence" or "objection" letter to the applicant.

G. A copy of DOS' "concurrence" or "objective" letter to the applicant will be forwarded to the program coordinator.

III. FINANCIAL ASSISTANCE ACTIONS

A. Upon receiving notification of a proposed federal financial assistance action, DOS will request information on the action 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 program coordinator. A copy of this letter will be forwarded to the coordinator and will serve as notification that the proposed action may be subject to review.

B. DOS will acknowledge the receipt of the requested information and provide a copy of this acknowledgement to the program coordinator. DOS may, at this time, request the applicant to submit additional information for review purposes.

C. The review period will conclude thirty (30) 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 financial assistance actions.

D. The program coordinator must submit the municipality's comments and recommendations on the proposed action to DOS within twenty days (or other time agreed to by DOS and the program coordinator) from the start of the review period. If comments and recommendations are not received within this period, DOS will presume that the municipality has "no opinion" on the consistency of the proposed financial assistance action with local coastal policies.

E. If DOS does not fully concur with and/or has any questions on the comments and recommendations submitted by the municipality, DOS will contact the program 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 program coordinator.

Full Environmental Assessment Form
Part 1 - Project and Setting

Instructions for Completing Part 1

Part 1 is to be completed by the applicant or project sponsor. Responses become part of the application for approval or funding, are subject to public review, and may be subject to further verification.

Complete Part 1 based on information currently available. If additional research or investigation would be needed to fully respond to any item, please answer as thoroughly as possible based on current information; indicate whether missing information does not exist, or is not reasonably available to the sponsor; and, when possible, generally describe work or studies which would be necessary to update or fully develop that information.

Applicants/sponsors must complete all items in Sections A & B. In Sections C, D & E, most items contain an initial question that must be answered either "Yes" or "No". If the answer to the initial question is "Yes", complete the sub-questions that follow. If the answer to the initial question is "No", proceed to the next question. Section F allows the project sponsor to identify and attach any additional information. Section G requires the name and signature of the project sponsor to verify that the information contained in Part 1is accurate and complete.

A. Project and Sponsor Information.

Name of Action or Project: City of Jamestown Local Waterfront Revitalization Program		
Project Location (describe, and attach a general location map): City of Jamestown, NY. See attached USGS map		
Brief Description of Proposed Action (include purpose or need): Adoption of a local waterfront revitalization plan (LWRP) and implementing regulations including a zoning overlay and waterfront consistency review law. The LWRP outlines local policies, proposes new land and water uses and land use strategies to guide development activities in the City of Jamestown. Included are specific public and private actions to improve public access to the waterfront, upgrade public infrastructure, revitalize underutilized sites, increase recreational access to the water, protect water quality and natural resources.		
Name of Applicant/Sponsor: City of Jamestown/Vince DeJoy, Director of Development	Telephone: 716-483-7141 E-Mail: dejoy@cityofjamestownny.com	
Address: City Hall, 200 East Third Street		
City/PO: Jamestown	State: NY	Zip Code: 14701
Project Contact (if not same as sponsor; give name and title/role): William S. Rice, Principal Planner	Telephone: 716-483-7657 E-Mail: rice@cityofjamestownny.com	
Address: City Hall, 200 East Third Street		
City/PO: Jamestown	State: Ny	Zip Code: 14701
Property Owner (if not same as sponsor):	Telephone: E-Mail:	
Address:		
City/PO:	State:	Zip Code:

B. Government Approvals

B. Government Approvals, Funding, or Sponsorship. ("Funding" includes grants, loans, tax relief, and any other forms of financial assistance.)

Government Entity	If Yes: Identify Agency and Approval(s) Required	Application Date (Actual or projected)
a. City Council, Town Board, or Village Board of Trustees ☑Yes ☐No	City Council – LWRP Adoption, Zoning Amendment, consistency law approval	September 2016
b. City, Town or Village Planning Board or Commission ☐Yes ☑No		
c. City Council, Town or Village Zoning Board of Appeals ☐Yes ☑No		
d. Other local agencies ☐Yes ☑No		
e. County agencies ☑Yes ☐No	Chautauqua County Planning Department – Zoning amendments	September 2016
f. Regional agencies ☐Yes ☑No		
g. State agencies ☑Yes ☐No	NYS DOS – LWRP Review and Approval	
h. Federal agencies ☐Yes ☑No		

i. Coastal Resources.

i. Is the project site within a Coastal Area, or the waterfront area of a Designated Inland Waterway? ☑Yes ☐No

ii. Is the project site located in a community with an approved Local Waterfront Revitalization Program? ☐Yes ☑No

iii. Is the project site within a Coastal Erosion Hazard Area? ☐Yes ☑No

C. Planning and Zoning

C.1. Planning and zoning actions.

Will administrative or legislative adoption, or amendment of a plan, local law, ordinance, rule or regulation be the only approval(s) which must be granted to enable the proposed action to proceed? ☑Yes ☐No

- **If Yes,** complete sections C, F and G.
- **If No,** proceed to question C.2 and complete all remaining sections and questions in Part 1

C.2. Adopted land use plans.

a. Do any municipally- adopted (city, town, village or county) comprehensive land use plan(s) include the site where the proposed action would be located? ☑Yes ☐No

If Yes, does the comprehensive plan include specific recommendations for the site where the proposed action would be located? ☐Yes ☑No

b. Is the site of the proposed action within any local or regional special planning district (for example: Greenway Brownfield Opportunity Area (BOA); designated State or Federal heritage area; watershed management plan; or other?) ☑Yes ☐No

If Yes, identify the plan(s):

Site is partially contiguous with two NYS Brownfield Opportunity Areas in the City of Jamestown.

c. Is the proposed action located wholly or partially within an area listed in an adopted municipal open space plan, or an adopted municipal farmland protection plan? ☐Yes ☑No

If Yes, identify the plan(s):

C.3. Zoning

a. Is the site of the proposed action located in a municipality with an adopted zoning law or ordinance. ☑ Yes ☐ No
If Yes, what is the zoning classification(s) including any applicable overlay district?

Residential: single, double and multi-family; commercial: neighborhood commercial, community shopping, central business, central retail, service and highway commercial; manufacturing: light manufacturing, manufacturing; overlay: historic preservation.

b. Is the use permitted or allowed by a special or conditional use permit? ☐ Yes ☐ No

c. Is a zoning change requested as part of the proposed action? ☑ Yes ☐ No
If Yes,
i. What is the proposed new zoning for the site? Adoption of a resource protection overlay district

C.4. Existing community services.

a. In what school district is the project site located? Jamestown City School District

b. What police or other public protection forces serve the project site?
Jamestown Police Department

c. Which fire protection and emergency medical services serve the project site?
Jamestown Fire Department

d. What parks serve the project site?
Chadakoin Linear Park, Chadakoin Park, Jones Memorial Park, Keelboat Landing, McCrea Point Park, Panzarella Park, Porter Avenue Park, Riverwalk, The Grove, Veteran's Park

D. Project Details

D.1. Proposed and Potential Development

a. What is the general nature of the proposed action (e.g., residential, industrial, commercial, recreational; if mixed, include all components)?

b. a. Total acreage of the site of the proposed action? _____ acres
b. Total acreage to be physically disturbed? _____ acres
c. Total acreage (project site and any contiguous properties) owned or controlled by the applicant or project sponsor? _____ acres

c. Is the proposed action an expansion of an existing project or use? ☐ Yes ☐ No
i. If Yes, what is the approximate percentage of the proposed expansion and identify the units (e.g., acres, miles, housing units, square feet)? % _____ Units: _____

d. Is the proposed action a subdivision, or does it include a subdivision? ☐ Yes ☐ No
If Yes,
i. Purpose or type of subdivision? (e.g., residential, industrial, commercial; if mixed, specify types)

ii. Is a cluster/conservation layout proposed? ☐ Yes ☐ No
iii. Number of lots proposed? _____
iv. Minimum and maximum proposed lot sizes? Minimum _____ Maximum _____

e. Will proposed action be constructed in multiple phases? ☐ Yes ☐ No
i. If No, anticipated period of construction: _____ months
ii. If Yes:
- Total number of phases anticipated _____
- Anticipated commencement date of phase 1 (including demolition) _____ month _____ year
- Anticipated completion date of final phase _____ month _____year
- Generally describe connections or relationships among phases, including any contingencies where progress of one phase may determine timing or duration of future phases: _____

f. Does the project include new residential uses? ☐Yes ☐No

If Yes, show numbers of units proposed.

	One Family	Two Family	Three Family	Multiple Family (four or more)
Initial Phase	_____	_____	_____	_____
At completion of all phases	_____	_____	_____	_____

g. Does the proposed action include new non-residential construction (including expansions)? ☐Yes ☐No

If Yes,

i. Total number of structures _____

ii. Dimensions (in feet) of largest proposed structure: _____height; _____width; and _____ length

iii. Approximate extent of building space to be heated or cooled: _____ square feet

h. Does the proposed action include construction or other activities that will result in the impoundment of any liquids, such as creation of a water supply, reservoir, pond, lake, waste lagoon or other storage? ☐Yes ☐No

If Yes,

i. Purpose of the impoundment: _____

ii. If a water impoundment, the principal source of the water: ☐ Ground water ☐ Surface water streams ☐Other specify:

_____

iii. If other than water, identify the type of impounded/contained liquids and their source.

_____

iv. Approximate size of the proposed impoundment. Volume: _____ million gallons; surface area: _____ acres

v. Dimensions of the proposed dam or impounding structure: _____ height; _____ length

vi. Construction method/materials for the proposed dam or impounding structure (e.g., earth fill, rock, wood, concrete):

_____

D.2. Project Operations

a. Does the proposed action include any excavation, mining, or dredging, during construction, operations, or both? ☐Yes ☐No
(Not including general site preparation, grading or installation of utilities or foundations where all excavated materials will remain onsite)

If Yes:

i .What is the purpose of the excavation or dredging? _____

ii. How much material (including rock, earth, sediments, etc.) is proposed to be removed from the site?

- Volume (specify tons or cubic yards): _____
- Over what duration of time? _____

iii. Describe nature and characteristics of materials to be excavated or dredged, and plans to use, manage or dispose of them.

_____

_____

i*v.* Will there be onsite dewatering or processing of excavated materials? ☐Yes ☐No
If yes, describe. _____

_____

v. What is the total area to be dredged or excavated? _____acres

vi. What is the maximum area to be worked at any one time? _____ acres

vii. What would be the maximum depth of excavation or dredging? _____ feet

viii. Will the excavation require blasting? ☐Yes ☐No

ix. Summarize site reclamation goals and plan: _____

_____

_____

b. Would the proposed action cause or result in alteration of, increase or decrease in size of, or encroachment into any existing wetland, waterbody, shoreline, beach or adjacent area? ☐Yes ☐No

If Yes:

i. Identify the wetland or waterbody which would be affected (by name, water index number, wetland map number or geographic description): _____

_____

ii. Describe how the proposed action would affect that waterbody or wetland, e.g. excavation, fill, placement of structures, or alteration of channels, banks and shorelines. Indicate extent of activities, alterations and additions in square feet or acres:

_____

_____

_____

_____

iii. Will proposed action cause or result in disturbance to bottom sediments? ☐ Yes ☐ No

If Yes, describe: _____

iv. Will proposed action cause or result in the destruction or removal of aquatic vegetation? ☐ Yes ☐ No

If Yes:

- acres of aquatic vegetation proposed to be removed: _____
- expected acreage of aquatic vegetation remaining after project completion: _____
- purpose of proposed removal (e.g. beach clearing, invasive species control, boat access): _____

_____

- proposed method of plant removal: _____
- if chemical/herbicide treatment will be used, specify product(s): _____

v. Describe any proposed reclamation/mitigation following disturbance: _____

_____

c. Will the proposed action use, or create a new demand for water? ☐ Yes ☐ No

If Yes:

i. Total anticipated water usage/demand per day: _____ gallons/day

ii. Will the proposed action obtain water from an existing public water supply? ☐ Yes ☐ No

If Yes:

- Name of district or service area: _____
- Does the existing public water supply have capacity to serve the proposal? ☐ Yes ☐ No
- Is the project site in the existing district? ☐ Yes ☐ No
- Is expansion of the district needed? ☐ Yes ☐ No
- Do existing lines serve the project site? ☐ Yes ☐ No

iii. Will line extension within an existing district be necessary to supply the project? ☐ Yes ☐ No

If Yes:

- Describe extensions or capacity expansions proposed to serve this project: _____

_____

- Source(s) of supply for the district: _____

iv. Is a new water supply district or service area proposed to be formed to serve the project site? ☐ Yes ☐ No

If, Yes:

- Applicant/sponsor for new district: _____
- Date application submitted or anticipated: _____
- Proposed source(s) of supply for new district: _____

v. If a public water supply will not be used, describe plans to provide water supply for the project: _____

_____

vi. If water supply will be from wells (public or private), maximum pumping capacity: _____ gallons/minute.

d. Will the proposed action generate liquid wastes? ☐ Yes ☐ No

If Yes:

i. Total anticipated liquid waste generation per day: _____ gallons/day

ii. Nature of liquid wastes to be generated (e.g., sanitary wastewater, industrial; if combination, describe all components and approximate volumes or proportions of each): _____

_____

_____

iii. Will the proposed action use any existing public wastewater treatment facilities? ☐ Yes ☐ No

If Yes:

- Name of wastewater treatment plant to be used: _____
- Name of district: _____
- Does the existing wastewater treatment plant have capacity to serve the project? ☐ Yes ☐ No
- Is the project site in the existing district? ☐ Yes ☐ No
- Is expansion of the district needed? ☐ Yes ☐ No

- Do existing sewer lines serve the project site? ☐Yes ☐No
- Will line extension within an existing district be necessary to serve the project? ☐Yes ☐No

  If Yes:
  - Describe extensions or capacity expansions proposed to serve this project: _____

  _____

  _____

iv. Will a new wastewater (sewage) treatment district be formed to serve the project site? ☐Yes ☐No

If Yes:
- Applicant/sponsor for new district: _____
- Date application submitted or anticipated: _____
- What is the receiving water for the wastewater discharge? _____

v. If public facilities will not be used, describe plans to provide wastewater treatment for the project, including specifying proposed receiving water (name and classification if surface discharge, or describe subsurface disposal plans):

_____

_____

vi. Describe any plans or designs to capture, recycle or reuse liquid waste: _____

_____

_____

e. Will the proposed action disturb more than one acre and create stormwater runoff, either from new point sources (i.e. ditches, pipes, swales, curbs, gutters or other concentrated flows of stormwater) or non-point source (i.e. sheet flow) during construction or post construction? ☐Yes ☐No

If Yes:

i. How much impervious surface will the project create in relation to total size of project parcel?

_____ Square feet or _____ acres (impervious surface)

_____ Square feet or _____ acres (parcel size)

ii. Describe types of new point sources. _____

_____

iii. Where will the stormwater runoff be directed (i.e. on-site stormwater management facility/structures, adjacent properties, groundwater, on-site surface water or off-site surface waters)?

_____

_____

- If to surface waters, identify receiving water bodies or wetlands: _____

  _____

  _____
- Will stormwater runoff flow to adjacent properties? ☐Yes ☐No

iv. Does proposed plan minimize impervious surfaces, use pervious materials or collect and re-use stormwater? ☐Yes ☐No

f. Does the proposed action include, or will it use on-site, one or more sources of air emissions, including fuel combustion, waste incineration, or other processes or operations? ☐Yes ☐No

If Yes, identify:

i. Mobile sources during project operations (e.g., heavy equipment, fleet or delivery vehicles)

_____

ii. Stationary sources during construction (e.g., power generation, structural heating, batch plant, crushers)

_____

iii. Stationary sources during operations (e.g., process emissions, large boilers, electric generation)

_____

g. Will any air emission sources named in D.2.f (above), require a NY State Air Registration, Air Facility Permit, or Federal Clean Air Act Title IV or Title V Permit? ☐Yes ☐No

If Yes:

i. Is the project site located in an Air quality non-attainment area? (Area routinely or periodically fails to meet ambient air quality standards for all or some parts of the year) ☐Yes ☐No

ii. In addition to emissions as calculated in the application, the project will generate:
- _____Tons/year (short tons) of Carbon Dioxide (CO_2)
- _____Tons/year (short tons) of Nitrous Oxide (N_2O)
- _____Tons/year (short tons) of Perfluorocarbons (PFCs)
- _____Tons/year (short tons) of Sulfur Hexafluoride (SF_6)
- _____Tons/year (short tons) of Carbon Dioxide equivalent of Hydroflourocarbons (HFCs)
- _____Tons/year (short tons) of Hazardous Air Pollutants (HAPs)

h. Will the proposed action generate or emit methane (including, but not limited to, sewage treatment plants, landfills, composting facilities)? ☐Yes ☐No

If Yes:

i. Estimate methane generation in tons/year (metric): _____

ii. Describe any methane capture, control or elimination measures included in project design (e.g., combustion to generate heat or electricity, flaring): _____

_____

i. Will the proposed action result in the release of air pollutants from open-air operations or processes, such as quarry or landfill operations? ☐Yes ☐No

If Yes: Describe operations and nature of emissions (e.g., diesel exhaust, rock particulates/dust):

_____

_____

j. Will the proposed action result in a substantial increase in traffic above present levels or generate substantial new demand for transportation facilities or services? ☐Yes ☐No

If Yes:

i. When is the peak traffic expected (Check all that apply): ☐ Morning ☐ Evening ☐Weekend

☐ Randomly between hours of _____ to _____.

ii. For commercial activities only, projected number of semi-trailer truck trips/day: _____

iii. Parking spaces: Existing _____ Proposed _____ Net increase/decrease _____

iv. Does the proposed action include any shared use parking? ☐Yes ☐No

v. If the proposed action includes any modification of existing roads, creation of new roads or change in existing access, describe:

_____

_____

_____

vi. Are public/private transportation service(s) or facilities available within ½ mile of the proposed site? ☐Yes ☐No

vii Will the proposed action include access to public transportation or accommodations for use of hybrid, electric or other alternative fueled vehicles? ☐Yes ☐No

viii. Will the proposed action include plans for pedestrian or bicycle accommodations for connections to existing pedestrian or bicycle routes? ☐Yes ☐No

k. Will the proposed action (for commercial or industrial projects only) generate new or additional demand for energy? ☐Yes ☐No

If Yes:

i. Estimate annual electricity demand during operation of the proposed action: _____

_____

ii. Anticipated sources/suppliers of electricity for the project (e.g., on-site combustion, on-site renewable, via grid/local utility, or other):

_____

iii. Will the proposed action require a new, or an upgrade to, an existing substation? ☐Yes ☐No

l. Hours of operation. Answer all items which apply.

i. During Construction:

- Monday - Friday: _____
- Saturday: _____
- Sunday: _____
- Holidays: _____

ii. During Operations:

- Monday - Friday: _____
- Saturday: _____
- Sunday: _____
- Holidays: _____

m. Will the proposed action produce noise that will exceed existing ambient noise levels during construction, operation, or both? ☐ Yes ☐ No

If yes:

i. Provide details including sources, time of day and duration:

_____

_____

ii. Will proposed action remove existing natural barriers that could act as a noise barrier or screen? ☐ Yes ☐ No

Describe: _____

_____

n.. Will the proposed action have outdoor lighting? ☐ Yes ☐ No

If yes:

i. Describe source(s), location(s), height of fixture(s), direction/aim, and proximity to nearest occupied structures:

_____

_____

ii. Will proposed action remove existing natural barriers that could act as a light barrier or screen? ☐ Yes ☐ No

Describe: _____

_____

o. Does the proposed action have the potential to produce odors for more than one hour per day? ☐ Yes ☐ No

If Yes, describe possible sources, potential frequency and duration of odor emissions, and proximity to nearest occupied structures: _____

_____

_____

p. Will the proposed action include any bulk storage of petroleum (combined capacity of over 1,100 gallons) or chemical products 185 gallons in above ground storage or any amount in underground storage? ☐ Yes ☐ No

If Yes:

i. Product(s) to be stored _____

ii. Volume(s) _____ per unit time _____ (e.g., month, year)

iii. Generally describe proposed storage facilities: _____

_____

q. Will the proposed action (commercial, industrial and recreational projects only) use pesticides (i.e., herbicides, insecticides) during construction or operation? ☐ Yes ☐ No

If Yes:

i. Describe proposed treatment(s):

_____

_____

_____

_____

ii. Will the proposed action use Integrated Pest Management Practices? ☐ Yes ☐ No

r. Will the proposed action (commercial or industrial projects only) involve or require the management or disposal of solid waste (excluding hazardous materials)? ☐ Yes ☐ No

If Yes:

i. Describe any solid waste(s) to be generated during construction or operation of the facility:

- Construction: _____ tons per _____ (unit of time)
- Operation : _____ tons per _____ (unit of time)

ii. Describe any proposals for on-site minimization, recycling or reuse of materials to avoid disposal as solid waste:

- Construction: _____

  _____
- Operation: _____

  _____

iii. Proposed disposal methods/facilities for solid waste generated on-site:

- Construction: _____

  _____
- Operation: _____

  _____

s. Does the proposed action include construction or modification of a solid waste management facility? ☐ Yes ☐ No

If Yes:

i. Type of management or handling of waste proposed for the site (e.g., recycling or transfer station, composting, landfill, or other disposal activities): _____

ii. Anticipated rate of disposal/processing:

- _____ Tons/month, if transfer or other non-combustion/thermal treatment, or
- _____ Tons/hour, if combustion or thermal treatment

iii. If landfill, anticipated site life: _____ years

t. Will proposed action at the site involve the commercial generation, treatment, storage, or disposal of hazardous waste? ☐ Yes ☐ No

If Yes:

i. Name(s) of all hazardous wastes or constituents to be generated, handled or managed at facility: _____

_____

_____

ii. Generally describe processes or activities involving hazardous wastes or constituents: _____

_____

_____

iii. Specify amount to be handled or generated _____ tons/month

iv. Describe any proposals for on-site minimization, recycling or reuse of hazardous constituents: _____

_____

_____

v. Will any hazardous wastes be disposed at an existing offsite hazardous waste facility? ☐ Yes ☐ No

If Yes: provide name and location of facility: _____

_____

If No: describe proposed management of any hazardous wastes which will not be sent to a hazardous waste facility:

_____

_____

E. Site and Setting of Proposed Action

E.1. Land uses on and surrounding the project site

a. Existing land uses.

i. Check all uses that occur on, adjoining and near the project site.

☐ Urban ☐ Industrial ☐ Commercial ☐ Residential (suburban) ☐ Rural (non-farm)

☐ Forest ☐ Agriculture ☐ Aquatic ☐ Other (specify): _____

ii. If mix of uses, generally describe:

_____

_____

b. Land uses and covertypes on the project site.

Land use or Covertype	Current Acreage	Acreage After Project Completion	Change (Acres +/-)
• Roads, buildings, and other paved or impervious surfaces			
• Forested			
• Meadows, grasslands or brushlands (non-agricultural, including abandoned agricultural)			
• Agricultural (includes active orchards, field, greenhouse etc.)			
• Surface water features (lakes, ponds, streams, rivers, etc.)			
• Wetlands (freshwater or tidal)			
• Non-vegetated (bare rock, earth or fill)			
• Other Describe: _____ _____			

c. Is the project site presently used by members of the community for public recreation? ☐ Yes ☐ No

i. If Yes: explain: _____

d. Are there any facilities serving children, the elderly, people with disabilities (e.g., schools, hospitals, licensed day care centers, or group homes) within 1500 feet of the project site? ☐ Yes ☐ No

If Yes,

i. Identify Facilities:

_____

_____

e. Does the project site contain an existing dam? ☐ Yes ☐ No

If Yes:

i. Dimensions of the dam and impoundment:

- Dam height: _____ feet
- Dam length: _____ feet
- Surface area: _____ acres
- Volume impounded: _____ gallons OR acre-feet

ii. Dam's existing hazard classification: _____

iii. Provide date and summarize results of last inspection:

_____

_____

f. Has the project site ever been used as a municipal, commercial or industrial solid waste management facility, or does the project site adjoin property which is now, or was at one time, used as a solid waste management facility? ☐ Yes ☐ No

If Yes:

i. Has the facility been formally closed? ☐ Yes ☐ No

- If yes, cite sources/documentation: _____

ii. Describe the location of the project site relative to the boundaries of the solid waste management facility:

_____

_____

iii. Describe any development constraints due to the prior solid waste activities: _____

_____

g. Have hazardous wastes been generated, treated and/or disposed of at the site, or does the project site adjoin property which is now or was at one time used to commercially treat, store and/or dispose of hazardous waste? ☐ Yes ☐ No

If Yes:

i. Describe waste(s) handled and waste management activities, including approximate time when activities occurred:

_____

_____

h. Potential contamination history. Has there been a reported spill at the proposed project site, or have any remedial actions been conducted at or adjacent to the proposed site? ☐ Yes ☐ No

If Yes:

i. Is any portion of the site listed on the NYSDEC Spills Incidents database or Environmental Site Remediation database? Check all that apply: ☐ Yes ☐ No

☐ Yes – Spills Incidents database Provide DEC ID number(s): _____

☐ Yes – Environmental Site Remediation database Provide DEC ID number(s): _____

☐ Neither database

ii. If site has been subject of RCRA corrective activities, describe control measures:_____

_____

_____

iii. Is the project within 2000 feet of any site in the NYSDEC Environmental Site Remediation database? ☐ Yes ☐ No

If yes, provide DEC ID number(s): _____

iv. If yes to (i), (ii) or (iii) above, describe current status of site(s):

_____

_____

v. Is the project site subject to an institutional control limiting property uses? ☐ Yes ☐ No

- If yes, DEC site ID number: _____
- Describe the type of institutional control (e.g., deed restriction or easement): _____
- Describe any use limitations: _____
- Describe any engineering controls: _____
- Will the project affect the institutional or engineering controls in place? ☐ Yes ☐ No
- Explain: _____

_____

_____

E.2. Natural Resources On or Near Project Site

a. What is the average depth to bedrock on the project site? _____ feet

b. Are there bedrock outcroppings on the project site? ☐ Yes ☐ No
If Yes, what proportion of the site is comprised of bedrock outcroppings? _____%

c. Predominant soil type(s) present on project site: _____ _____%
_____ _____%
_____ _____%

d. What is the average depth to the water table on the project site? Average: _____ feet

e. Drainage status of project site soils: ☐ Well Drained: _____% of site
☐ Moderately Well Drained: _____% of site
☐ Poorly Drained _____% of site

f. Approximate proportion of proposed action site with slopes: ☐ 0-10%: _____% of site
☐ 10-15%: _____% of site
☐ 15% or greater: _____% of site

g. Are there any unique geologic features on the project site? ☐ Yes ☐ No
If Yes, describe: _____

_____

h. Surface water features.

i. Does any portion of the project site contain wetlands or other waterbodies (including streams, rivers, ponds or lakes)? ☐ Yes ☐ No

ii. Do any wetlands or other waterbodies adjoin the project site? ☐ Yes ☐ No

If Yes to either *i* or *ii*, continue. If No, skip to E.2.i.

iii. Are any of the wetlands or waterbodies within or adjoining the project site regulated by any federal, state or local agency? ☐ Yes ☐ No

iv. For each identified regulated wetland and waterbody on the project site, provide the following information:

- Streams: Name _____ Classification _____
- Lakes or Ponds: Name _____ Classification _____
- Wetlands: Name _____ Approximate Size _____
- Wetland No. (if regulated by DEC) _____

v. Are any of the above water bodies listed in the most recent compilation of NYS water quality-impaired waterbodies? ☐ Yes ☐ No

If yes, name of impaired water body/bodies and basis for listing as impaired: _____

_____

i. Is the project site in a designated Floodway? ☐ Yes ☐ No

j. Is the project site in the 100 year Floodplain? ☐ Yes ☐ No

k. Is the project site in the 500 year Floodplain? ☐ Yes ☐ No

l. Is the project site located over, or immediately adjoining, a primary, principal or sole source aquifer? ☐ Yes ☐ No
If Yes:

i. Name of aquifer: _____

m. Identify the predominant wildlife species that occupy or use the project site: _____

_____ _____ _____

_____ _____ _____

n. Does the project site contain a designated significant natural community? ☐ Yes ☐ No

If Yes:

i. Describe the habitat/community (composition, function, and basis for designation): _____

_____

ii. Source(s) of description or evaluation: _____

iii. Extent of community/habitat:

- Currently: _____ acres
- Following completion of project as proposed: _____ acres
- Gain or loss (indicate + or -): _____ acres

o. Does project site contain any species of plant or animal that is listed by the federal government or NYS as endangered or threatened, or does it contain any areas identified as habitat for an endangered or threatened species? ☐ Yes ☐ No

p. Does the project site contain any species of plant or animal that is listed by NYS as rare, or as a species of special concern? ☐ Yes ☐ No

E

q. Is the project site or adjoining area currently used for hunting, trapping, fishing or shell fishing? ☐ Yes ☐ No

If yes, give a brief description of how the proposed action may affect that use: _____

_____

E.3. Designated Public Resources On or Near Project Site

a. Is the project site, or any portion of it, located in a designated agricultural district certified pursuant to Agriculture and Markets Law, Article 25-AA, Section 303 and 304? ☐ Yes ☐ No

If Yes, provide county plus district name/number: _____

b. Are agricultural lands consisting of highly productive soils present? ☐ Yes ☐ No

i. If Yes: acreage(s) on project site? _____

ii. Source(s) of soil rating(s): _____

c. Does the project site contain all or part of, or is it substantially contiguous to, a registered National Natural Landmark? ☐ Yes ☐ No

If Yes:

i. Nature of the natural landmark: ☐ Biological Community ☐ Geological Feature

ii. Provide brief description of landmark, including values behind designation and approximate size/extent: _____

_____

_____

d. Is the project site located in or does it adjoin a state listed Critical Environmental Area? ☐ Yes ☐ No

If Yes:

i. CEA name: _____

ii. Basis for designation: _____

iii. Designating agency and date: _____

e. Does the project site contain, or is it substantially contiguous to, a building, archaeological site, or district which is listed on, or has been nominated by the NYS Board of Historic Preservation for inclusion on, the State or National Register of Historic Places? ☐ Yes ☐ No

If Yes:

i. Nature of historic/archaeological resource: ☐ Archaeological Site ☐ Historic Building or District

ii. Name: _____

iii. Brief description of attributes on which listing is based:

_____

f. Is the project site, or any portion of it, located in or adjacent to an area designated as sensitive for archaeological sites on the NY State Historic Preservation Office (SHPO) archaeological site inventory? ☐ Yes ☐ No

g. Have additional archaeological or historic site(s) or resources been identified on the project site? ☐ Yes ☐ No

If Yes:

i. Describe possible resource(s): _____

ii. Basis for identification: _____

h. Is the project site within fives miles of any officially designated and publicly accessible federal, state, or local scenic or aesthetic resource? ☐ Yes ☐ No

If Yes:

i. Identify resource: _____

ii. Nature of, or basis for, designation (e.g., established highway overlook, state or local park, state historic trail or scenic byway, etc.): _____

iii. Distance between project and resource: _____ miles.

i. Is the project site located within a designated river corridor under the Wild, Scenic and Recreational Rivers Program 6 NYCRR 666? ☐ Yes ☐ No

If Yes:

i. Identify the name of the river and its designation: _____

ii. Is the activity consistent with development restrictions contained in 6NYCRR Part 666? ☐ Yes ☐ No

F. Additional Information

Attach any additional information which may be needed to clarify your project.

If you have identified any adverse impacts which could be associated with your proposal, please describe those impacts plus any measures which you propose to avoid or minimize them.

G. Verification

I certify that the information provided is true to the best of my knowledge.

Applicant/Sponsor Name _____ Date_____

Signature_____ Title_____

PRINT FORM

Agency Use Only [If applicable]

Project :

Date :

Full Environmental Assessment Form
Part 2 - Identification of Potential Project Impacts

Part 2 is to be completed by the lead agency. Part 2 is designed to help the lead agency inventory all potential resources that could be affected by a proposed project or action. We recognize that the lead agency's reviewer(s) will not necessarily be environmental professionals. So, the questions are designed to walk a reviewer through the assessment process by providing a series of questions that can be answered using the information found in Part 1. To further assist the lead agency in completing Part 2, the form identifies the most relevant questions in Part 1 that will provide the information needed to answer the Part 2 question. When Part 2 is completed, the lead agency will have identified the relevant environmental areas that may be impacted by the proposed activity.

If the lead agency is a state agency **and** the action is in any Coastal Area, complete the Coastal Assessment Form before proceeding with this assessment.

Tips for completing Part 2:

- Review all of the information provided in Part 1.
- Review any application, maps, supporting materials and the Full EAF Workbook.
- Answer each of the 18 questions in Part 2.
- If you answer "**Yes"** to a numbered question, please complete all the questions that follow in that section.
- If you answer "**No"** to a numbered question, move on to the next numbered question.
- Check appropriate column to indicate the anticipated size of the impact.
- Proposed projects that would exceed a numeric threshold contained in a question should result in the reviewing agency checking the box "Moderate to large impact may occur."
- The reviewer is not expected to be an expert in environmental analysis.
- If you are not sure or undecided about the size of an impact, it may help to review the sub-questions for the general question and consult the workbook.
- When answering a question consider all components of the proposed activity, that is, the "whole action".
- Consider the possibility for long-term and cumulative impacts as well as direct impacts.
- Answer the question in a reasonable manner considering the scale and context of the project.

1. Impact on Land
Proposed action may involve construction on, or physical alteration of, the land surface of the proposed site. (See Part 1. D.1)
If "Yes", answer questions a - j. If "No", move on to Section 2.

☑ NO ☐ YES

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action may involve construction on land where depth to water table is less than 3 feet.	E2d	☐	☐
b. The proposed action may involve construction on slopes of 15% or greater.	E2f	☐	☐
c. The proposed action may involve construction on land where bedrock is exposed, or generally within 5 feet of existing ground surface.	E2a	☐	☐
d. The proposed action may involve the excavation and removal of more than 1,000 tons of natural material.	D2a	☐	☐
e. The proposed action may involve construction that continues for more than one year or in multiple phases.	D1e	☐	☐
f. The proposed action may result in increased erosion, whether from physical disturbance or vegetation removal (including from treatment by herbicides).	D2e, D2q	☐	☐
g. The proposed action is, or may be, located within a Coastal Erosion hazard area.	B1i	☐	☐
h. Other impacts: _____ _____		☐	☐

2. Impact on Geological Features

The proposed action may result in the modification or destruction of, or inhibit access to, any unique or unusual land forms on the site (e.g., cliffs, dunes, minerals, fossils, caves). (See Part 1. E.2.g) ☑ NO ☐ YES

If "Yes", answer questions a - c. If "No", move on to Section 3.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. Identify the specific land form(s) attached: _____ _____	E2g	☐	☐
b. The proposed action may affect or is adjacent to a geological feature listed as a registered National Natural Landmark. Specific feature: _____	E3c	☐	☐
c. Other impacts: _____ _____		☐	☐

3. Impacts on Surface Water

The proposed action may affect one or more wetlands or other surface water bodies (e.g., streams, rivers, ponds or lakes). (See Part 1. D.2, E.2.h) ☑ NO ☐ YES

If "Yes", answer questions a - l. If "No", move on to Section 4.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action may create a new water body.	D2b, D1h	☐	☐
b. The proposed action may result in an increase or decrease of over 10% or more than a 10 acre increase or decrease in the surface area of any body of water.	D2b	☐	☐
c. The proposed action may involve dredging more than 100 cubic yards of material from a wetland or water body.	D2a	☐	☐
d. The proposed action may involve construction within or adjoining a freshwater or tidal wetland, or in the bed or banks of any other water body.	E2h	☐	☐
e. The proposed action may create turbidity in a waterbody, either from upland erosion, runoff or by disturbing bottom sediments.	D2a, D2h	☐	☐
f. The proposed action may include construction of one or more intake(s) for withdrawal of water from surface water.	D2c	☐	☐
g. The proposed action may include construction of one or more outfall(s) for discharge of wastewater to surface water(s).	D2d	☐	☐
h. The proposed action may cause soil erosion, or otherwise create a source of stormwater discharge that may lead to siltation or other degradation of receiving water bodies.	D2e	☐	☐
i. The proposed action may affect the water quality of any water bodies within or downstream of the site of the proposed action.	E2h	☐	☐
j. The proposed action may involve the application of pesticides or herbicides in or around any water body.	D2q, E2h	☐	☐
k. The proposed action may require the construction of new, or expansion of existing, wastewater treatment facilities.	D1a, D2d	☐	☐

l. Other impacts: _____ _____		□	□

4. Impact on groundwater

The proposed action may result in new or additional use of ground water, or may have the potential to introduce contaminants to ground water or an aquifer. (See Part 1. D.2.a, D.2.c, D.2.d, D.2.p, D.2.q, D.2.t) ☑ NO ☐ YES

If "Yes", answer questions a - h. If "No", move on to Section 5.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action may require new water supply wells, or create additional demand on supplies from existing water supply wells.	D2c	□	□
b. Water supply demand from the proposed action may exceed safe and sustainable withdrawal capacity rate of the local supply or aquifer. Cite Source: _____	D2c	□	□
c. The proposed action may allow or result in residential uses in areas without water and sewer services.	D1a, D2c	□	□
d. The proposed action may include or require wastewater discharged to groundwater.	D2d, E2l	□	□
e. The proposed action may result in the construction of water supply wells in locations where groundwater is, or is suspected to be, contaminated.	D2c, E1f, E1g, E1h	□	□
f. The proposed action may require the bulk storage of petroleum or chemical products over ground water or an aquifer.	D2p, E2l	□	□
g. The proposed action may involve the commercial application of pesticides within 100 feet of potable drinking water or irrigation sources.	E2h, D2q, E2l, D2c	□	□
h. Other impacts: _____ _____		□	□

5. Impact on Flooding

The proposed action may result in development on lands subject to flooding. (See Part 1. E.2) ☑ NO ☐ YES

If "Yes", answer questions a - g. If "No", move on to Section 6.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action may result in development in a designated floodway.	E2i	□	□
b. The proposed action may result in development within a 100 year floodplain.	E2j	□	□
c. The proposed action may result in development within a 500 year floodplain.	E2k	□	□
d. The proposed action may result in, or require, modification of existing drainage patterns.	D2b, D2e	□	□
e. The proposed action may change flood water flows that contribute to flooding.	D2b, E2i, E2j, E2k	□	□
f. If there is a dam located on the site of the proposed action, is the dam in need of repair, or upgrade?	E1e	□	□

g. Other impacts: _____ _____		☐	☐

6. Impacts on Air

The proposed action may include a state regulated air emission source. ☑ NO ☐ YES
(See Part 1. D.2.f., D,2,h, D.2.g)
If "Yes", answer questions a - f. If "No", move on to Section 7.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. If the proposed action requires federal or state air emission permits, the action may also emit one or more greenhouse gases at or above the following levels:			
i. More than 1000 tons/year of carbon dioxide (CO_2)	D2g	☐	☐
ii. More than 3.5 tons/year of nitrous oxide (N_2O)	D2g	☐	☐
iii. More than 1000 tons/year of carbon equivalent of perfluorocarbons (PFCs)	D2g	☐	☐
iv. More than .045 tons/year of sulfur hexafluoride (SF_6)	D2g	☐	☐
v. More than 1000 tons/year of carbon dioxide equivalent of hydrochloroflourocarbons (HFCs) emissions	D2g	☐	☐
vi. 43 tons/year or more of methane	D2h	☐	☐
b. The proposed action may generate 10 tons/year or more of any one designated hazardous air pollutant, or 25 tons/year or more of any combination of such hazardous air pollutants.	D2g	☐	☐
c. The proposed action may require a state air registration, or may produce an emissions rate of total contaminants that may exceed 5 lbs. per hour, or may include a heat source capable of producing more than 10 million BTU's per hour.	D2f, D2g	☐	☐
d. The proposed action may reach 50% of any of the thresholds in "a" through "c", above.	D2g	☐	☐
e. The proposed action may result in the combustion or thermal treatment of more than 1 ton of refuse per hour.	D2s	☐	☐
f. Other impacts: _____ _____		☐	☐

7. Impact on Plants and Animals

The proposed action may result in a loss of flora or fauna. (See Part 1. E.2. m.-q.) ☑ NO ☐ YES
If "Yes", answer questions a - j. If "No", move on to Section 8.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action may cause reduction in population or loss of individuals of any threatened or endangered species, as listed by New York State or the Federal government, that use the site, or are found on, over, or near the site.	E2o	☐	☐
b. The proposed action may result in a reduction or degradation of any habitat used by any rare, threatened or endangered species, as listed by New York State or the federal government.	E2o	☐	☐
c. The proposed action may cause reduction in population, or loss of individuals, of any species of special concern or conservation need, as listed by New York State or the Federal government, that use the site, or are found on, over, or near the site.	E2p	☐	☐
d. The proposed action may result in a reduction or degradation of any habitat used by any species of special concern and conservation need, as listed by New York State or the Federal government.	E2p	☐	☐

e. The proposed action may diminish the capacity of a registered National Natural Landmark to support the biological community it was established to protect.	E3c	□	□
f. The proposed action may result in the removal of, or ground disturbance in, any portion of a designated significant natural community. Source: _____	E2n	□	□
g. The proposed action may substantially interfere with nesting/breeding, foraging, or over-wintering habitat for the predominant species that occupy or use the project site.	E2m	□	□
h. The proposed action requires the conversion of more than 10 acres of forest, grassland or any other regionally or locally important habitat. Habitat type & information source: _____ _____	E1b	□	□
i. Proposed action (commercial, industrial or recreational projects, only) involves use of herbicides or pesticides.	D2q	□	□
j. Other impacts: _____ _____		□	□

8. Impact on Agricultural Resources

The proposed action may impact agricultural resources. (See Part 1. E.3.a. and b.) ☑ NO ☐ YES

If "Yes", answer questions a - h. If "No", move on to Section 9.

	Relevant Part I Question(s)	**No, or small impact may occur**	**Moderate to large impact may occur**
a. The proposed action may impact soil classified within soil group 1 through 4 of the NYS Land Classification System.	E2c, E3b	□	□
b. The proposed action may sever, cross or otherwise limit access to agricultural land (includes cropland, hayfields, pasture, vineyard, orchard, etc).	E1a, Elb	□	□
c. The proposed action may result in the excavation or compaction of the soil profile of active agricultural land.	E3b	□	□
d. The proposed action may irreversibly convert agricultural land to non-agricultural uses, either more than 2.5 acres if located in an Agricultural District, or more than 10 acres if not within an Agricultural District.	E1b, E3a	□	□
e. The proposed action may disrupt or prevent installation of an agricultural land management system.	El a, E1b	□	□
f. The proposed action may result, directly or indirectly, in increased development potential or pressure on farmland.	C2c, C3, D2c, D2d	□	□
g. The proposed project is not consistent with the adopted municipal Farmland Protection Plan.	C2c	□	□
h. Other impacts: _____		□	□

9. Impact on Aesthetic Resources

The land use of the proposed action are obviously different from, or are in sharp contrast to, current land use patterns between the proposed project and a scenic or aesthetic resource. (Part 1. E.1.a, E.1.b, E.3.h.)

☑ NO ☐ YES

If "Yes", answer questions a - g. If "No", go to Section 10.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. Proposed action may be visible from any officially designated federal, state, or local scenic or aesthetic resource.	E3h	☐	☐
b. The proposed action may result in the obstruction, elimination or significant screening of one or more officially designated scenic views.	E3h, C2b	☐	☐
c. The proposed action may be visible from publicly accessible vantage points: i. Seasonally (e.g., screened by summer foliage, but visible during other seasons) ii. Year round	E3h	 ☐ ☐	 ☐ ☐
d. The situation or activity in which viewers are engaged while viewing the proposed action is: i. Routine travel by residents, including travel to and from work ii. Recreational or tourism based activities	E3h E2q, E1c	 ☐ ☐	 ☐ ☐
e. The proposed action may cause a diminishment of the public enjoyment and appreciation of the designated aesthetic resource.	E3h	☐	☐
f. There are similar projects visible within the following distance of the proposed project: 0-1/2 mile ½ -3 mile 3-5 mile 5+ mile	D1a, E1a, D1f, D1g	☐	☐
g. Other impacts: _____ _____		☐	☐

10. Impact on Historic and Archeological Resources

The proposed action may occur in or adjacent to a historic or archaeological resource. (Part 1. E.3.e, f. and g.)

☑ NO ☐ YES

If "Yes", answer questions a - e. If "No", go to Section 11.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action may occur wholly or partially within, or substantially contiguous to, any buildings, archaeological site or district which is listed on or has been nominated by the NYS Board of Historic Preservation for inclusion on the State or National Register of Historic Places.	E3e	☐	☐
b. The proposed action may occur wholly or partially within, or substantially contiguous to, an area designated as sensitive for archaeological sites on the NY State Historic Preservation Office (SHPO) archaeological site inventory.	E3f	☐	☐
c. The proposed action may occur wholly or partially within, or substantially contiguous to, an archaeological site not included on the NY SHPO inventory. Source: _____	E3g	☐	☐

d. Other impacts: _____ _____		□	□
e. If any of the above (a-d) are answered "Moderate to large impact may occur", continue with the following questions to help support conclusions in Part 3:			
i. The proposed action may result in the destruction or alteration of all or part of the site or property.	E3e, E3g, E3f	□	□
ii. The proposed action may result in the alteration of the property's setting or integrity.	E3e, E3f, E3g, E1a, E1b	□	□
iii. The proposed action may result in the introduction of visual elements which are out of character with the site or property, or may alter its setting.	E3e, E3f, E3g, E3h, C2, C3	□	□

11. Impact on Open Space and Recreation

The proposed action may result in a loss of recreational opportunities or a reduction of an open space resource as designated in any adopted municipal open space plan.
(See Part 1. C.2.c, E.1.c., E.2.q.)
If "Yes", answer questions a - e. If "No", go to Section 12.

☑ NO ☐ YES

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action may result in an impairment of natural functions, or "ecosystem services", provided by an undeveloped area, including but not limited to stormwater storage, nutrient cycling, wildlife habitat.	D2e, E1b E2h, E2m, E2o, E2n, E2p	□	□
b. The proposed action may result in the loss of a current or future recreational resource.	C2a, E1c, C2c, E2q	□	□
c. The proposed action may eliminate open space or recreational resource in an area with few such resources.	C2a, C2c E1c, E2q	□	□
d. The proposed action may result in loss of an area now used informally by the community as an open space resource.	C2c, E1c	□	□
e. Other impacts: _____ _____		□	□

12. Impact on Critical Environmental Areas

The proposed action may be located within or adjacent to a critical environmental area (CEA). (See Part 1. E.3.d)
If "Yes", answer questions a - c. If "No", go to Section 13.

☑ NO ☐ YES

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action may result in a reduction in the quantity of the resource or characteristic which was the basis for designation of the CEA.	E3d	□	□
b. The proposed action may result in a reduction in the quality of the resource or characteristic which was the basis for designation of the CEA.	E3d	□	□
c. Other impacts: _____ _____		□	□

13. Impact on Transportation

The proposed action may result in a change to existing transportation systems. ☑ NO ☐ YES
(See Part 1. D.2.j)
If "Yes", answer questions a - f. If "No", go to Section 14.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. Projected traffic increase may exceed capacity of existing road network.	D2j	☐	☐
b. The proposed action may result in the construction of paved parking area for 500 or more vehicles.	D2j	☐	☐
c. The proposed action will degrade existing transit access.	D2j	☐	☐
d. The proposed action will degrade existing pedestrian or bicycle accommodations.	D2j	☐	☐
e. The proposed action may alter the present pattern of movement of people or goods.	D2j	☐	☐
f. Other impacts: _____ _____		☐	☐

14. Impact on Energy

The proposed action may cause an increase in the use of any form of energy. ☑ NO ☐ YES
(See Part 1. D.2.k)
If "Yes", answer questions a - e. If "No", go to Section 15.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action will require a new, or an upgrade to an existing, substation.	D2k	☐	☐
b. The proposed action will require the creation or extension of an energy transmission or supply system to serve more than 50 single or two-family residences or to serve a commercial or industrial use.	D1f, D1q, D2k	☐	☐
c. The proposed action may utilize more than 2,500 MWhrs per year of electricity.	D2k	☐	☐
d. The proposed action may involve heating and/or cooling of more than 100,000 square feet of building area when completed.	D1g	☐	☐
e. Other Impacts: _____ _____			

15. Impact on Noise, Odor, and Light

The proposed action may result in an increase in noise, odors, or outdoor lighting. ☑ NO ☐ YES
(See Part 1. D.2.m., n., and o.)
If "Yes", answer questions a - f. If "No", go to Section 16.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action may produce sound above noise levels established by local regulation.	D2m	☐	☐
b. The proposed action may result in blasting within 1,500 feet of any residence, hospital, school, licensed day care center, or nursing home.	D2m, E1d	☐	☐
c. The proposed action may result in routine odors for more than one hour per day.	D2o	☐	☐

d. The proposed action may result in light shining onto adjoining properties.	D2n	☐	☐
e. The proposed action may result in lighting creating sky-glow brighter than existing area conditions.	D2n, E1a	☐	☐
f. Other impacts: _____ _____		☐	☐

16. Impact on Human Health

The proposed action may have an impact on human health from exposure to new or existing sources of contaminants. (See Part 1.D.2.q., E.1. d. f. g. and h.) ☑ NO ☐ YES

If "Yes", answer questions a - m. If "No", go to Section 17.

	Relevant Part I Question(s)	No,or small impact may cccur	Moderate to large impact may occur
a. The proposed action is located within 1500 feet of a school, hospital, licensed day care center, group home, nursing home or retirement community.	E1d	☐	☐
b. The site of the proposed action is currently undergoing remediation.	E1g, E1h	☐	☐
c. There is a completed emergency spill remediation, or a completed environmental site remediation on, or adjacent to, the site of the proposed action.	E1g, E1h	☐	☐
d. The site of the action is subject to an institutional control limiting the use of the property (e.g., easement or deed restriction).	E1g, E1h	☐	☐
e. The proposed action may affect institutional control measures that were put in place to ensure that the site remains protective of the environment and human health.	E1g, E1h	☐	☐
f. The proposed action has adequate control measures in place to ensure that future generation, treatment and/or disposal of hazardous wastes will be protective of the environment and human health.	D2t	☐	☐
g. The proposed action involves construction or modification of a solid waste management facility.	D2q, E1f	☐	☐
h. The proposed action may result in the unearthing of solid or hazardous waste.	D2q, E1f	☐	☐
i. The proposed action may result in an increase in the rate of disposal, or processing, of solid waste.	D2r, D2s	☐	☐
j. The proposed action may result in excavation or other disturbance within 2000 feet of a site used for the disposal of solid or hazardous waste.	E1f, E1g E1h	☐	☐
k. The proposed action may result in the migration of explosive gases from a landfill site to adjacent off site structures.	E1f, E1g	☐	☐
l. The proposed action may result in the release of contaminated leachate from the project site.	D2s, E1f, D2r	☐	☐
m. Other impacts: _____ _____			

17. Consistency with Community Plans

The proposed action is not consistent with adopted land use plans. ☑ NO ☐ YES

(See Part 1. C.1, C.2. and C.3.)

If "Yes", answer questions a - h. If "No", go to Section 18.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action's land use components may be different from, or in sharp contrast to, current surrounding land use pattern(s).	C2, C3, D1a E1a, E1b	☐	☐
b. The proposed action will cause the permanent population of the city, town or village in which the project is located to grow by more than 5%.	C2	☐	☐
c. The proposed action is inconsistent with local land use plans or zoning regulations.	C2, C2, C3	☐	☐
d. The proposed action is inconsistent with any County plans, or other regional land use plans.	C2, C2	☐	☐
e. The proposed action may cause a change in the density of development that is not supported by existing infrastructure or is distant from existing infrastructure.	C3, D1c, D1d, D1f, D1d, Elb	☐	☐
f. The proposed action is located in an area characterized by low density development that will require new or expanded public infrastructure.	C4, D2c, D2d D2j	☐	☐
g. The proposed action may induce secondary development impacts (e.g., residential or commercial development not included in the proposed action)	C2a	☐	☐
h. Other: _____ _____		☐	☐

18. Consistency with Community Character

The proposed project is inconsistent with the existing community character. ☑ NO ☐ YES

(See Part 1. C.2, C.3, D.2, E.3)

If "Yes", answer questions a - g. If "No", proceed to Part 3.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action may replace or eliminate existing facilities, structures, or areas of historic importance to the community.	E3e, E3f, E3g	☐	☐
b. The proposed action may create a demand for additional community services (e.g. schools, police and fire)	C4	☐	☐
c. The proposed action may displace affordable or low-income housing in an area where there is a shortage of such housing.	C2, C3, D1f D1g, E1a	☐	☐
d. The proposed action may interfere with the use or enjoyment of officially recognized or designated public resources.	C2, E3	☐	☐
e. The proposed action is inconsistent with the predominant architectural scale and character.	C2, C3	☐	☐
f. Proposed action is inconsistent with the character of the existing natural landscape.	C2, C3 E1a, E1b E2g, E2h	☐	☐
g. Other impacts: _____ _____		☐	☐

PRINT FULL FORM

City of Jamestown, New York

CHAPTER XXXX

Waterfront Development Overlay District

Last Revised June 3, 2016

A. Purpose and Intent

This Waterfront Development Overlay District (WDOD) is being set forth to foster development within the district in accordance with the vision described in the City of Jamestown Local Waterfront Revitalization Program (LWRP), the intent of which is to promote and enhance the development and recreational use of the City's waterfront; to encourage the aesthetics of the existing buildings and waterfront area; to provide an integrated, cooperative approach to the protection of wetlands, riparian areas, and watercourses including but not limited to wetlands, riparian areas, and the Chadakoin River; to preserve and enhance the natural and scenic values of the waterfront; increase the potential for public access to the waterfront; and to permit new construction in a manner that complements and enhances the existing form of the district.

The proposed enhancement and redevelopment of each of the sub-districts has been described in the LWRP, and the proposed characteristics of each sub-district include:

- The Chadakoin Outlet Sub-District will continue to contain a variety of land use patterns, including:
    - Industrial uses adjacent to the railroad, with redevelopment of a number of the currently vacant and underutilized properties within the area.
    - Green space proximal to the River and associated with Chadakoin Park, enhanced access to the River, an improved trail network, ecological preservation and enhancement, and new educational opportunities through the creation of a Nature and Educational Center.
    - Commercial uses along Washington Street and Fluvanna Avenue, with in-fill development of underutilized and vacant properties.

- Land use within the Downtown Sub-District will undergo the most significant change, as many of the current uses are not compatible with the vision for a vibrant waterfront with exceptional access, amenities, and programming that draw significant numbers of people. In some cases, uses are compatible and should be encouraged to be expanded upon. Where existing development is inconsistent, market forces will gradually encourage the inconsistent development to relocate to other, more appropriate areas of the City. Additional focus will be placed on development of the Medical Corridor concept, and the results will include the conversion of underutilized sites to medical office space and other related uses.

- Land uses in the Industrial Heritage Corridor Sub-District will be modified slightly from existing conditions, where currently vacant and underutilized properties will be put back into productive use, primarily for commercial or industrial uses. Additionally, access to the River will be enhanced where appropriate to provide workers and residents alike the ability to enjoy the Riverfront.

- The East End Industrial Corridor Sub-District primarily consists of manufacturing facilities that are more modern and fully utilized. Future plans for the area call for continued use of this area for primarily industrial purposes. The few properties that are underutilized can be easily retrofitted for reuse and remain as industrial uses. Enhancements to the commercial and residential areas within this sub-district could include improved access to the waterfront and ecological preservation and enhancement along the River corridor.

B. Applicability

The Waterfront Development Overlay District shall be considered as overlaying other zoning districts as shown on the Zoning Map for the City of Jamestown. Review procedures are outlined in Section G of these overlay district regulations.

These Waterfront Revitalization Standards are not intended to be substituted for other general zoning district provisions but should be considered as additional requirements to be met by the applicant or developer, prior to project approval. In those instances where the Waterfront Development Overlay District contains additional or greater restrictions or regulations, such uses shall not be allowed until such restrictions and/or regulations are complied with. In any cases where conflicts arise between these regulations and any other existing regulations, the more restrictive regulations shall apply.

C. Waterfront Development Sub-Districts

Specifically, the Waterfront Development Overlay District should be considered as segmented into four primary sub-districts, each of which has its own existing and planned characteristics. The design and intent of any future development in the Waterfront Development Overlay District should be in concert with the plans for each of these sub-districts, which are shown on the zoning map and include:

1. Chadakoin Outlet Sub-District – this area stretches from the western City boundary to the edge of McCrea Point Park, from Fluvanna Avenue/Washington Street to the railroad tracks and includes the Chadakoin River and associated wetlands complex in the western portion of the City.

2. Downtown Sub-District – this area stretches from McCrea Point Park to Winsor Street, from 4th Street to Allen Street/Glasgow Avenue/Hall Avenue and includes the City's downtown core and Brooklyn Square.

3. Industrial Heritage Corridor Sub-District – this area stretches from Winsor Street to the east side of the Dahlstrom Complex, from 2nd Street to Allen Street and includes many historic manufacturing facilities that are currently either vacant or underutilized.

4. East End Industrial Corridor Sub-District – this area stretches from the east side of the Dahlstrom Complex to Tiffany Avenue (the eastern City boundary), from 2nd Street to Buffalo Street and includes many modern manufacturing facilities that are currently underutilized or fully active.

D. Permitted uses; prohibited uses

1. Permitted principal uses and structures, permitted accessory uses, and special permit uses will conform to the requirements for the underlying zoning districts; however, the following uses are specifically prohibited within the Waterfront Development Overlay District:

a. Junkyards and solid waste disposal or processing facilities.
b. Mineral extraction or surface mining.
d. Bulk fuel storage.
e. Bulk industrial chemical storage or processing.

2. Should any of the above mentioned prohibited uses already exist within the Waterfront Development Overlay District, they are subject to the nonconforming use regulations found in Article VI.

E. Development Standards

Development in the Waterfront Development Overlay District shall be consistent with the vision, goals and objectives of the City's Local Waterfront Revitalization Plan and the City's Urban Design Plan; and will also be reviewed using the following criteria:

1. Land Use & Development Pattern: New development and redevelopment in the corridor is encouraged to be mixed use, compact development and should include, if possible, infill development.

2. Sustainable Building and Site Design: Development and redevelopment of sites and buildings in the Waterfront Development Overlay District should be encouraged to incorporate energy efficiency and stormwater green infrastructure elements consistent with the most current Leadership in Energy Efficiency and Design (LEED) standards for buildings, sites and neighborhoods.

3. Natural Resource Protection: In addition to the Wetlands and Waterfront Transition criteria in this section, development and redevelopment within the WDOD shall, wherever practicable, preserve, protect and enhance water, plant and animal habitats, open spaces, scenic areas and historic/archeological resources.

4. Multi-modal Transportation: Development and redevelopment of properties within the Waterfront Development Overlay District shall enhance and provide opportunities for multi-modal transportation and circulation for all users including, but not limited to sidewalks, trails, bicycle lanes, transit stops and traffic calming measures.

5. Wetlands: Development and redevelopment of property within the WDOD shall provide appropriate protection of the City's wetland resources in order to protect wetland functions and values related to surface and ground water protection, wildlife habitat, and flood control. Development and redevelopment of property within the WDOD shall comply with Chapter 149: Freshwater Wetlands of the City of Jamestown's Code as well as any applicable State and Federal wetland regulations.

6. Stormwater: All land development activity within the WDOD must manage construction and post-construction stormwater runoff in accordance with the following regulations.

a. Any land development activity within the WDOD must comply with applicable State and Federal stormwater regulations, requirements and guidelines. Depending on the specific land development activity (as outlined in State and Federal law), this may include the preparation, submission, and approval of a Stormwater Pollution Prevention Plan (SWPPP).

b. Where feasible and when not in conflict with the SWPPP and other state or federal standards/requirements, the performance standards must be met through Green Infrastructure Best Management Practices in the following order of preference:
   i. Infiltration on-site through such practices including, but not limited to, bioretention cells/rain gardens, constructed wetlands, filter strips, porous pavement, retentive grading, swales, and subsurface infiltration.
   ii. Capture and reuse of runoff through low- impact practices including, but not limited to, green roofs, blue roofs, and rain barrels or cisterns.

F. Waterfront Transition Areas

Areas immediately surrounding the Chadakoin River represent opportunities to reconnect the community with the River; contain wildlife that are a natural resource of local and statewide significance; and have the potential to improve visual aesthetics and water quality. The Waterfront Transition Areas are within the WDOD and provide special controls over vegetation, land use and development in areas adjacent to the River in order to provide improved waterfront access, riverbank stabilization, and habitat enhancements, and to protect the valuable and limited water resources in the City of Jamestown.

1. Intent and Limits of Waterfront Transition Areas.

a. West Side Naturalized Transition Area – this area stretches along the Chadakoin River from the western City boundary to the Fairmount Avenue Bridge. The intent of this sub-area is to develop a riparian buffer with a naturalized stream bank and a mixed plant community. Vegetation would include canopy trees, understory trees, shrubs, and herbaceous perennials.

b. West Side Pastoral Transition Area – this area stretches along the Chadakoin River from the Fairmount Avenue Bridge to the Sprague Street bridge. The intent of this sub-area is to develop a riparian buffer with a more pastoral and naturalized feeling. Vegetation would include native / adaptive plant species, woody shrubs, and herbaceous perennials.

c. Main Street River Transition Area – this area stretches along the Chadakoin River from the Sprague Street bridge to the Harrison Street bridge (near Institute Street). The intent of this sub-area is to develop the urban fabric and pedestrian connections to the River. This would be accomplished by encouraging the use of native plantings, developing access to the River, and encouraging a variety in use, look, and feel of the waterfront land.

d. East Side Pastoral Transition Area – this area stretches along the Chadakoin River from the Harrison Street Bridge (near Institute Street) to the Harrison Street Bridge (near Winsor Street). The intent of this sub-area is to develop a riparian buffer with a more pastoral and naturalized feeling. Vegetation would include native / adaptive plant species, woody shrubs, and herbaceous perennials.

e. East Side Naturalized Transition Area – this area stretches along the Chadakoin River from the Harrison Street Bridge (near Winsor Street) to Tiffany Avenue (the eastern City boundary). The intent of this sub-area is to develop a riparian buffer with a naturalized stream bank and a mixed plant community. Vegetation would include canopy trees, understory trees, shrubs, and herbaceous perennials.

2. Waterfront Transition Area setback distances. The width of the Waterfront Transition Areas will vary depending on the River's width and waterfront setback distances as described below. These waterfront setbacks shall be a minimum distance from the top of bank, which is defined as the break in slope between the bank and the surrounding terrain.

In the event of a conflict between a Waterfront Transition Area setback and that in the underlying district zoning, the more restrictive setback shall prevail with respect to all buildings, structures, and parking areas.

a. In R-2 and R-C Districts, the minimum waterfront setback shall be no less than 25 feet from the top of bank; however, if 25 feet is more than 25% of the lot depth, then the waterfront setback shall be 25% of the lot depth.
b. In L-C, C-2, C-4, C-M, L-M, and M Districts, the minimum waterfront setback shall be no less than 30 feet from the top of bank.

3. The following conditions shall apply to all Waterfront Transition Areas:

a. No building, structure or parking area shall be constructed within the Waterfront Transition Areas, except for structures used exclusively for water-dependent uses as defined in the LWRP Section II 2.2 or that are designed and built specifically for the purpose of providing pedestrian access and travel along the bank (e.g. Riverwalk), for improving the safety of such access and travel, or for facilitating boat access to the river without disturbing pedestrian access.
b. Snow storage areas designated pursuant to site plan shall not be located within the Waterfront Transition Areas unless the applicant can demonstrate that there is no reasonable alternative location for snow storage on the same property and measures such as infiltration areas or enhanced buffer vegetation have been incorporated into the site plan and/or stormwater treatment system to reduce the potential for erosion and contaminated runoff entering the associated watercourse as a result of snow melt.
c. Encroachments necessary to rectify a natural catastrophe for the protection of the public health, safety and welfare are allowed. Such encroachments shall be undertaken so as to minimize the impact and every reasonable effort shall be made to restore the site after the activity is completed.
d. Encroachments are allowed as necessary for providing for or improving public facilities in those cases where there is no reasonable alternative to impacting the waterfront setback area.
e. Utility lines, including power, telephone, cable, fiber, sewer and water, to the extent necessary to cross or encroach into the Waterfront Transition Area where there is no feasible alternative for providing or extending utility services, will be allowed.

4. The following are specific conditions for each Waterfront Transition Area:

a. The West Side Naturalized Transition Area and East Side Naturalized Transition Area will consist partly or wholly of heavily vegetated areas of native vegetation and trees in order to re-stabilize

the Riverbank, reduce the impact of stormwater runoff, reduce sedimentation, and increase infiltration and base flows in the Chadakoin River. The two sub-areas will include a naturalized stream bank and a riparian buffer with mixed plant community, canopy trees, understory trees, shrubs, and herbaceous perennials. The specific standards for the vegetation and maintenance of these areas are as follows:

i. All lands not already developed within these two sub-areas shall be left in an undisturbed, naturally vegetated condition, unless said development is one of the exceptions listed in Section F.3.a. (e.g. a water-dependent use, Riverwalk, or boat access). Any areas within these two sub-areas that are not vegetated, otherwise covered, or that are disturbed during construction shall be re-vegetated with a mixed plant community including canopy trees, understory trees, shrubs, and herbaceous perennials. If the construction related disturbance impacts tree or shrub species, the disturbed area shall be restored using the same species of trees and shrubs. Supplemental planting and landscaping with appropriate species of vegetation to re-stabilize the Riverbank, reduce the impact of stormwater runoff, reduce sedimentation, and increase infiltration and base flows in the River shall be permitted.

ii. The clearing of trees within these two sub-areas that are not dead, diseased, or heavily damaged by ice storms or other natural events, and the clearing of any other vegetation other than invasive species, is not permitted, unless the clearing is required for the development of a water-dependent use, Riverwalk, or boat access.

iii. Areas within these two sub-areas shall not be mowed more than 1 time per calendar year after the effective date of these regulations. Mowing shall not be undertaken until after August 15th of each year in order to prevent impacts to ground nesting species. Mowing of existing lawn areas or for agricultural activities is exempt from this requirement.

iv. The creation of lawn areas within these two sub-areas is not permitted after the effective date of these regulations.

b. The West Side Pastoral Transition Area and East Side Pastoral Transition Area will consist partly or wholly of pastoral areas of native and adaptive plant species in order to balance environmental and public waterfront access needs. The two sub-areas will balance the environmental needs to re-stabilize the Riverbank, reduce the impact of stormwater runoff, reduce sedimentation, and increase infiltration and base flows in the Chadakoin River with the need to provide both physical and visible access to the waterfront. The two sub-areas will include a combination of naturalized and pastoral stream banks and a riparian buffer with native / adaptive plant species, woody shrubs, and herbaceous perennials. The specific standards for the vegetation and maintenance of these areas are as follows:

i. All lands not already developed within these two sub-areas shall be left in an undisturbed, naturally vegetated condition, unless said development is one of the exceptions listed in Section F.3.a. (e.g. a water-dependent use, Riverwalk, or boat access). Any areas within these two sub-areas that are not vegetated, otherwise covered, or that are disturbed during construction shall be re-vegetated with native / adaptive plant species, woody shrubs, and herbaceous perennials. Supplemental planting and landscaping with appropriate species of vegetation to re-stabilize the Riverbank, reduce the impact of stormwater runoff, reduce sedimentation, and increase infiltration and base flows in the River shall be permitted.

ii. The clearing of trees and woody shrubs within these two sub-areas shall be allowed in order to improve public access (both physical and visual) to the waterfront; however, it is encouraged to refrain from removing trees and woody shrubs that are not dead, diseased, or heavily damaged by ice storms or other natural events. The clearing of any other vegetation other than invasive species, is not permitted, unless the clearing is required for the development of a water-dependent use, Riverwalk, or boat access.

iii. Areas within these two sub-areas between the water's edge and the top of bank shall not be mowed more than 1 time per calendar year after the effective date of these regulations. In these areas, mowing shall not be undertaken until after August 15th of each year in order to prevent impacts to ground nesting species. Areas within these two sub-areas between the top of bank and the minimum setback shall not be mowed more than 2 times per calendar year after the effective date of these regulations. Mowing of existing lawn areas or for agricultural activities is exempt from this requirement.

iv. The creation of lawn areas within these two sub-areas is not permitted after the effective date of these regulations.

c. The Main Street River Transition Area will consist partly or wholly of manicured landscaping and paved / stoned surfaces to facilitate public access to the waterfront. The sub-area will include a combination of paved / stoned, manicured, pastoral, and naturalized stream banks and a riparian buffer that is, for the most part, highly manicured and vegetated with lawn grass, bushes, and trees. The specific standards for the vegetation and maintenance of this area are as follows:

i. Lands within this sub-area shall have a manicured park-like feel with vegetation including trees, bushes, grasses and other habitat. The use of native vegetation is encouraged.

ii. Lands within this sub-area may be developed with water-dependent uses, Riverwalk (including occasional trail spurs to the River's edge and meeting the specifications of the City's Riverfront Trail system), or boat access.

iii. Paving with concrete, asphalt, stone or other material for all other water enhanced uses (such as a patio or other outdoor seating or use) is permitted; however, such impervious surfaces will be located a minimum of 15 feet from the River.

G. Procedure for Review.

1. Any proposed principal building or any proposed or expanded paved area larger than 5,000 square feet that would be partially or entirely located within the WDOD shall be submitted for review by the Planning Board. Site plan review shall be conducted in accordance with the procedures established in the zoning code. In the event of a conflict between the regulations of the WDOD and those of the Site Plan Review process at §300 Article IX of the City of Jamestown Zoning Ordinance the regulations of the WDOD shall apply. All projects within this district shall be reviewed within 45 days of submitting the building or site plan.

2. All plans for exterior work within the WDOD shall require the following:

a. Elevation drawings to include the existing and proposed design;

b. Site plans showing location and dimensions of all existing structure(s), State and federal wetlands and associated proposed impacts, proposed improvements on site, and proposed stormwater management and treatment design; and
c. Description of (if any) waterfront amenities; public waterfront access; riparian buffers, and wetland mitigation.

H. Review Criteria.

In accordance with the Local Waterfront Revitalization Program Consistency Review Law, codified at Chapter 300 of the City of Jamestown Code, the Planning Board shall examine the following criteria in determining whether the project complies with the intent of this chapter. The Planning Board shall not approve a project unless it satisfies each of the following criteria.

1. The project shall be consistent with all water-dependent and water-enhanced use(s) within the WDOD and the specific sub-district in which the project is located;

2. The project shall be consistent with the general character of the waterfront, the WDOD, and the specific sub-district in which the project is located;

3. The project shall be consistent with the LWRP;

4. The project shall be consistent with the design guidelines described in the Urban Design Plan;

5. The project shall be consistent with the zoning regulations; and

6. The project shall be consistent with the Development Standards and other regulations within this section.

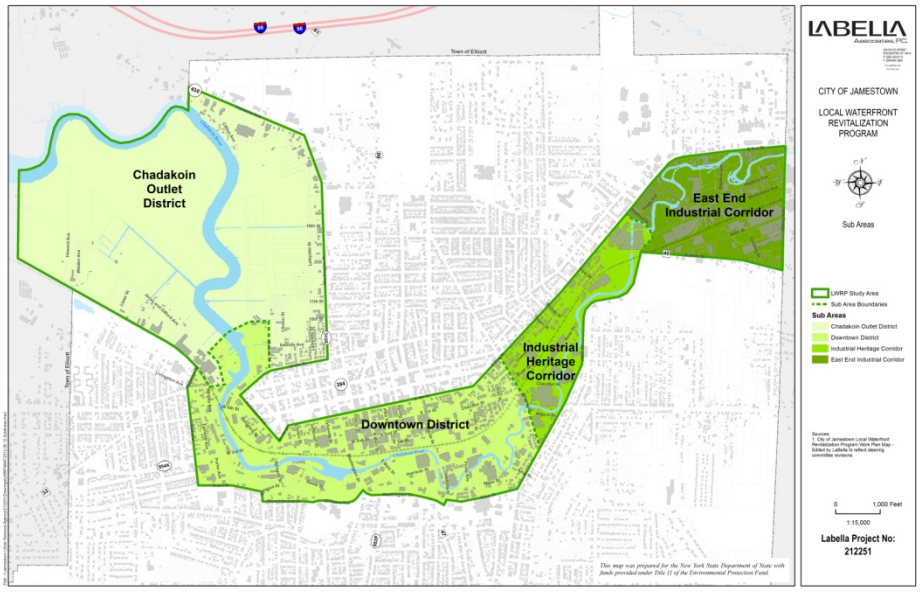
I. Exception to Review.

Nothing in this article shall be construed to prevent the construction, reconstruction, alteration, restoration or demolition of any unsafe or dangerous feature which is determined to be a threat to public safety by the Building Inspector.

J. Appeal Procedure.

Should an applicant choose to appeal a decision of the Planning Commission, the Commission shall review the proposed work at its next scheduled meeting. In the event that the applicant chooses to appeal the decision of the Planning Commission, said applicant shall have 30 days from the date of filing said decision with the City Clerk in which to commence special proceedings pursuant to the provisions of Article 78 of the Civil Practice Law and Rules.

Exhibit 1. District and Sub-District Map



SUPPORTING DOCUMENTS

Document 1: Economic and Market Analysis

Document 2: Ecological Conditions and Living Infrastructure Framework

Document 3: Urban Design Analysis

Document 4: Inventory and Analysis of Transportation and Municipal Infrastructure Systems

W-ZHA, LLC

ECONOMIC FRAMEWORK AND MARKET ASSESSMENTS

CHADAKOIN RIVER CENTRAL STUDY AREA

Submitted by:

W-ZHA, LLC

Submitted to

LaBella Associates

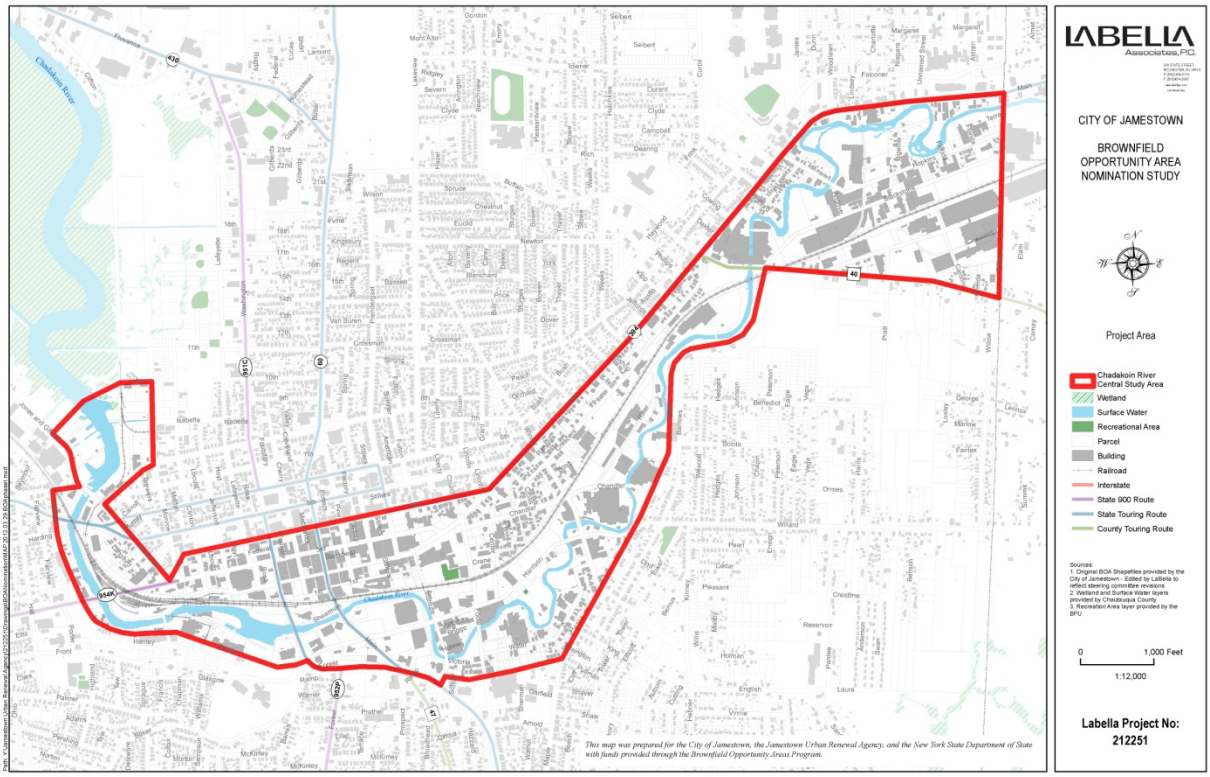
July 2013

TABLE OF CONTENTS

Introduction 1
Overview of the Study Area 1
Economic Framework 3
Economic and Social Considerations 21
Market Analysis 24
Keys to Success 40

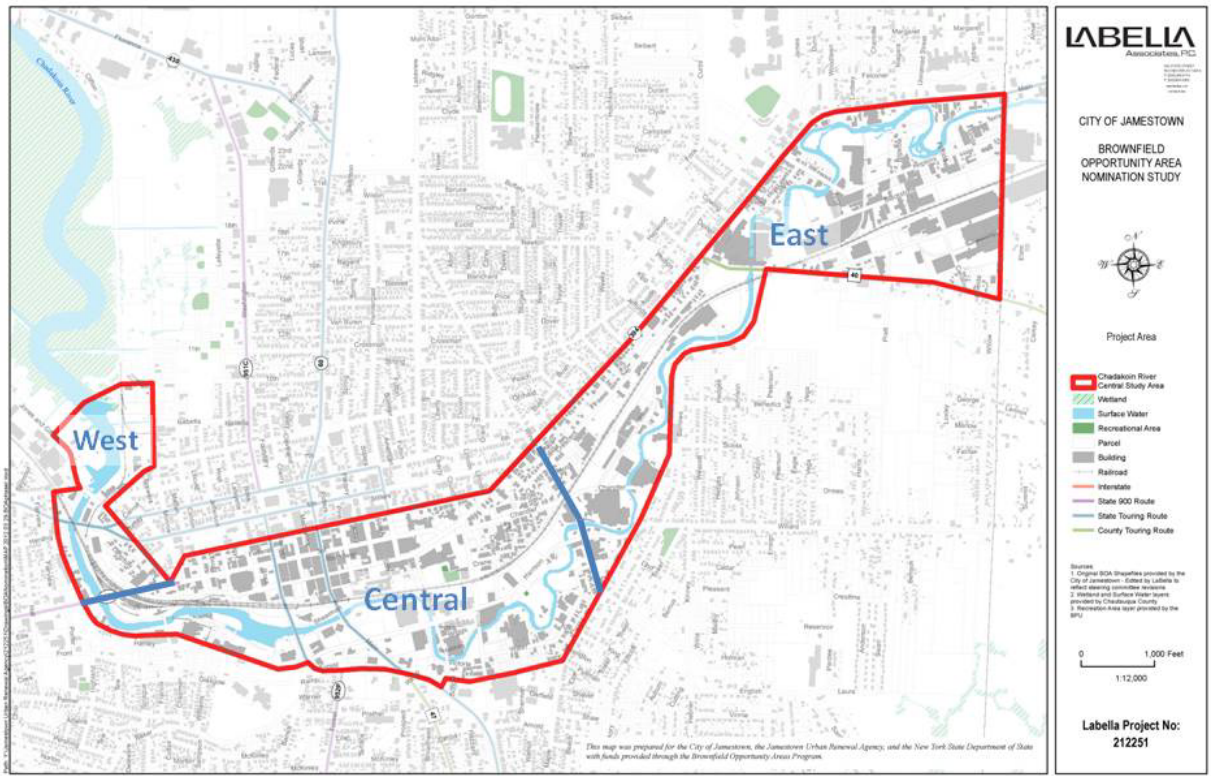
INTRODUCTION

W-ZHA was retained to identify market and economic trends impacting the Jamestown economy and analyze the redevelopment potential for the Chadakoin River Central Study Area ("Study Area"). This Technical Memorandum summarizes W-ZHA's economic analysis and market conclusions.



OVERVIEW OF THE STUDY AREA

There are significant land use variations within the Study Area boundaries. W-ZHA divided the Study Area into three sections: East, Central, and West. The boundaries of the sections are depicted on the following map.



The West section of the Study Area incorporates McCrea Point and the Fairmount Bridge/6th Street bridge areas. McCrea Point has a park with a small docking area. It appears that most of the people that use McCrea Point Park are local residents. Boaters can access Chautauqua Lake via the Chadakoin River from this point. It is difficult to access the Downtown via the River from McCrea Point.

This West section is accessible to a number of bike routes. It is easily accessed from the 42 mile Chautauqua Lake route. This bike route, which goes around the Lake, is one of the most popular bike routes for visitors and locals alike.

The Central section of the Study Area runs from the Third Street bridge to Winsor Street. North of the River, the boundary incorporates a portion of Jamestown's Central Business District. South of the River major anchors in, or adjacent to, the Central section of the Study Area include BPU, the Jamestown Area Medical Association, WCA Hospital and businesses like the Urology Center, Phoenix Metals and Artone Manufacturing. There are also a number of restaurants, pharmacies and general merchandise stores in the Central section of the Study Area.

A Healthcare Corridor concept is developing in the Central section that emanates from WCA Hospital. The Healthcare Corridor begins at Foote Street and extends to the Jones Memorial Health Campus and the Riverwalk Center. The concept is to cluster health and wellness uses in a physically attractive and connected environment in order to create land use synergy. Uses involved in technology, education, manufacturing and health and social services could all be part of the health and wellness cluster.

The Riverwalk passes through the central portion of the Study Area. The Riverwalk follows the River from the BPU Island, past the Riverwalk Center to Harrison Street.

To the east of Winsor Street is the Study Area's East section. Land use becomes mostly industrial and light industrial in the East section. Industrial uses benefit from low utility costs because of BPU's presence to the west. These uses also benefit from a strong transportation network and the presence of rail.

ECONOMIC FRAMEWORK

Observation: Chautauqua County and the Region have not grown significantly over the last decade and are not projected to grow over the next 5 years.

The Buffalo Niagara Region consists of Buffalo, Niagara, Chautauqua, Cattaraugus, and Allegany counties. Over the last 10 years, this region lost population, but had a slight increase in households. The Southern Tier West Region consists of Chautauqua, Cattaraugus, and Allegany counties. The Southern Tier West Region contains 19 percent of the Buffalo Niagara Region's population. Like the Buffalo Niagara Region, the Southern Tier West Region lost population, but had a slight increase in households over the last 10 years.

Population and Household Change
Buffalo Niagara Region, Southern Tier West Region, and Chautauqua County
2000 - 2012

	2000	2012	Change #	Change %
Population				
Buffalo Niagara Region /1	1,443,743	1,395,556	(48,187)	-3.3%
Southern Tier West Region /2	273,632	263,285	(10,347)	-3.8%
Chautauqua County	139,750	134,335	(5,415)	-3.9%
Households				
Buffalo Niagara Region /1	573,266	580,077	6,811	1.2%
Southern Tier West Region /2	104,547	104,998	451	0.4%
Chautauqua County	54,515	54,293	(222)	-0.4%

1. The Buffalo Niagara Region includes Erie, Niagara, Chautauqua, Cattauragus, and Allegany counties.
2. The Southern Tier West Region includes Chautauqua, Cattauragus, and Allegany counties.

Source: Claritas, Inc.; W-ZHA

f:\8000s, misc\80083 LaBella Jamestown\[demo.xls]pop

W-ZHA, LLC

With an estimated 2012 population of approximately 31,000, Jamestown is the largest City in Chautauqua County. The "Jamestown Area" contains approximately 30 percent of the County's population and 31 percent of its households. W-ZHA defines the Jamestown Area as the City of Jamestown, Jamestown West, Celoron, Lakewood, and Falconer. The County, the Jamestown Area, and the City lost population and households between 2000 and 2012.

Population and Household Change
Chautauqua County, Jamestown Area, and Jamestown
2000 - 2012

	2000	2012	Change #	Change %
Population				
Chautauqua County	139,750	134,335	(5,415)	-3.9%
Jamestown Area	41,358	39,782	(1,576)	-3.8%
City of Jamestown	31,730	30,958	(772)	-2.4%
Households				
Chautauqua County	54,515	54,293	(222)	-0.4%
Jamestown Area	17,682	17,001	(681)	-3.9%
City of Jamestown	13,558	13,057	(501)	-3.7%

The Jamestown Area is defined as Jamestown, Jamestown West, Celoron, Lakewood and Falconer.

Source: Claritas, Inc.; W-ZHA

f:\8000s, misc\80083 LaBella Jamestown\[demo.xls]jamestown pop

Claritas, Inc. projects population and households over a five year period. Claritas projects that the number of County households will not change much over the next five years. Claritas projects that the Jamestown Area and the City of Jamestown will lose households over the next five years.

W-ZHA, LLC

Population and Household Projection
Buffalo Niagara Region, Southern Tier West Region, and Chautauqua County
2012 - 2017

	2012	2017	Change #	Change %
Population				
Chautauqua County	134,335	132,906	(1,429)	-1.1%
Jamestown Area	39,782	39,128	(654)	-1.6%
City of Jamestown	30,958	30,464	(494)	-1.6%
Households				
Chautauqua County	54,293	54,136	(157)	-0.3%
Jamestown Area	17,682	16,788	(894)	-5.1%
City of Jamestown	13,558	12,872	(686)	-5.1%

Source: Claritas, Inc.; W-ZHA

f:\8000s, misc\80083 LaBella Jamestown\[demo.xls]Sheet2

Observation: Most of the households in Chautauqua County do not have children at home; one-and two-person household make up two-thirds of the County's households.

Most households in the County, Jamestown Area and the City of Jamestown do not have children under the age of 18 years old. The share of households with children at home has been decreasing in the County.

Households by the Presence of Children
Select Areas
2000, 2012

	2000		2012	
	With Children < 18	Without Children < 18	With Children < 18	Without Children < 18
Buffalo Niagara	32%	68%	29%	71%
Southern Tier West	34%	66%	30%	70%
Chautauqua	33%	67%	30%	70%
Jamestown Area	31%	69%	32%	68%
Jamestown	32%	68%	31%	69%

Source: Claritas, Inc.; W-ZHA

F:\8000s, misc\80083 LaBella Jamestown\[households with children.xls]Sheet1

Two-thirds of the households in the Jamestown Area and the City are one- and two-person households. The average size of a household in the County and the Jamestown Area is 2.26.

W-ZHA, LLC

Household Size Chautauqua County, Jamestown Area, Jamestown 2012			
	Chautauqua County	Jamestown Area	Jamestown
1 Person	30%	35%	35%
2 Person	34%	32%	31%
3 Person	16%	15%	15%
4 Person	12%	11%	11%
4+ Persons	5%	5%	5%

Source: Claritas, Inc.; W-ZHA

F:\8000s, misc\80083 LaBella Jamestown\[household size.xls]Sheet1

Observation: Chautauqua County has the relatively small share of young households. These households are important contributors to the labor force and their scarcity could prove to be an economic development constraint.

The County and the Jamestown Area lost households from 2000 to 2012. Most of these losses occurred among younger households. The share of City households under the age of thirty five went from 25 percent in 2000 to 21 percent in 2012. The share of households under the age of forty five went from 45 percent to 40 percent between 2000 and 2012.

W-ZHA, LLC

Household Change by Household Age
City of Jamestown
1990, 2000, 2012

Household Age	2000 Hshlds	2000 Share of Total	2012 Hshlds	2012 Share of Total	Change 2000-2012 #	Change 2000-2012 %
15-24	1,025	8%	879	7%	(146)	-14%
25-34	2,295	17%	1,792	14%	(503)	-22%
35-44	2,720	20%	2,492	19%	(228)	-8%
45-54	2,501	18%	2,680	21%	179	7%
55-64	1,610	12%	2,205	17%	595	37%
65-74	1,563	12%	1,393	11%	(170)	-11%
75-84	1,353	10%	1,170	9%	(183)	-14%
85+	491	4%	446	3%	(45)	-9%
Total	13,558		13,057		(501)	-4%
Share of Households Under 35 Years Old		*24%*		*20%*		
Share of Households Under 45 Years Old		*45%*		*40%*		

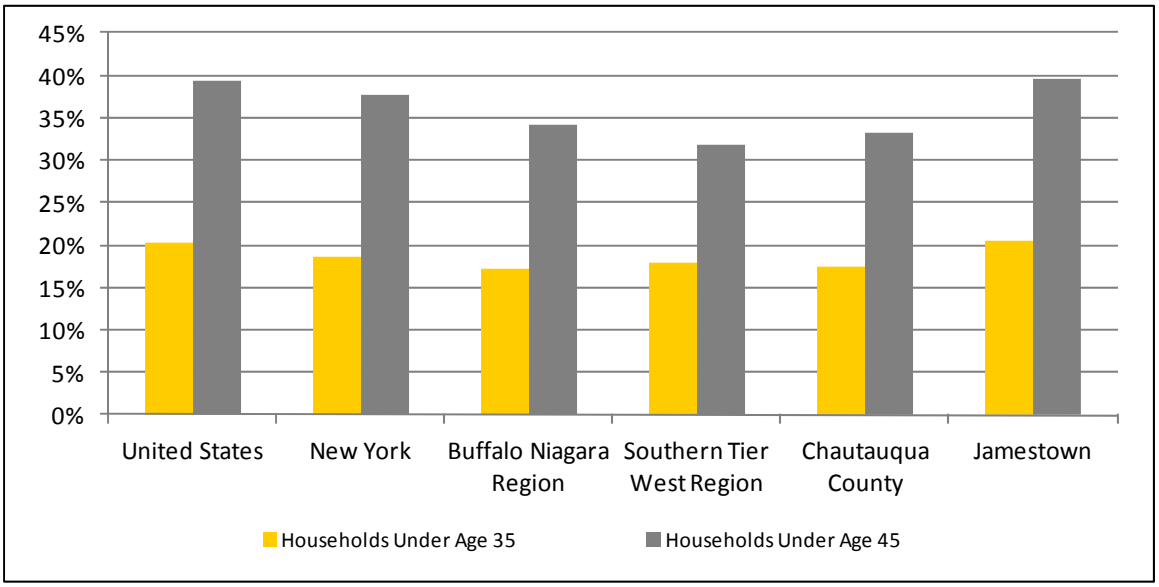
Source: Claritas, Inc.; W-ZHA

F:\8000s, misc\80083 LaBella Jamestown\[demo.xls]jamestown age

The aging of the Jamestown household is a demographic phenomenon, not an economic phenomenon. Jamestown's household age changes are consistent with national trends. In fact, it appears that Jamestown has been more successful at retaining younger households as compared to the County and the State.

W-ZHA, LLC

The Share of Households Under 35 and Under 45 Years Old
U.S., New York, Buffalo Niagara Region, Southern Tier West Region, and City of Jamestown
2012



Source: Claritas, Inc.; W-ZHA
Demo/sht 8

Chautauqua County, however, has experienced a more significant reduction in younger households. In the County, today, only 33 percent of the households are under 45 years old and 18 percent are under the age of 35. Chautauqua County is where most of Jamestown's workers reside.

W-ZHA, LLC

Household Change by Household Age
Chautauqua County
1990, 2000, 2012

	1990		2000		2012		Change 1990-2000		Change 2000-2012	
Household Age	Hshlds	Share of Total	Hshlds	Share of Total	Hshlds	Share of Total	#	%	#	%
15-24	2,907	6%	2,848	5%	2,508	5%	(59)	-2%	(340)	-12%
25-34	9,951	21%	7,387	14%	7,004	13%	(2,564)	-26%	(383)	-5%
35-44	10,873	23%	11,342	21%	8,516	16%	469	4%	(2,826)	-25%
45-54	7,785	17%	10,923	20%	11,829	22%	3,138	40%	906	8%
55-64	3,792	8%	7,675	14%	10,392	19%	3,883	102%	2,717	35%
65-74	4,060	9%	7,145	13%	6,993	13%	3,085	76%	(152)	-2%
75-84	4,176	9%	5,457	10%	5,064	9%	1,281	31%	(393)	-7%
85+	3,547	8%	1,738	3%	1,987	4%	(1,809)	-51%	249	14%
Total	47,091		54,515		54,293		7,424	16%	(222)	0%
Share of Households Under 35 Years Old				*19%*		*18%*				
Share of Households Under 45 Years Old				40%		33%				

Source: Claritas, Inc.; W-ZHA

F:\8000s, misc\80083 LaBella Jamestown\[demo.xls]county age

Observation: Jamestown has a higher share of younger households, but they are not thriving economically.

Jamestown's median household income is lower than the region's and has not grown as quickly as the region's since 2000.

Median Household Income
Select Areas
2000, 2012

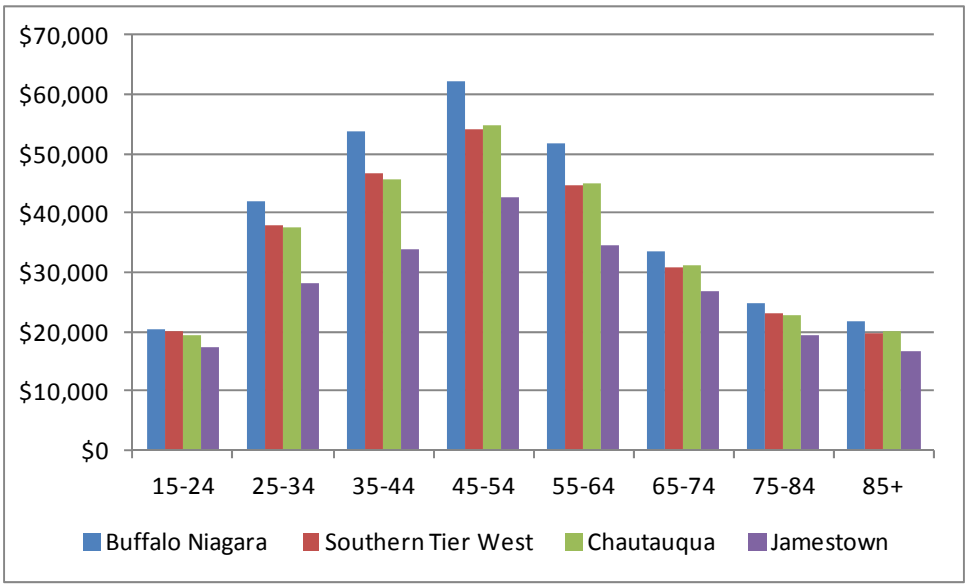
	2000	2012	Change #	Change %
Buffalo Niagara	$37,678	$43,904	$6,226	17%
Southern Tier West Region	$33,360	$38,930	$5,570	17%
Chautauqua County	$33,600	$38,540	$4,940	15%
Jamestown Area	$28,320	$31,650	$3,330	12%
City of Jamestown	$26,070	$29,310	$3,240	12%

Source: Claritas, Inc.; W-ZHA

f:\8000s, misc\80083 LaBella Jamestown\[demo.xls]Sheet4

Jamestown's younger households have lower median incomes as compared to the region. This is a function of their employment status and education.

Median Household Income By Householder Age
Selected Areas
2012



Jamestown's unemployment rate is much higher than the region's unemployment rate. Unemployment is a factor depressing incomes.

Civilian Labor Force Employment
Select Areas
2012

	Unemployment Rate
Buffalo Niagara	8.4%
Southern Tier West	8.5%
Chautauqua County	8.4%
Jamestown Area	12.5%
Jamestown	12.8%

Source: Claritas, Inc.; W-ZHA

f:\8000s, misc\80083 LaBella Jamestown\[civilian labor force education.xls]Sheet3

The educational attainment of Jamestown residents also depresses household income. Only 15 percent of Jamestown's adult population possesses a Bachelors degree or higher. This compares to 29 percent in the County.

Educational Achievement
Selected Area
2012

Educational Achievement	Buffalo Niagara	Southern Tier West	Chautauqua County	Jamestown
High School Diploma +	88%	87%	87%	85%
Associates Degree +	37%	31%	33%	31%
Bachelors Degree +	26%	19%	20%	18%
Master/Professional/Doctorate	12%	9%	9%	7%

Source: Claritas, Inc.; W-ZHA

F:\8000s, misc\80083 LaBella Jamestown\[civilian labor force education.xls]Sheet5

The County's per capita income is above the Southern Tier Region's, but below the Buffalo Niagara Region's. Jamestown's per capita income is low at $17,250.

Per Capita Income
Select Areas
2012

	Per Capita Income
Buffalo Niagara Region	$24,044
Southern Tier West Region	$19,962
Chautauqua County	$20,358
Jamestown Area*	$18,997
City of Jamestown	$17,251

* The Jamestown Area is defined as Jamestown, Jamestown West, Celoron, Lakewood and Falconer.

Source: Claritas, Inc.; W-ZHA

f:\8000s, misc\80083 LaBella Jamestown\[demo.xls]Sheet3

W-ZHA, LLC

Observation: The Jamestown Area has more jobs than it does labor force. Approximately, two-thirds of the City of Jamestown's jobs are held by people who live outside of the City.

Many of the higher income households in Chautauqua County work in Jamestown. The City of Jamestown has more jobs (13,523 jobs in 2010) than employed residents (11,152 people in 2010). Approximately two-thirds of the City of Jamestown's jobs are held by people who live outside of the City. The majority of Jamestown residents (57%) are actually working outside of the city.

Job Inflow/Outflow
City of Jamestown
2010

Employed in City	13,523	
Employed in City, Lives Outside	8,716	64%
Employed and Lives in City	4,807	36%
Lives in City	11,152	
Lives in City, Works Outside	6,345	57%
Lives and Works in City	4,807	43%

Source: Census; W-ZHA

f:\8000s, misc\80083 LaBella Jamestown\[emp stats.xlsx]Sheet7

Observation: The State's Department of Labor indicates that Chautauqua County lost 9 percent of its jobs between 2000 and 2012. Most of the job losses occurred in the manufacturing industry, while there were significant job gains in the education and health services industries.

According to the State of New York's Department of Labor, Chautauqua County lost 9 percent of its jobs between 2000 and 2012. Over this same time period, the Buffalo Niagara Region (Erie, Niagara, Chautauqua, Cattaraugus, and Alleghany Counties) lost 2 percent of their jobs. Erie and Niagara Counties contain 84 percent of the employment in the Western Region.

W-ZHA, LLC

At Place of Work Employment Trends
Chautauqua County and Buffalo Niagara Region
2000 - 2012

	000's		Change	
	2000	**2012**	# (000's)	%
Buffalo Niagara Region	669.5	652.9	-16.6	-2%
Chautauqua County	59.5	53.9	-5.6	-9%
County Share of Regional Jobs	*8.9%*	*8.3%*		

Source: State of New York, Department of Labor; W-ZHA

F:\8000s, misc\80083 LaBella Jamestown\[employment trends state.xls]Sheet2

Most of the job losses in Chautauqua County occurred in the manufacturing industry. Most of the job gains occurred in the education and health industries.

At Place of Work Employment Trends
Chautauqua County
2000 - 2012

	000's		Change	
	2000	**2012**	# (000's)	%
Natural Resources Mining and Construction	1.8	2.2	0.4	22%
Manufacturing	**13.8**	**9.9**	**-3.9**	**-28%**
Trade Transportation and Utilities	10.2	9	-1.2	-12%
Information	1	0.7	-0.3	-30%
Financial Activities	1.3	1.4	0.1	8%
Professional and Business Services	3.5	3	-0.5	-14%
Education and Health Services	**7.3**	**9.4**	**2.1**	**29%**
Leisure and Hospitality	5.8	5.2	-0.6	-10%
Other Services	3.4	2.2	-1.2	-35%
Government	11.4	10.9	-0.5	-4%
Total	59.5	53.9	-5.6	-9%

Source: State of New York, Department of Labor; W-ZHA

F:\8000s, misc\80083 LaBella Jamestown\[employment trends state.xls]Sheet1

W-ZHA, LLC

Observation: According to the United States Census, Chautuaqua County lost 6 percent of its jobs between 2002 and 2010, but the Jamestown Area, with almost half of the County's jobs, lost only 1 percent of its jobs.

The U.S. Census estimates employment by geographic area. The at-place-of-employment Census data is different from the State because the Census employs a different methodology and the Census does not include part-time workers or seasonal workers.

Primary Job Trends
Chautauqua County
2002-2010

	2002		2010		Change	
	Jobs	Share of Total	2010	Share of Total	#	%
Agriculture, Forestry, Fishing and Hunting	439	*1%*	434	*1%*	(5)	-1%
Mining, Quarrying, and Oil/Gas Extraction	156	*0%*	170	*0%*	14	9%
Utilities	289	*1%*	214	*0%*	(75)	-26%
Construction	1,287	*3%*	1,263	*3%*	(24)	-2%
Manufacturing	12,498	*26%*	9,419	*21%*	(3,079)	-25%
Wholesale Trade	1,447	*3%*	1,039	*2%*	(408)	-28%
Retail Trade	5,853	*12%*	5,434	*12%*	(419)	-7%
Transportation and Warehousing	1,245	*3%*	1,113	*2%*	(132)	-11%
Information	714	*1%*	625	*1%*	(89)	-12%
Finance and Inusrance	711	*1%*	804	*2%*	93	13%
Real Estate	362	*1%*	446	*1%*	84	23%
Professional, Scientific, and Technical Services	1,021	*2%*	860	*2%*	(161)	-16%
Management of Companies	238	*0%*	112	*0%*	(126)	-53%
Admin Support & Waste Management	1,179	*2%*	2,247	*5%*	1,068	91%
Educational Service	5,652	*12%*	5,372	*12%*	(280)	-5%
Health Care and Social Services	5,662	*12%*	7,174	*16%*	1,512	27%
Arts,Entertainment and Recreation	536	*1%*	396	*1%*	(140)	-26%
Accomodations and Food Services	3,808	*8%*	3,569	*8%*	(239)	-6%
Other Services (exc Public Admin)	1,919	*4%*	1,861	*4%*	(58)	-3%
Public Admin	3,918	*8%*	3,342	*7%*	(576)	-15%
Total	48,934	*100%*	45,894		(3,040)	-6%

Source: U.S. Census; W-ZHA

F:\8000s, misc\80083 LaBella Jamestown\[emp stats.xlsx]county

According to the Census, in 2010, the City of Jamestown contained approximately one-third of the County's jobs. The Jamestown Area contained almost half of all the jobs in Chautauqua County.

W-ZHA, LLC

Jamestown Area's and Jamestown City's Share of Chautauqua County Jobs 2010

	County Jobs	Jamestown Area Share	Jamestown City Share
Agriculture, Forestry, Fishing and Hunting	434	0%	0%
Mining, Quarrying, and Oil/Gas Extraction	170	28%	28%
Utilities	214	7%	7%
Construction	1,263	28%	18%
Manufacturing	9,419	45%	23%
Wholesale Trade	1,039	41%	27%
Retail Trade	5,434	55%	21%
Transportation and Warehousing	1,113	34%	24%
Information	625	48%	40%
Finance and Inusrance	804	63%	38%
Real Estate	446	51%	28%
Professional, Scientific, and Technical Services	860	53%	40%
Management of Companies	112	84%	36%
Admin Support & Waste Management	2,247	62%	57%
Educational Service	5,372	35%	27%
Health Care and Social Services	7,174	58%	52%
Arts,Entertainment and Recreation	396	65%	64%
Accomodations and Food Services	3,569	40%	20%
Other Services (exc Public Admin)	1,861	47%	35%
Public Admin	3,342	11%	8%
Total	45,894	44%	34%

Source: U.S. Census; W-ZHA

f:\8000s, misc\80083 LaBella Jamestown\[emp stats.xlsx]share of county

Where Chautauqua County lost 6 percent of its primary jobs between 2002 and 2010, the Jamestown Area only lost approximately 245 jobs, or 1 percent of its primary employment base during this time period.

W-ZHA, LLC

At Place of Work Primary Job Trends
Chautauqua County and the Jamestown Area
2002-2010

	2002	2010	Change #	Change %
Chautauqua County	48,934	45,894	-3,040	-6%
Jamestown Area	20,636	20,382	-254	-1%
Jamestown Area Share of County Jobs	*42.2%*	*44.4%*		

Source: U.S. Census; W-ZHA

f:\8000s, misc\80083 LaBella Jamestown\[emp stats.xlsx]jamestown area total

Observation: Both the health care and social service industry and the manufacturing industry are critical industries in the Jamestown Area economy.

The manufacturing industry and the health care and social service industry are the two largest industries in the Jamestown Area followed by retail and education. Approximately, four out of ten jobs in the Jamestown Area are either in the manufacturing or health care and social service industries.

Primary Job Trends
The Jamestown Area*
2002-2010

	2002 Jobs	2002 Share of Total	2010	2010 Share of Total	Change #	Change %
Agriculture, Forestry, Fishing and Hunting	24	*0%*	1	*0%*	-23	-96%
Mining, Quarrying, and Oil/Gas Extraction	34	*0%*	48	*0%*	14	41%
Utilities	38	*0%*	16	*0%*	-22	-58%
Construction	269	*1%*	357	*2%*	88	33%
Manufacturing	5,894	*29%*	4,215	*21%*	-1,679	-28%
Wholesale Trade	525	*3%*	429	*2%*	-96	-18%
Retail Trade	3,386	*16%*	3,000	*15%*	-386	-11%
Transportation and Warehousing	356	*2%*	382	*2%*	26	7%
Information	373	*2%*	300	*1%*	-73	-20%
Finance and Inusrance	375	*2%*	504	*2%*	129	34%
Real Estate	158	*1%*	228	*1%*	70	44%
Professional, Scientific, and Technical Services	514	*2%*	458	*2%*	-56	-11%
Management of Companies	187	*1%*	94	*0%*	-93	-50%
Admin Support & Waste Management	602	*3%*	1,398	*7%*	796	132%
Educational Service	1,786	*9%*	1,872	*9%*	86	5%
Health Care and Social Services	3,100	*15%*	4,156	*20%*	1,056	34%
Arts,Entertainment and Recreation	236	*1%*	257	*1%*	21	9%
Accomodations and Food Services	1,449	*7%*	1,417	*7%*	-32	-2%
Other Services (exc Public Admin)	797	*4%*	880	*4%*	83	10%
Public Admin	533	*3%*	370	*2%*	-163	-31%
Total	20,636	*100%*	20,382	*100%*	-254	-1%

* The Jamestown Area is defined as Jamestown, West Jamestown, Celeron, Lakewood, the Cummins Property and Falconer.

Source: U.S. Census; W-ZHA

f:\8000s, misc\80083 LaBella Jamestown\[emp stats.xlsx]jamestown area

W-ZHA, LLC

Health care is an important economic engine for the City of Jamestown. With 3,725 jobs, the health care industry is the City's largest industry. Over one-quarter of the jobs in the City are in the health care industry. Over 850 new health care jobs were created in the City between 2002 and 2010.

Primary Job Trends
City of Jamestown
2002-2010

	2002		2010		Change	
	Jobs	Share of Total	2010	Share of Total	#	%
Agriculture, Forestry, Fishing and Hunting	24	*0%*	1	*0%*	(23)	-96%
Mining, Quarrying, and Oil/Gas Extraction	12	*0%*	48	*0%*	36	300%
Utilities	38	*0%*	16	*0%*	(22)	-58%
Construction	184	*1%*	228	*2%*	44	24%
Manufacturing	3,750	*26%*	2,130	*16%*	(1,620)	-43%
Wholesale Trade	343	*2%*	283	*2%*	(60)	-17%
Retail Trade	1,697	*12%*	1,155	*9%*	(542)	-32%
Transportation and Warehousing	232	*2%*	266	*2%*	34	15%
Information	352	*2%*	252	*2%*	(100)	-28%
Finance and Inusrance	280	*2%*	304	*2%*	24	9%
Real estate	122	*1%*	124	*1%*	2	2%
Professiona, Scientific, and Technical Services	438	*3%*	342	*3%*	(96)	-22%
Management of Companies	40	*0%*	40	*0%*	0	0%
Admin Support & Waste Management	514	*4%*	1,288	*10%*	774	151%
Educational Service	1,349	*9%*	1,432	*11%*	83	6%
Health Care	2,873	*20%*	3,725	*28%*	852	30%
Arts,Entertainment and Recreation	210	*1%*	253	*2%*	43	20%
Accomodations and Food Services	765	*5%*	731	*5%*	(34)	-4%
Other Services (exc Public Admin)	657	*5%*	652	*5%*	(5)	-1%
Public Admin	413	*3%*	253	*2%*	(160)	-39%
Total	14,293	*100%*	13,523	*100%*	(770)	-5%

Source: U.S. Census; W-ZHA

F:\8000s, misc\80083 LaBella Jamestown\[emp stats on the map.xlsx]Sheet11

Anchoring the health care industry is WCA Hospital which borders the Study Area. WCA Hospital employs approximately 1,150 people at a variety of skill levels. As is true in many communities, the hospital is a very important economic anchor that not only employs residents, but services the health and social needs of the community.

The manufacturing industry is the second largest employer in the City of Jamestown. One-out-of-four County manufacturing jobs are located in the City of Jamestown and many of these jobs are located in the Study Area. While there have been significant job losses over the last two decades, manufacturing is still an important component of the City's economic base.

W-ZHA, LLC

Observation: The City of Jamestown contains two-thirds of the County's cultural and recreational jobs; many of the County's cultural and recreational anchors are located in the Downtown.

While not a big job generator, it is important to note that the City of Jamestown is the cultural and recreation center of the County. The City contained 65 percent of the County's arts, entertainment, and recreation jobs. The Jamestown Savings Ice Arena is a major recreation anchor that draws attendance from the larger region. The Downtown also contains the Reg Lenna Civic Center, the Lucille Ball-Desi Arnaz Center, and the Fenton History Center.

Observation: With the exception of motor vehicle sales, Jamestown's retail sales have increased since 2000.

Sales, Marketing & Management, Inc. tracks retail sales over time through their "Survey of Buying Power". The most recent Survey data is from 2009. The table below summarizes retail sales for Chautauqua County and Jamestown. The sales are presented in 2000 dollars in order to show real change (net of inflation). Not all retail categories are presented, so the numbers do not add to the total.

Retail Sales
Chautauqua County and the City of Jamestown
2000 and 2009

	2000	2009 [1]	Change #	Change %
Chautauqua County				
Total	$1,342,404,000	$1,412,870,000	$70,466,000	5%
Food & Beverage	$164,710,000	$250,689,000	$85,979,000	52%
Eat & Drink	$108,844,000	$109,139,000	$295,000	0%
General Merchandise	$235,535,000	$233,771,000	($1,764,000)	-1%
Furniture & Appliances	$29,147,000	$16,165,000	($12,982,000)	-45%
Motor Vehicles Parts & Dealer	$461,201,000	$205,273,000	($255,928,000)	-55%
Jamestown				
Total	$372,926,000	$359,626,000	($13,300,000)	-4%
Food & Beverage	$46,795,000	$68,494,000	$21,699,000	46%
Eat & Drink	$23,189,000	$26,638,000	$3,449,000	15%
General Merchandise	$0	$22,577,000	$22,577,000	100%+
Furniture & Appliances	$5,182,000	$5,925,000	$743,000	14%
Motor Vehicles Parts & Dealer	$228,999,000	$92,173,000	($136,826,000)	-60%

1. 2009 sales have been adjusted for inflation. The 2009 sales are in 2000 dollars.

Source: Sales, Marketing & Management; W-ZHA

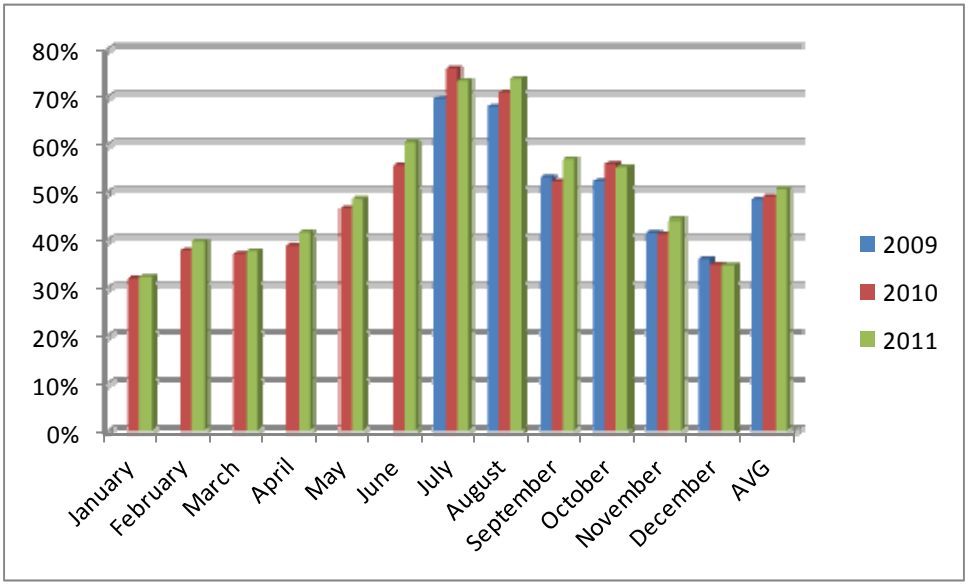
F:\8000s, misc\80083 LaBella Jamestown\[retail sales.xlsx]Sheet1

Sales in motor vehicles and parts declined significantly between 2000 and 2009 in both the County and the City. The County saw sales in food and beverage increase significantly as did the City. Jamestown's retail sales increased in eating and drinking, general merchandise and furniture and appliances over this timeframe. Where City eating and drinking sales accounted for 21 percent of the County's eating and drinking sales in 2000, City eating and drinking sales accounted for almost one-quarter of the County's eat/drink sales in 2009.

Observation: The tourism market has been hurt by the recession, but the Chautauqua County Visitor's Bureau concludes that the tourism industry is growing 2 to 3 percent per year.

Local franchise hotels have been maintaining close to 50 percent occupancy over the last three years. As is illustrated on the following graph, the summer and fall months buoy the winter and spring months.

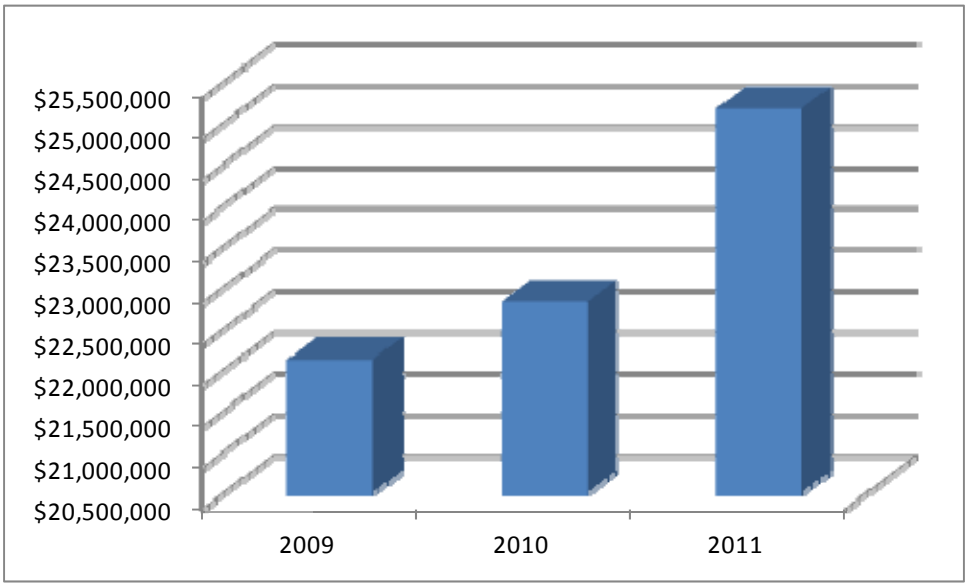
Hotel Occupancy
Chautauqua County
2009, 2010, 2011



Source: Chautauqua County Visitors Bureau

Franchise hotel revenue has increase over the last three years.

Hotel Revenue
Chautauqua County
2009, 2010, 2011



Source: Chautauqua County Visitors Bureau

It appears that the tourism economy is relatively stable.

Observation: Chautauqua County employment is projected to grow over the next 10 years.

Moody's Analytics produces at-place employment projections by industry. Moody's projects that the County's employment will increase by 8 percent between 2010 and 2020. This represents an important turn-around from the last 10 years.

Employment Projections Chautauqua County 2010-2020	Change
	%
Agriculture, Forestry, Fishing and Hunting	*na*
Mining, Quarrying, and Oil/Gas Extraction	0%
Utilities	-9%
Construction	23%
Manufacturing	-8%
Wholesale Trade	6%
Retail Trade	-1%
Transportation and Warehousing	0%
Information	14%
Finance and Inusrance	8%
Real Estate	2%
Professional, Scientific, and Technical Services	7%
Management of Companies	-4%
Admin Support & Waste Management	23%
Educational Service	12%
Health Care and Social Services	22%
Arts,Entertainment and Recreation	10%
Accomodations and Food Services	17%
Other Services (exc Public Admin)	8%
Public Admin	5%
Total	8%

Source: Moody's Analytics; W-ZHA

F:\8000s, misc\80083 LaBella Jamestown\[emp stats.xlsx]projections

Employment in health care and social services is projected to continue to grow at a rapid pace. While manufacturing is projected to lose employment, the rate of employment loss is projected to be slower in the coming decade. Significant employment gains are projected in the accommodations and food service industries.

ECONOMIC AND SOCIAL CONSIDERATIONS

Consideration: WCA Hospital is an Economic Development Anchor and Engine for Jamestown.

Bordering the Study Area is the WCA Hospital complex. WCA Hospital is the most important economic asset in Jamestown's economy. The Hospital employs over 1,100 people. According to the Census,

Chautauqua County's employment in health care and social services grew by 27 percent between 2002 and 2010. Moody's Analytics projects that the number of jobs in this industry will increase by 22 percent over the next decade.

The BOA Area is well-positioned to capitalize on this growth if the WCA Hospital and the Jamestown Area can become more competitive. For the Hospital to become more competitive it must attract more private paying patients and offer state-of-the-art quality health care. Currently, a very high share of the Hospital's patrons are Medicaid and Medicare patients. These types of patients pay less. This, in turn, makes it more difficult to attract quality specialists. Private paying clients often travel to Erie or Buffalo for their health care.

The new emergency room at the Hospital is an important step in the re-positioning of the Hospital. The state-of-the-art emergency room acts as a front door to many private patients. If the private patient feels comfortable, it is more likely that they will stay at the Hospital. As the share of private-pay patients increases the Hospital will become better able to recruit physicians.

An important contributor to the Hospital's success is the strength of its related local health care and social service cluster. The Study Area's redevelopment can be a critical component of this cluster's success. Creating an attractive, vital and functional mix of uses in the Central section of the Study Area will make it a more attractive investment location for medical, social and technical businesses. The Medical Corridor concept recognizes that a strong cluster of uses in an enhanced physical environment is necessary to successfully compete in the coming decade.

Related to this is Downtown's role as an urban destination. The Hospital recruits dozens of doctors a year, many of which are young. Many young professionals prefer Downtown living and walkable environments. As a dynamic urban center with urban living options and an 18-hour cycle of activity, the Downtown can enhance the Hospital's competitiveness.

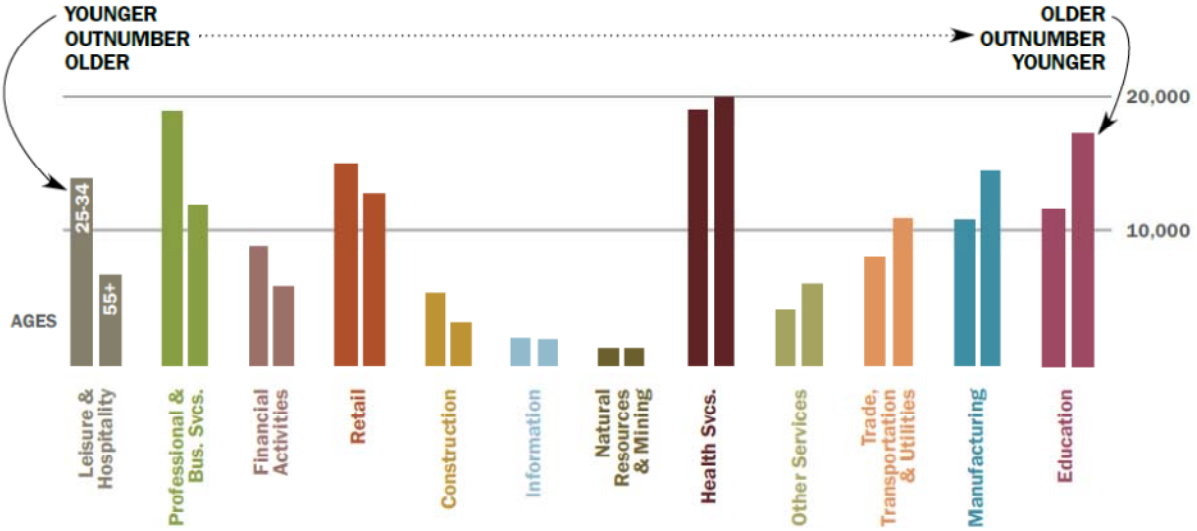
Consideration: The Manufacturing Industry Still has an Important Role in the Jamestown Economy.

The United States as well as the Jamestown Area has seen a steady erosion of manufacturing jobs over the last three to four decades. The job losses have been most pronounced in industries that produce high volume, standardized products where competition is based largely on price. The manufacturers that have been more successful in the U.S. have been those that produce specialized products. Rather than compete on labor costs, these manufacturers compete on design quality, customer service, and, often, a quick turnaround.

Many of these types of manufacturers are located in the Jamestown Area and they provide one-in-five of the Jamestown Area's jobs. These industries are located in the Jamestown Area either because they started here a long time ago or were attracted by low utility costs and the reliable workforce.

There is a problem, however. As manufacturing has been written-off as a dying industry, relatively few young people have pursued careers in the trades. At the same time (as the graph below illustrates), manufacturing has one of the oldest workforces among the major industries.

Number of Jobs by Industry and Age of Worker
Buffalo Niagara Region
2009



Source: "Buffalo Niagara Labor Market Assessment: Who's Your Economy?", Buffalo Niagara Enterprise

Buffalo Niagara Enterprise projects that in the coming years one-fifth of the manufacturing workforce will retire. As the older workforce retires there will be a labor shortage as there are few young people skilled in the trades to take their place. Those locations where there is a ready labor pool will be best positioned to retain, grow and attract manufacturing companies.

To address this looming employment shortage, the Manufacturers Association of the Southern Tier offers a program, "Dream It - Do It", that is designed to train people in the trades. The Southern Tier West Region is one of 17 regions across the country to offer this type of program and receive Federal funding. The program is currently operating in Jamestown in cooperation with the Jamestown Community College. The goal is to increase technical program enrollment in local colleges by 30 percent and satisfy local manufacturers' labor demands by 2015. While not as large as it once was, advanced manufacturing is and can be a viable industry in the Jamestown Area.

The East section of the Study Area is an important industrial area to the region. This section of the BOA Area offers good access, available and affordable land, and short rail. Importantly, the eastern portion of the BOA Area is near BPU where power is particularly inexpensive. Soon there will be a fiber-optic loop that will allow redundancy -- key to data centers and other high-tech user groups. Finally, the Mason Industrial Park due west of the BOA Area does not have much land available for new businesses.

In planning for the future, it will be important to have shovel-ready sites available (and potentially incentive packages) in the East section of the Study Area. The old Dahlstrom site, which is currently partially demolished, is a prime industrial location.

Observation: Jamestown Does Not Yet Have a Sufficient Critical Mass of Activity to Attract the Tourist.

Chautauqua County is a visitor destination throughout the year. Chautauqua Institute attracts 175,000 visitors during the summer. Other County attractions include Peek N' Peek Resort, the Brick Fire, Bemus point attractions, the Lake Erie Wine Trail, Roger Tory Peterson Institute, Luci & Desi attractions, the Reg Lenna Civic Center, and the Jamestown Savings Ice Arena. The primary trade area for the tourist market is the excursion market within 150- to 200-miles.

As acknowledged in the "Chautauqua County Branding, Development & Marketing Action Plan", most Chautauqua County towns do not have a sufficient critical mass of shopping and dining to appeal to visitors. The report notes that, in particular, the towns are weak on after 6pm activities when 70 percent of all consumer spending takes place.

W-ZHA believes that Downtown Jamestown is on the verge of having such a critical mass of activities. We agree, however, that the Downtown has yet to function as a tourist destination (except on an event basis). To strengthen the Downtown in the near term, therefore, will require that Downtown become more attractive to the ***local*** population. As the local market supports Downtown activities and businesses the economy can grow and a critical mass of activity will be developed -- the visitors will follow.

The Chadakoin Riverfront and Riverwalk in the Central section could be an important anchor to draw locals to the Downtown area. The Riverfront needs to continue to evolve into a recreational asset. Extending the Riverwalk to link with the historic train station and regional bike trails as well as the development of complementary land uses would help to make the River a regional destination.

MARKET ANALYSIS

Market analyses inform the planning process by identifying short-term development opportunities. Market analysis is a tool typically employed by the private sector to test whether there is sufficient demand for a product in a given trade area to warrant product development. To test the market for a given land use, W-ZHA employs methodologies used by investors and developers. Because it is an investment tool, the time horizon for a market analysis is relatively short -- five to ten years.

The residential, heath-social service, office, retail/restaurant, and industrial markets were analyzed on a preliminary basis to determine the character and magnitude of short-term market opportunities. The analyses resulted in the following conclusions:

- The market can currently support the development of 50 to 90 new/adaptive re-use housing units in the Study Area.
- By 2020, there will be market for 47,000 to 63,000 square feet of new health care and social service space in the Central portion of the Study Area.
- By 2020, there will be a market for 22,000 to 33,000 square feet of professional office space in the Study Area.
- There is specialty retail investment potential in the Downtown Core portion of the Study Area.
- By 2020 there will be a market for 5,000 to 7,000 square feet of eating and drinking space in the Study Area.
- The East section of the Study Area is well-positioned for industrial, light industrial and high tech businesses.

Conclusion: The market can support the development of 50 to 90 new/adaptive re-use housing units over the next five to seven years.

In Jamestown there is a shortage of new housing. Over 60 percent of the housing stock in in Jamestown is over 70 years old. Only 1 percent of the City's housing stock was built in the last decade.

Age of Housing Stock
Buffalo Niagara Region, Chautuaqua County, Jamestown Area, Jamestown
2012

	Buffalo Niagara Region	Chautauqua County	Jamestown Area	Jamestown
2005+	1.6%	1.3%	0.8%	0.9%
2000-2004	3.4%	2.4%	0.4%	0.3%
1990-1999	7.5%	6.3%	2.3%	1.4%
1980-1989	7.4%	7.8%	3.8%	3.4%
1970-1979	10.7%	9.1%	6.8%	6.0%
1960-1969	10.0%	8.1%	7.5%	7.3%
1950-1959	16.1%	11.6%	12.8%	11.3%
1940-1949	8.9%	7.3%	9.4%	8.6%
<1939	34.5%	46.3%	56.1%	60.8%
Median Age	1954	1945	1939	1939

Source: Claritas, Inc.; W-ZHA

F:\8000s, misc\80083 LaBella Jamestown\[housing.xls]Sheet1

The Jamestown Area's housing stock is primarily comprised of old, large single family homes. These homes were not designed for the tastes and lifestyles of today's Jamestown household. Two-thirds of

Jamestown's households are one- and two-person. Less than 20 percent of households have "full-nest" lifestyles.

Household Lifestage and Lifestyle Characteristics
Chautauqua County and Jamestown
2012

	Chautauqua County		Jamestown	
YOUNGER YEARS		**31%**		**29%**
Midlife Success	8%		2%	
Young Achievers	3%		5%	
Striving Singles	20%		22%	
FAMILY LIFE		**19%**		**19%**
Accumulated Wealth	0%		0%	
Young Accumulators	2%		2%	
Mainstream Families	12%		5%	
Sustaining Families	5%		11%	
MATURE YEARS		**50%**		**52%**
Affluent Empty Nesters	3%		3%	
Conservative Classics	11%		8%	
Cautious Couples	20%		20%	
Sustaining Seniors	15%		21%	

Source: Claritas, Inc.; W-ZHA

F:\8000s, misc\80083 LaBella Jamestown\[prizm jamestown.xls]lifestage

New urban housing tends to attract three primary household types:

- Young households, either singles or couples with urban lifestyle characteristics;
- Empty-nester households with urban lifestyle characteristics; and
- Households with urban lifestyle characteristics.

These household types may reside in an area, yet be underserved by the residential supply. For example, consider an older couple living in the family house, whose children are grown, and travel three months of the year. This couple might consider moving to a smaller, new house or condominium if an attractive option were available. In other words, urban housing markets are not necessarily driven by

net new households, they can be driven by changes in household lifestyle. Different lifestyles and lifestages demand different housing products.

Lifestyle data were analyzed for existing households within Chautauqua County. These existing households might consider a Jamestown location if the appropriate housing product were available. Approximately 24 percent of the households in the County have the income and lifestyle characteristics where an urban housing product might be an attractive option. A majority of this market are retirees.

Households with the Potential to Move Into Urban Residential Product
Chautauqua County
2012

Non-Subsidized Target Households	12,767	24%
Total Households	54,293	

Source: Claritas, Inc.; W-ZHA

F:\8000s, misc\80083 LaBella Jamestown\[residential analysis.xls]Sheet1

Retired couples typically stay in place until they have to move for health or family reasons. However, some move to housing products that are more consistent with their retired lifestyles. Retiree housing products range from small villas to townhouses to multi-family units. Given our understanding of the household types in the market, for-sale townhouses or villas in a well-planned neighborhood setting are an appropriate product. There may be an opportunity, albeit limited, for luxury lofts in a Downtown setting, as well. These products are not available in Downtown Jamestown today.

Empty nesters and young households demand a mix of product-types. While not deep, there is certainly a market for new multi-family for-sale or for-rent product in the Downtown to serve these households. There is very little product available to this market in Downtown today. In addition, like the retiree market, empty nesters and young households can demand rowhouse and villa products. Once again, these products are not readily available in Downtown Jamestown today.

On average, approximately four to five percent of American households move in a given year. Households at different lifestages move at different rates. For example, a 25-year-old single, young professional typically moves more often than a family of five. W-ZHA applied move rates to each target household type to determine market potential. Over the next five years, approximately 21 percent of the target households will likely move out of their existing home.

W-ZHA, LLC

Potential Households Moving Next 5 Years
Chautauqua County
2012-2017

	Target Markets	Moving Over Next 5 Years
Young Households	1,654	546
Empty Nesters	4,385	805
Retirees	6,728	1,360
Total	12,767	2,711

Source: Claritas, Inc.; W-ZHA

f:\8000s, misc\80083 LaBella Jamestown\[residential analysis.xls]Sheet4

Depending upon each target market's characteristics, W-ZHA applied capture rates of 1 to 5 percent among target market movers.

Market Rate Urban Residential Potential
Chautauqua County
2012-2017

	Target Markets	Moving Over Next 5 Years	Capture Rate On Movers		Units		
			Conservative	Moderate	Low		High
Young Households	1,654	546	3%	5%	16	-	27
Empty Nesters	4,385	805	3%	5%	24	-	40
Retirees	6,728	1,360	1%	2%	14	-	27
Total	12,767	2,711			50	-	90

Source: Claritas, Inc.; W-ZHA

f:\8000s, misc\80083 LaBella Jamestown\[residential analysis.xls]Sheet2

Given the character of the households and the magnitude of the moving market, W-ZHA concludes that there is market for the following housing mix in the Study Area over the next 5 to 7 years:

- 10-20 new, small houses or townhouses (1,000 to 1,500 square feet) in a neighborhood setting;
- 10-15 luxury condominiums in the Core of Downtown, either new or adaptive reuse multi-family lofts;
- 30-55 new multi-family rental housing units.

The under-utilized waterfront area (north of Harrison Street on the Chadokoin River in the Central portion of the Study Area) offers a residential development opportunity. An urban neighborhood can be created with the natural amenity of the River as well as services within walking distance.

There are adaptive re-use opportunities in the Downtown portion of the Study Area. The Cron building on the southwest corner of 2nd Avenue at the Pine Street intersection is a strong candidate. Over the longer term, the El Greco Mill could potentially be re-used for-rent residential.

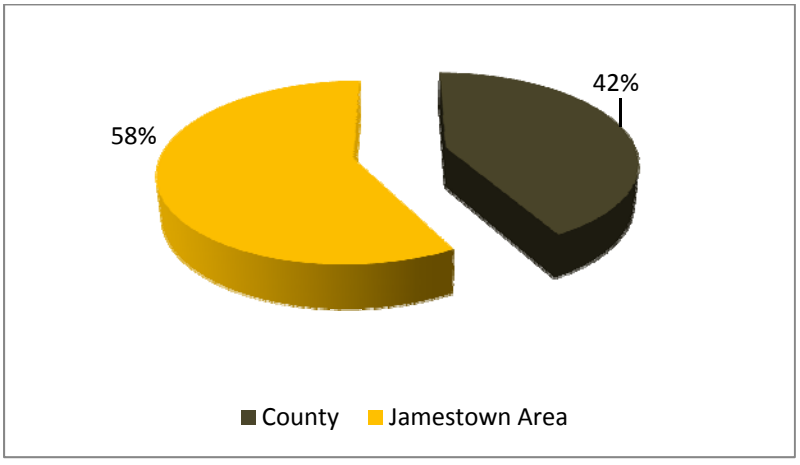
The primary constraint to residential development is economics. The target markets can afford to pay approximately $0.80 to $1.00 per square foot in rent per month. These prices are well above existing price points. These prices reflect the buying power of the target markets and the value of new product. Development and/or adaptive re-use costs may require a higher rent to achieve a reasonable return.

In addition, as in many New York communities, Jamestown has high property taxes. Unfortunately, high property taxes will reduce supportable residential sale prices and increase rents drastically. Without significant property tax breaks it will be difficult to attract residential developers to capitalize on market opportunities. It is important to note that a 10-year property tax break does not benefit the for-sale market where re-sale value is a consideration.

Conclusion: The market will support new medical office and social service space development in the Central section of the Study Area near the Hospital.

The Jamestown Area contains 58 percent of the County's health care and social service jobs. WCA Hospital accounts for just over one quarter of the Jamestown Area's health care and social service jobs. The Resource Center likely accounts for a significant share of the social service jobs in the Jamestown Area.

Jamestown Area's Share of County Health Care and Social Service Jobs
2010



Source: US Census; W-ZHA Employment.xls/ja share

Industry sub-sector data is available on a County level. In 2010, 59 percent of the County's health care and social service jobs were located in hospitals or nursing/ residential care facilities. Approximately, 40 percent of the health care and social service jobs were in doctors' offices and social service offices.

Health Care and Social Service Employment by Industry Sub-Sector
Chautauqua County
2010

	2010
	Share
Ambulatory	21%
Social Assistance	20%
Hospitals	21%
Nursing and Residential Care	38%
Total	100%

Source: County Business Patterns; W-ZHA
f:\8000s, misc\80083 LaBella Jamestown\[employment.XLS]Sheet2

Moody's Analytics projects that the number of jobs in the County's health care and social service industry will increase by 21 percent by 2020. Applying this growth rate to the US Census' 2010 County employment data, this amounts to 1,540 new jobs by 2020.

Health Care and Social Service Employment Projections
Chautauqua County
2010-2020

			Change	
	2010	2020	#	%
Health Care and Social Service Employment	7,174	8,710	1,536	21%

Source: U.S. Census; Moody's Analytics; W-ZHA
f:\8000s, misc\80083 LaBella Jamestown\[employment.XLS]Sheet1

Applying the 2010 distribution of jobs by industry sub-sector as a proxy, there will be 630 new ambulatory care and social service jobs in the County by 2020.

W-ZHA, LLC

Health Care and Social Service Employment Projections
Chautauqua County
2010 - 2020

	2010	2020	Change
Ambulatory	1,494	1,814	320
Social Assistance	1,448	1,758	310
Hospitals, Nursing and Residential Care	4,232	5,138	906
Total	7,174	8,710	1,536

Source: U.S. Census; Moody's Analytics; W-ZHA
f:\8000s, misc\80083 LaBella Jamestown\[employment.XLS]Sheet5

At 250 square feet per employee, this job growth will generate demand for 157,500 square feet of medical office and social service space in the County by 2020.

Health Care and Social Service Employment Projections
Chautauqua County
2020

	2020
Ambulatory and Social Assistance New Jobs	630
Space per Employee (Square Feet)	250
Total Potential Demand (Square Feet)	157,530

Source: U.S. Census; Moody's Analytics; W-ZHA
f:\8000s, misc\80083 LaBella Jamestown\[employment.XLS]Sheet5

The Medical Corridor is well-positioned to capture a significant share of this new medical and social service development potential. The WCA Hospital is a major health care anchor. Medical offices do, and will continue to, locate near the Hospital.

W-ZHA concludes that the Study Area has the potential to capture 30 to 40 percent of the space demanded by the County's growth in the ambulatory and social assistance industries. This amounts to 47,000 to 63,000 square feet.

W-ZHA, LLC

Doctors and Social Service Space Development Potential Study Area 2020		
	Low	**High**
County Ambulatory and Social Assistance Space Demand	157,530	157,530
Study Area Capture	30%	40%
Development Potential (Square Feet)	47,000	63,000

Source: U.S. Census; Moody's Analytics; W-ZHA
f:\8000s, misc\80083 LaBella Jamestown\[employment.XLS]health conc

Conclusion: The market will support additional professional office space in the Study Area.

Industries that typically occupy office space include information, finance and insurance, real estate, professional and business services, and other religious, social, and fraternal organizations. The Jamestown Area contained 39 percent of the County's office-inclined jobs in 2010.

Jamestown Area Share of Office-Inclined Employment
Chautauqua County and Jamestown Area
2010

	County	Jamestown Area	Share
Information	887	300	34%
Finance and Insurance	1,091	504	46%
Real estate	609	228	37%
Professional, Scientific, and Technical Services	1,018	458	45%
Management of Companies	194	94	48%
Religious,Grantmaking,Civic,Prof Organizations *	1,827	616	34%
	5,626	2,200	39%

* *County business patterns provides employment data on a sub-sector basis. Religious, grant making, civic professional and related organization employment represented 70 percent of the County's total "Other Services" employment in 2010. W-ZHA assumed the same percentage of "Other Services" to estimate religious, grant making, civic and professional organization employment in the Jamestown Area.*

Source: U.S. Census; Moody's Analytics; W-ZHA
f:\8000s, misc\80083 LaBella Jamestown\[employment.XLS]off share

Moody's Analytics projects that by 2020, Chautauqua County will have an additional 444 jobs in office-inclined industries.

W-ZHA, LLC

Office-Inclined Industry Employment Projection
Chautauqua County
2010-2020

	2010	2020	Change #	Change %
Information	887	1,009	122	14%
Finance and Insurance	1,091	1,183	92	8%
Real estate	609	622	13	2%
Professional, Scientific, and Technical Services	1,018	1,094	76	7%
Management of Companies	194	186	-8	-4%
Religious,Grantmaking,Civic,Prof Organizations *	1,827	1,976	148	8%
Total	5,626	6,071	444	8%

Source: U.S. Census; Moody's Analytics; W-ZHA
f:\8000s, misc\80083 LaBella Jamestown\[employment.XLS]off proj

This job growth will generate a demand for approximately 111,000 square feet of office space. Some of this demand will be satisfied by existing vacant or under-utilized space. Some of this demand may be met with new office construction in the County.

Office Space Potential
Chautauqua County
2020

	2020
New Office-Inclined Jobs	444
Space per Employee (Square Feet)	250
Total Potential Demand (Square Feet)	111,000

Source: U.S. Census; Moody's Analytics; W-ZHA
f:\8000s, misc\80083 LaBella Jamestown\[employment.XLS]Sheet11

Downtown Jamestown is already a business center with goods and services within walking distance of each other. As the County's current office center, the Downtown is well-positioned to capture a portion of future office demand. Office opportunities are available in existing Downtown buildings such as the post office. The Downtown also has sites suitable for new office construction, particularly west of Washington Street.

There are relatively few professional office buildings on the south side of the River in the Study Area. However, there are under-utilized sites well positioned for new office construction to the east of Foote Avenue.

W-ZHA, LLC

W-ZHA concludes that the Study Area has the potential to capture 20 to 30 percent of the County's new office-inclined employment. This translates into 22,000 to 33,000 square feet of office space by 2020.

Office Space Development Potential
BOA Study Area
2020

	Low	High
Office Space Demand	111,000	111,000
BOA Capture	20%	30%
Development Potential (Square Feet)	22,000	33,000

Source: U.S. Census; Moody's Analytics; W-ZHA
f:\8000s, misc\80083 LaBella Jamestown\[employment.XLS]Sheet12

Conclusion: The Study Area is not particularly well-positioned for additional retail, except in the Downtown Core where independently operated, specialty retail has potential.

Chautauqua County benefits from the tourism trade. Retail sales are over 25 percent higher than average because of the tourism economy. Curiously, tourism is not buoying the eating and drinking market. Eating and drinking sales are below what the local population typically spends in eating and drinking establishments per year.

Resident Retail Expenditure Potential Compared to Retail Sales
Chautauqua County
2012

	Non-Auto Retail*		
	Total Retail & Eat/Drink	Retail Only	Eat/Drink Only
Expenditure Potential	$1,127,983,000	$967,509,000	$160,474,000
Retail Sales	$1,437,625,000	$1,303,383,000	$134,241,000
Inflow/(Outflow)	$309,642,000	$335,874,000	($26,233,000)
Share of Sales from Inflow/(Outflow)	22%	26%	20%

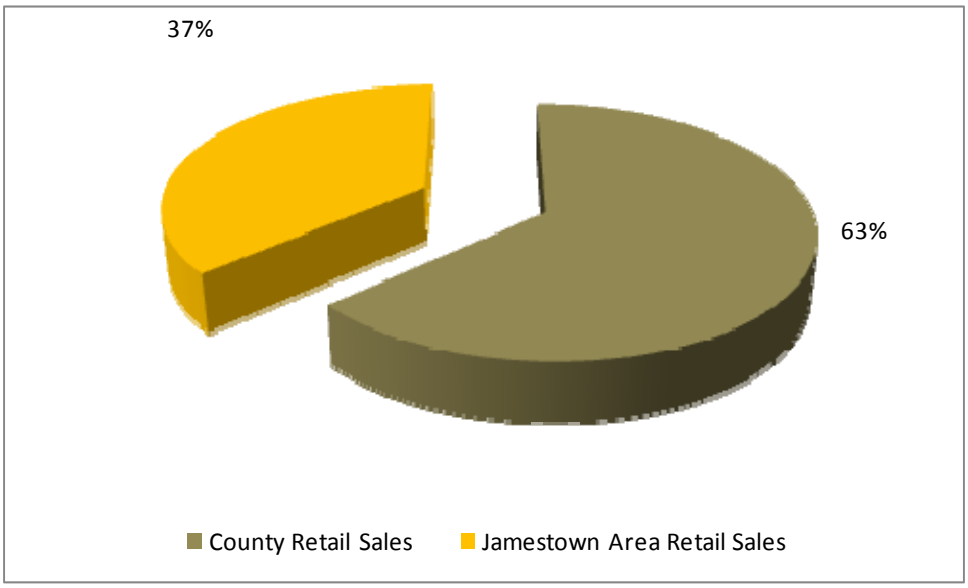
* Excludes vehicle sales and gasoline sales.

Source: U.S. Census; Claritas, Inc.; W-ZHA
F:\8000s, misc\80083 LaBella Jamestown\[retail county jamestown.xls]inflow

The Jamestown Area contains 30 percent of the County's population and accounts for 37 percent of the County's non-vehicle retail and eating and drinking sales.

Jamestown Area Share of County Non-Vehicle Retail Sales

2012



Source: Claritas, Inc.

Retail county Jamestown/area split

Sixty percent of the Jamestown Area's retail sales are from non-residents. Approximately, 20 percent of eating and drinking sales are from non-residents.

Resident Retail Expenditure Potential Compared to Retail Sales
Jamestown Area
2012

	Non-Auto Retail*		
	Total Retail & Eat/Drink	**Retail Only**	**Eat/Drink Only**
Expenditure Potential	$311,709,414	$267,363,631	$44,345,783
Retail Sales	$726,668,791	$672,042,801	$54,625,990
Inflow/(Outflow)	$414,959,377	$404,679,170	$10,280,207
Share of Sales from Inflow/(Outflow)	57%	60%	19%

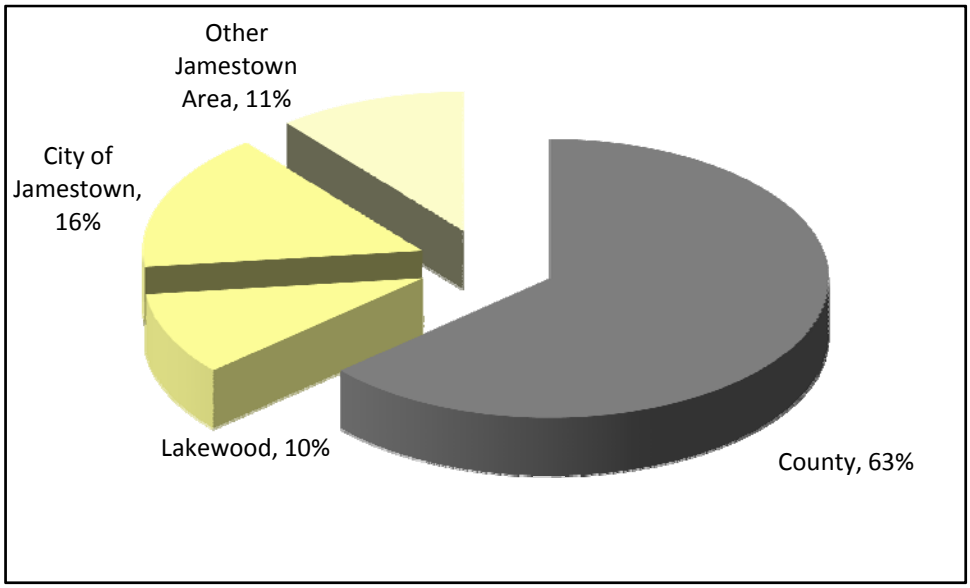
* Excludes vehicle sales and gasoline sales.

Source: U.S. Census; Claritas, Inc.; W-ZHA

F:\8000s, misc\80083 LaBella Jamestown\[retail county jamestown.xls]Sheet6

Lakewood contains 2 percent of the County's population and 10 percent of its retail sales. Lakewood contains the Chautauqua Mall, Wal-Mart Plaza, and Lakewood Village Center.

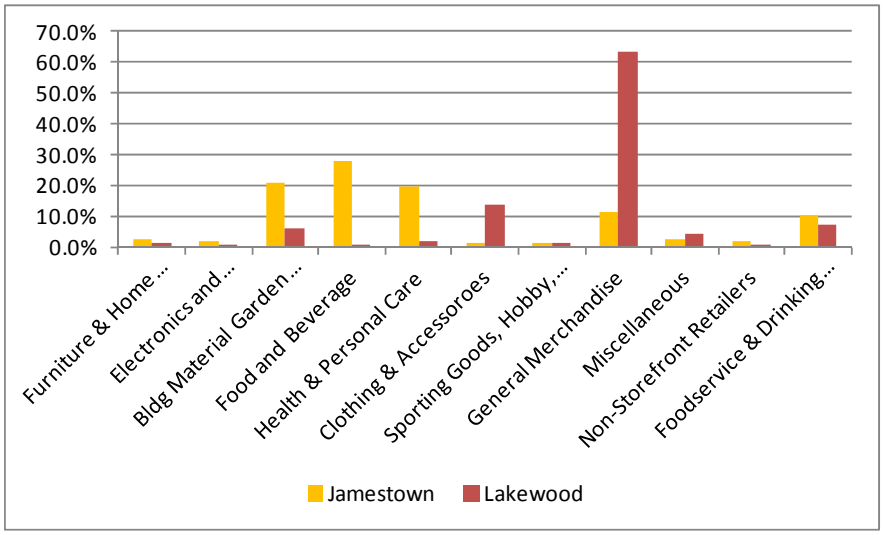
Distribution of Retail Sales
Jamestown Area and the Rest of Chautauqua County
2012



Source: Claritas, Inc.
Retail county Jamestown/area split

Comparing sales by store-type clearly illustrates that Lakewood is where people go to comparison shop. Over 60 percent of the retail sales in Lakewood occur in general merchandise stores. Lakewood accounts for a majority of the general merchandise, miscellaneous store, and clothing and accessory sales in the Jamestown Area. Eighty percent of Lakewood's $192 million in retail sales are from people living outside of Lakewood.

Distribution of Retail Sales by Store Type



Lakewood is within a 10-minute drive from the Downtown and Brooklyn Square. Lakewood is the natural location for new shopper's goods stores seeking to serve the Jamestown market. Lakewood is already an established shopping district.

There are shopper's goods[1] stores in the Study Area mostly in the Downtown Core and Brooklyn Square. Census tract 305 closely approximates the Downtown retail area (see below).

Census Tract 305 Boundaries

Jamestown Downtown Area



Source: US Census

[1] Shopper's goods stores include clothing and clothing accessories; sporting goods, hobby, books, music; general merchandise and miscellaneous stores.

With $91.2 million in non-auto retail sales, Downtown accounts for 6 percent of the County's retail sales. Forty percent of the Downtown's retail sales were related to the medical and social service cluster – these sales occurred in health and personal care stores (for example, Walgreens).

Downtown Area Non-Auto Sales by Store-Type
Downtown Jamestown (Census Tract 305)
2012

	Sales	Share
Furniture/Home Furnishings	$4,502,309	5%
Electronics & Appliances	$1,010,282	1%
Bldg Material/Garden Equipment	$4,265,260	5%
Food & Beverage	$2,210,702	2%
Health & Personal Care	$36,305,133	40%
Clothing/Clothing Accessories	$1,268,093	1%
Sporting Goods/Hobby/Book/Music	$2,679,451	3%
General Merchandise	$16,100,733	18%
Miscellaneous	$3,636,184	4%
Non-Stores	$1,609,624	2%
Eating and Drinking Establishments	$17,619,093	19%
Total	$91,206,864	100%

Source: Claritas, Inc.; W-ZHA

F:\8000s, misc\80083 LaBella Jamestown\[retail censs.xls]Sheet1

Most of the shopper's goods sales occur in general merchandise stores like Big Lots and Dollar General. There are a limited number of specialty shopper's goods stores. With a few exceptions (Suburban Blend and the Jock Shop), relatively few Downtown stores offer merchandise of interest to the tourist. The remaining stores in the Downtown are mostly convenience (food and drug) or service establishments.

W-ZHA concludes that the Study Area is not well-positioned for credit-tenant retail investment. Lakewood is within 10-minute drive and there are grocery stores and drug stores available nearby. Household projections indicate that the area immediately surrounding the Study Area will either maintain or lose households in the next five years. This will make it difficult to recruit chain retailers.

Specialty retail, however, is an opportunity in the Downtown area. This type of retail is best located in the pedestrian-friendly, Downtown Core north of the River. Likely tenant-types include arts and craft stores, outdoor stores, and youth-oriented, "hip" accessory stores.

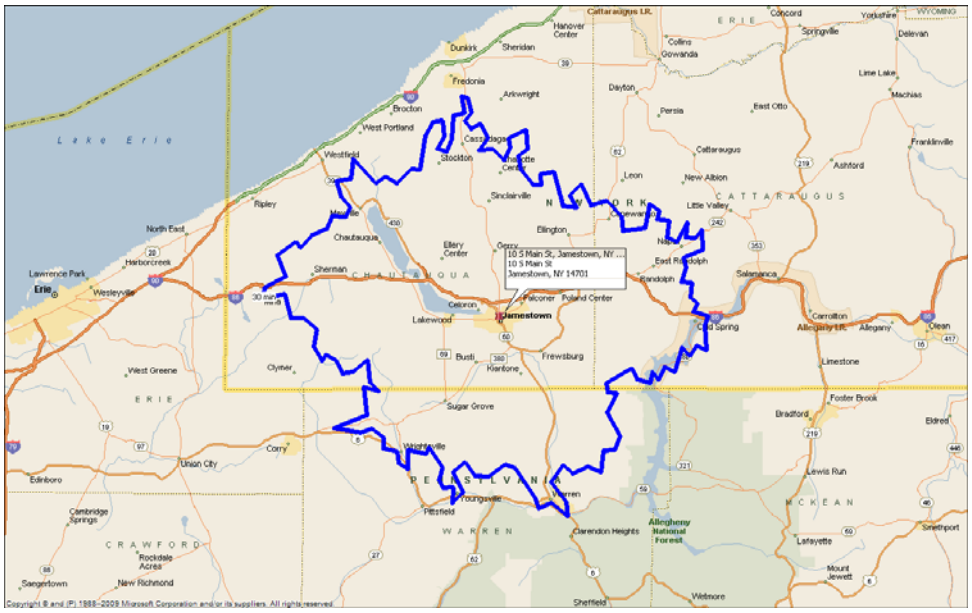
Conclusion: The Study Area has the potential to attract additional eating and drinking establishments.

With 33 Downtown eating and drinking establishments, the eating and drinking scene in Jamestown is improving. There are 20 cafes and restaurants, 10 taverns, and 3 nightclubs in Downtown Jamestown.

Downtown eating and drinking sales are higher than Lakewood's. Downtown accounts for 13 percent of the County's total eating and drinking sales.

W-ZHA considers the primary market for Downtown eating and drinking the area within a half hour drive. There are 93,000 people and 38,665 households living within a half hour drive of Downtown Jamestown. Currently, Downtown captures 18 percent of this markets' eating and drinking expenditure potential. Downtown Jamestown is doing quite well -- strong Downtowns capture 20 percent of their trade area.

Half-Hour Drive Time Area



W-ZHA believes there is an opportunity to continue to grow Downtown's eating and drinking cluster. The eating and drinking options around Jamestown are quite weak. Trade area capture to 20 percent alone will justify another 5,000 square feet of eating and drinking space. When a high amenity, walkable Medical Corridor evolves, there will be additional eat/drink opportunities. For planning purposes, an additional 5,000 to 7,000 square feet of eating and drinking space is reasonable by 2020.

In addition to the Downtown Core, McCrea Point is a potential location for a small café, if made visible from Fairmount Street. This location could capitalize on the bike trail, activities on the River like rowing, and McCrea Park. A riverview location on the Riverwalk within easy walking distance to WCA Hospital would also be a strong location.

Conclusion: The East section of the Study Area is best positioned for industrial, light industrial and high tech businesses.

Employment projections anticipate that the Jamestown Area will lose industrial employment between now and 2020. At the same time, there are programs currently underway at Jamestown Community College targeted to supporting existing industry with their labor needs over time. The industrial sector of the Jamestown economy is large and important.

The East section is very well suited for industrial, light industrial and high tech businesses. The area has strong road access, rail availability and soon, redundant fiber. Because of BPU, the area is uniquely advantaged with low cost power. The East section should be maintained as a center for industry.

It is difficult to project demand, given projected employment losses. The key is for the community to have "shovel-ready" sites available to existing, growing businesses or new businesses. A key site is the old Dahlstrom site at the corner of Buffalo Street and Blackstone Avenue, immediately off of Route 394. This site is an attractive location for a call center, a manufacturer, a data center, or flex office space.

Conclusion: Brooklyn Square is a logical location for a new limited service hotel

While there is not sufficient market to justify a new hotel Downtown in the foreseeable future, the Brooklyn Square area would be a good location for a future hotel. Brooklyn Square is centrally located, visible, and easily accessed. A hotel at this location would help to reinforce Riverfront activity.

KEYS TO SUCCESS

In evaluating the market potential for the Study Area's land use development, a number of important economic principles are revealed:

- Jamestown has geographic and demographic (i.e., density, excursion time to major metros) advantages that can be leveraged.
- The health and social service industry cluster and manufacturing cluster are important contributors to the Study Area's development potential.
- Downtown Jamestown must grow its own market through housing, business and cultural investment;
- The Chadokoin River is a market asset that must be better leveraged by improving pedestrian connections to it and the land use environment around it.
- New product (in addition to renovation and/or adaptive re-use) is critical to capitalize on market opportunities.
- Multiple public and private investments are necessary; this is not a silver bullet situation.

MARCH 2013 FINAL REPORT

JAMESTOWN BOA AND LWRP
ECOLOGICAL CONDITIONS AND LIVING INFRASTRUCTURE FRAMEWORK



Prepared by:

Biohabitats
Incorporated

2081 Clipper Park Road
Baltimore, MD 21211

TABLE OF CONTENTS

1. STUDY AREA CONTEXT 1.1
1.1. Natural Resource History and Early Settlement 1.1
1.2. Regional Context 1.1
1.2.1. Regional Landscape Ecology 1.1
1.2.2. Migratory Flyway 1.3
1.2.3. Fish Assemblages and Passage of Aquatic Species 1.7
1.2.4. Regional Geology 1.9
1.2.5. Regional Morphology 1.9
1.2.6. Regional Hydrology 1.10
1.2.7. Regional Landcover 1.11
1.3. Environmental Justice 1.12
1.4. Concurrent and Complementary Ecologically Related Efforts 1.12
1.4.1. List of Publications and Studies 1.12
1.4.2. Environmental Stakeholders 1.15
2. STUDY AREA ANALYSIS 2.1
2.1. Study Area Description 2.1
2.1.1. Zone 1: West End Natural Zone 2.1
2.1.2. Zone 2: McCrea Point to Warner Dam 2.1
2.1.3. Zone 3: Warner Dam to Gateway Center (Winsor Street) 2.2
2.1.4. Zone 4: Gateway Center to Tiffany Avenue (East of Winsor Street) 2.2
2.2. Study Area Conditions 2.2
2.2.1. Study Area Geology 2.2
2.2.2. Study Area Soils 2.2
2.2.3. Study Area Morphology 2.2
2.2.4. Study Area Hydrology 2.3
2.2.5. Rare, Threatened and Endangered (RTE) Species 2.5
2.2.6. Riparian and Shoreline Conditions 2.7
2.3. Study Area Observations 2.10
2.2.1. Zone 1: West End Natural Zone 2.10
2.2.2. Zone 2: McCrea Point to Warner Dam 2.19
2.2.3. Zone 3: Warner Dam to Winsor Street 2.24
2.2.4. Zone 4: Winsor Street to Tiffany Avenue (East of Winsor Street) 2.32
2.4. Local Landscape Ecology 2.39
3. STUDY AREA POTENTIAL 3.1
3.1. A Living Infrastructure Approach 3.1
3.2. Living Infrastructure Framework 3.1
3.3. Ecological Priorities in the Jamestown BOA and LWRP 3.7
3.3.1. Zone 1: West End Natural Zone 3.8
3.3.2. Zone 2: McCrea Point to Warner Dam 3.15
3.3.3. Zone 3: Warner Dam to Gateway Center 3.19
3.3.4. Zone 4: Gateway Center to Tiffany Avenue (East of Winsor Street) 3.22
APPENDICIES
Appendix A: Regional Geology
Appendix B: Regional Morphology
Appendix C: Regional Hydrology
Appendix D: Photo Key
Appendix E: River Buffers
Appendix F: Restoration/Living Infrastructure Zones

INTRODUCTION

This report sets forth the results of work completed by Biohabitats, Inc. to assess ecological conditions and develop related recommendations for the City of Jamestown Brownfield Opportunities Area (BOA) and Local Waterfront Revitalization Program (LWRP) study areas along the Chadakoin River.

In support of this study, Biohabitats has conducted literature reviews, desktop analyses and field investigations to establish current ecological conditions within the study area. Drawing from this work, Biohabitats has developed a proposed "living infrastructure framework" for the study area that integrates ecological restoration, conservation, green infrastructure, and other opportunities into a cohesive structure that may serve as a basis for future land use planning and redevelopment decisions.

Section 1 of this report provides the ecological context for the study areas – natural resources history; regional priorities, considerations, and influences; and complementary efforts and concerns. Section 2 of the report focuses on ecological conditions within the study areas, and describes the results of the literature review, desktop analyses and field assessments. Section 3 of the report presents the recommended living infrastructure framework for the study area and details specific ecological recommendations within the study area.

1. STUDY AREA CONTEXT

1.1. Natural Resource History and Early Settlement

The Wisconsinan Glaciation reached its maximum extension approximately 20,000 to 18,000 years ago. As the glaciers retreated, melt waters dropped massive amounts of sediment and other materials along the landscape. New landscape patterns defined by the glacial retreat and melt created the Great Lakes, along with the major rivers and other tributaries, and other freshwater lakes in northern and western New York. Hardwood forests migrated slowly northward as gradual warming and extensive periods of increased precipitation combined with the transport of bird-, wind-, and water-borne seeds. All of these historic processes created the foundation materials and patterns that define the Chautauqua Lake and Chadakoin River watershed today. *(Reference: http://upload.wikimedia.org/wikipedia/commons/b/b0/Glacial_lakes.jpg; Barnes, Burton V., Donald R. Zak, Shirley R. Denton, Stephen H. Spurr. Forest Ecology. John Wiley & Sons, Inc. New York, NY. 1990. 4th edition 1998.)*

Chautauqua Lake formed as this glacial retreat occurred in western New York, approximately 16,000 years ago. It is understood to have formed with several advances and retreats of glacial ice. The lake appears now as almost two separate lakes, with a constriction in the center near Bemus Point. Glacial sediments dropping off the retreating glaciers likely formed the constriction. The deepest portion of the lake, near this constriction, is believed to be a kettle lake (a freshwater depression where a piece of glacier breaks off and slowly melts). The northern basin measures approximately nine miles long and 26 feet deep, while the southern basin is eight miles long and approximately 11 feet deep. The Chadakoin River drains Chautauqua Lake at its southernmost point, which is also the beginning of the study area for the BOA 1 Study and the LWRP. Because the river acts as the lake's outlet the Warner Dam was built to help regulate lake levels and help prevent flooding. From the Chadakoin River the water flows to the Conewango Creek east of Jamestown, which then flows into the Allegheny River to join the Monongahela in Pittsburgh to form the Ohio. *(Reference: http://www.jamestownpublicschools.org/highschool/localfieldtrip/riverwalk.html)*

The region has been inhabited by humans since approximately 12,000 BC, first with Paleo Indians as the glaciers receded. The Proto-Erie were followed by the Iroquois League of the Seneca Nation. A group called the Cornplanters, of the Seneca Nation, were noted for settlement along a hillside south of the Chadakoin near the present day Washington Street Bridge in a camp from 1797 until the 1830's. The Chautauqua County region was mainly known for its fishing and hunting resources. *(Reference: http://www.jamestownpublicschools.org/persell/faculty/jkresge/Site_3/Welcome_files/HistoricOverview.pdf)*

1.2. Regional Context

1.2.1. Regional Landscape Ecology

This region of western New York boasts a significant number of important glacially-influenced forests, swamps, rivers, ponds, marshes and meadow areas that help define the landscape, both in terms of natural resource value and habitat, but also in terms of historic human uses for industry and recreation. Designated natural resource areas, wildlife management areas, sanctuaries and preserves in the region provide important habitat for neo-tropical migratory birds and other endemic native wildlife. The areas

serve as both conservation as well as recreational resources and provide important clues to the landscape matrix that would have defined the region prior to widespread settlement.

There are several regional examples of sites where functional forest, riparian, and wetland communities can inform restoration, preservation and management along the Chadakoin River in terms of species diversity and habitat needs. See Figure 1.1 and descriptions below.

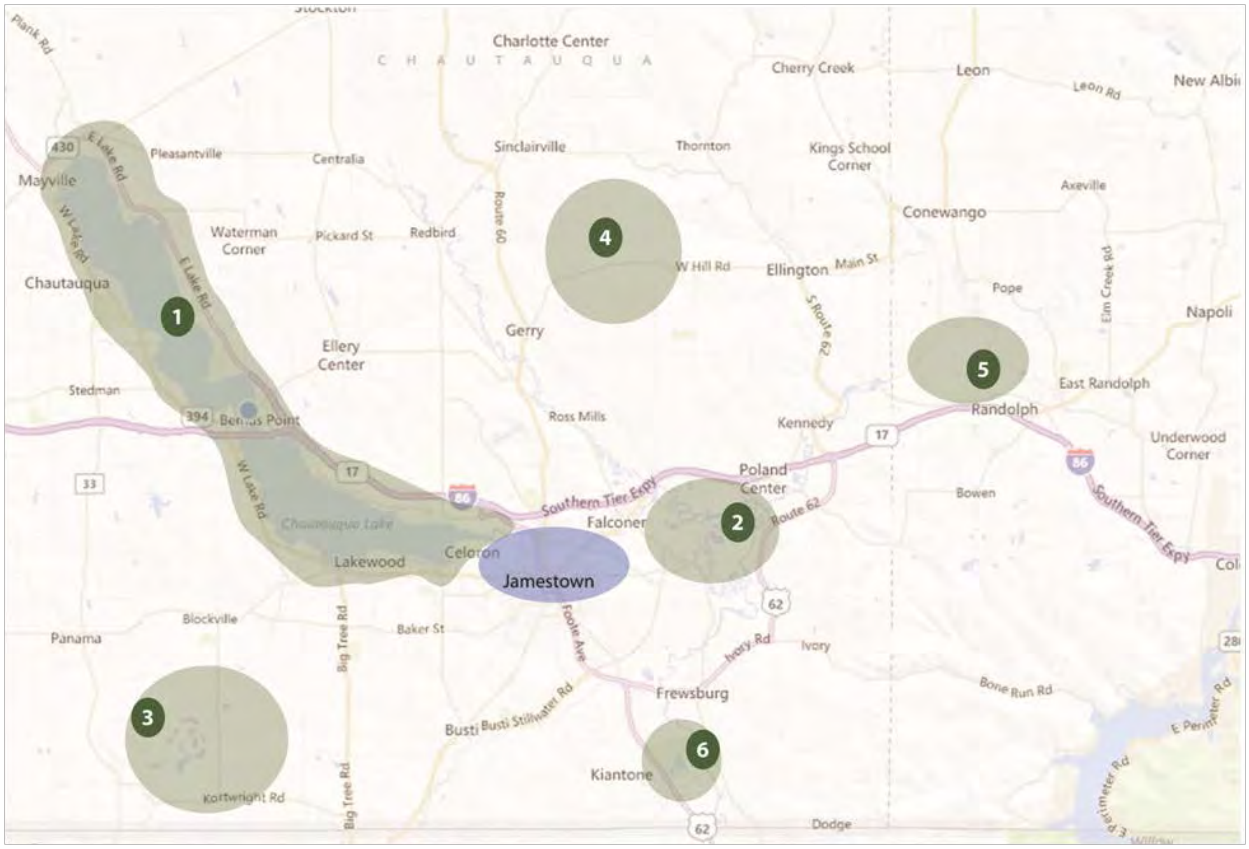


Figure 1.1. Regional landscape ecological resource areas (Map source: Bing.com – © 2010 NAVTEC © 2012 Microsoft Corporation)

Chautauqua Lake (1) has been designated as an Important Bird Area by the National Audubon Society of New York, as a major stopover for migration of waterfowl along the Atlantic Flyway. Species that have been documented include common loons, pied-billed grebes, tundra swans, hooded mergansers, lesser yellowlegs, Bonaparte's gulls, and black terns. The Lake also has a number of wildlife management areas including wetlands at ***Tom's Point***, extensive wetlands at ***Stow Farm***, natural shoreline at ***Cheney Farm***. A hardwood and conifer forest preserve at ***Dobbins Woods*** includes two of the tributaries to Chautauqua Lake and the ***Elm Flats Wetland Preserve*** is an 83-acre maple and shrub swamp at the headwaters of Big Inlet Creek that flows into Chautauqua Lake that provides important habitat.

There are also a number of significant natural resources outside of Jamestown proper, providing habitat patches within the region, and which may provide further reference for the ecological diversity and the value of improved habitat along the Chadakoin River. The Chadakoin River Watershed is within the Cattauraugus Highlands ecological zone, which is dominated by northern hardwoods (primarily oaks) and supports a variety of mammals, birds, reptiles and amphibians.

To the east of Jamestown, where the Chadakoin River meets Cassadaga Creek which then joins Conewango Creek, the **Hartson Swamp and Clay Pond Wildlife Management Areas (2)** are favored locations for birders and wildlife enthusiasts. These two areas include flat bottomland marshes and ponds where the rivers converge in varying meanders and oxbows. These glacially influenced wetlands are host to a wide variety of birds and native plants including: the pied-billed grebe, wood duck, hooded merganser, cliff swallows, northern flicker, common yellow-throat, yellow warbler, green heron, wood thrush, red-eyed vireo, Eastern towhee, as well as the Midland painted turtle, snapping turtle, bullfrog and Northern leopard frog. Plants of note include wild ginger, swamp dogwood, and northern arrowwood.

Further afield a few notable natural resource areas include (see Figure 1.1):

Hill Higher State Forest (3), to the southwest, includes wetland shrub swamps and emergent marsh areas that host among other wildlife, the endangered New York State raptor, the Northern harrier. This forest has vast areas blanketed by leatherleaf– indicative of glacial landscapes.

Hatch Creek State Forest (4), to the north, which is a popular nesting area for a number of birds including red-breasted nut hatches, golden crowned kinglets, blue-headed vireos, and dark eyed juncos. This forest is dominated by maples and black cherries and hosts a variety of ferns in its understory. During spring migration other birds of note include: the Eastern wood pewee, great crested flycatcher, red-eyed vireo, blue-headed vireo, chestnut sided warbler, black throated green warbler, scarlet tanager, and the yellow-billed sapsucker.

Conewango Swamp (5), to the northeast of Jamestown, hosts 900 acres of shrub swamp, as well as emergent marsh and wetland open water, managed by the New York State Department of Environmental Conservation (NYSDEC). It is managed mainly to provide habitat for resident and migratory species of birds as well as other wildlife, including beaver, muskrat, and mink.

Jamestown Audubon Center (6), to the south of downtown Jamestown, includes 600 acres of ponds, swamps, marshes, forest and open fields, which could perhaps provide reference for the transition of the Chadakoin Park to a more natural park landscape dominated by similar vegetative features. Besides the over 265 species of birds that are seen at the nature sanctuary, other wildlife including dragonflies and damselflies, frogs, turtles, snakes, muskrats, and waterfowl are abundant. Red maple, Northern red oak, Eastern hemlock, black cherry, and American beech dominate the canopy of the forested areas. The understory of the wetland areas and woods includes buttonbush and spicebush.

(References: http://www.rtpi.org/index.php?option=com_content&view=section&id=17&Itemid=166 & http://planningchautauqua.com/pdf/reports/Chautauqua_Lake_LWRP.pdf)

1.2.2. Migratory Flyway

In North America, birds migrate along four main routes, or flyways: the Atlantic, Central, Mississippi and the Pacific. The Atlantic flyway extends along the Atlantic Coast from the shores of Greenland south to the Gulf of Mexico, extending west to the Allegheny Mountains, and northwest through northern West Virginia and Northeast Ohio and then across the provinces of Canada to the Northwest Territories (Figure 1.2). The flyway includes Jamestown and western New York and serves as important migratory

route for shorebirds, raptors, waterfowl and pelagic birds, as well as butterflies, certain bats and dragonflies (Figure 1.3). *(References: http://www.fws.gov/migratorybirds/, http://www.birdnature.com/flyways.html)*

In this region of the Great Lakes there are several important smaller routes considered tributaries to the Atlantic Flyway. Of particular ecological significance is the Niagara Escarpment, designated as a UNESCO World Biosphere Reserve in 1990, which is a protected ecological reserve. It crosses two major biomes and includes significant areas of boreal needle leaf forest, temperate broadleaf forest, wetland complexes, cliff faces, slopes and aquatic systems including some of the major rivers and tributaries in the province of Ontario. The Niagara Escarpment is considered one of the most biologically diverse regions of Canada and hosts various rare plant and animal species (Figure 1.4). *(References: http://www.escarpment.org/landplanning/plan/index.php; http://www.unesco.org/mabdb/br/brdir/directory/biores.asp?code=CAN+06&mode=all)*



Figure 1.2. Atlantic Migratory Bird Flyway



Figure 1.3. Jamestown along the Atlantic Migratory Bird Flyway in the Great Lakes Region



Figure 1.4. The Niagara Escarpment as important wildlife corridor in the region (Map source Bing.com –© 2012 Microsoft Corporation)

As noted above, Chautauqua Lake has been recognized as a State Important Bird Area by a consortium of conservation and nature organizations including the National Audubon Society. This site falls within the Lower Great Lakes/St. Lawrence Plain Bird Conservation Region and includes the State-owned 16 mile-long Chautauqua Lake. The site is noted as an important stopover location for migrant birds, particularly waterfowl, and has typically supported over 1% of the estimated State wintering population of pied-billed grebes (Figure 1.5). More than 270 species of birds have been documented over the past 20 years, including the maximum numbers of selected species indicated in Table 1.1. The site is also listed in the 2002 New York State Open Space Conservation Plan as a priority site under the project name Chautauqua Lake Access, Shore Lands, and Vistas.



Figure 1.5. Pied-billed grebe (Source: U.S. Fish and Wildlife Service)

Table 1.1. Maximum Numbers of Selected Chautauqua Lake Bird Species Documented Over the Past 20 years

Common Name	Scientific Name	Totals
tundra swan	*Cygnus columbianus*	3,000
canvasback	*Aythya valisineria*	1,000
redhead	*Aythya americana*	800
lesser scaup	*Aythya affinis*	400
surf scoter	*Melanitta perspicillata*	100
long-tailed duck	*Clangula hyemalis*	120
bufflehead	*Bucephala albeola*	650
common goldeneye	*Bucephala clangula*	800
hooded merganser	*Lophodytes cucullatus*	1,200
common merganser	*Mergus merganser*	600
red-breasted merganser	*Mergus serrator*	400
ruddy duck	*Oxyura jamaicensis*	1,200
common loon	*Gavia immer*	40
pied-billed grebe	*Podilymbus podiceps*	120
horned grebe	*Podiceps auritus*	250
American coot	*Fulica americana*	4,500
semipalmated plover	*Charadrius semipalmatus*	50

Common Name	Scientific Name	Totals
killdeer	*Charadrius vociferus*	200
lesser yellowleg	*Tringa flavipes*	110
semipalmated sandpiper	*Calidris pusilla*	80
Bonaparte's gull	*Chroicocephalus philadelphia*	250
ring-billed gull	*Larus delawarensis*	8000
herring gull	*Larus argentatus*	3000
common tern	*Sterna hirundo*	87
black tern	*Chlidonias niger*	23

Source: http://iba.audubon.org/iba/viewSiteProfile.do?siteId=861&navSite=state

1.2.3. Fish Assemblages and Passage of Aquatic Species

Recent fisheries reports for the Chadakoin River are not available, but limited data on sportfish in Chautauqua Lake is provided in Citizens Statewide Lake Assessment Program (CSLAP) reports (2009 and 2010) and on the NYSDEC Outdoors web page for Chautauqua Lake (http://www.dec.ny.gov/outdoor/9230.html). It can be assumed that a number of these sportfish exist in the Lake outlet, which is similar to the habitat of the lake, and within the Chadakoin River below the Warner Dam, where the river is more free flowing (Table 1.2).

Table 1.2. Chautauqua Lake Sportfish

Common Name	Scientific Name
black crappie	*Pomoxis nigromaculatus*
bluegill sunfish	*Lepomis macrochirus*
brown bullhead catfish	*Ameiurus nebulosus*
largemouth bass	*Micropterus salmoides*
muskellunge	*Esox masquinongy*
pumpkinseed sunfish	*Lepomis gibbosus*
smallmouth bass	*Micropterus dolomieu*
walleye	*Sander vitreus*
white crappie	*Pomoxis annularis*
white perch	*Morone americana*
yellow bullhead	*Ameiurus natalis*
yellow perch	*Perca flavescens*

Chautauqua Lake is noted as supporting a coolwater fishery since it contains a mix of both warmwater (e.g. bass and sunfish) and coolwater species (e.g. walleye and yellow perch). Walleye and muskellunge are both stocked annually to support an active recreational fishery in the Lake.

East of Jamestown and Falconer, the Chadakoin River meets Cassadaga Creek and from there takes on the name of the latter. After approximately four to five river miles, the Cassadaga then joins the Conewango Creek and flows south into Pennsylvania. The portion of the Conewango in Pennsylvania is 13 miles long and was sampled by Pennsylvania Fish and Boat Commission staff on June 24, 2004 (*http://www.fishandboat.com/images/fisheries/afm/2004/2_07-07conewango.htm*). Captured sportfish included smallmouth bass (*Micropterus dolomieu*), northern pike (*Esox lucius*), walleye (*Sander vitreus*), rock bass (*Ambloplites rupestris*), bluegill (*Lepomis macrochirus*), and pumpkinseed (*Lepomis gibbosus*) (Table 1.3). Additional fish species included common carp (*Cyprinus carpio*), redhorse

(*Moxostoma sp.*), grass pickerel (*Esox americanus*), northern hogsucker (*Hypentelium nigricans*), spotfin shiners, sand shiner (*Cyprinella spiloptera*), logperch (*Percina caprodes*), and bluntnose minnow (*Pimephales notatus*). It can also be assumed that a number of these fish also exist in the Chadakoin River in the study area below the Warner Dam as the Chadakoin study area is approximately 20 river miles upstream from the Conewango at the Pennsylvania state line.

Table 1.3. Conewango Creek Sportfish Downstream of New York Border

Common Name	Scientific Name
bluegill sunfish	*Lepomis macrochirus*
northern pike	*Esox lucius*
pumpkinseed sunfish	*Lepomis gibbosus*
rock bass	*Ambloplites rupestris*
smallmouth bass	*Micropterus dolomieu*
walleye	*Sander vitreus*

During the field assessment of the Chadakoin River corridor performed in this study, fishermen above and below the Warner Dam reported commonly catching walleye and smallmouth bass from the stream. One fisherman angling under the Fairmount Avenue bridge proudly displayed a bucket containing a combination of crappie (*Pomoxis* sp.) and bluegill. A single longnose gar (*Lepisosteus osseus*) was observed cruising the shallows near Panzarella Park and common carp and white sucker (*Catostomus commersonii*) were observed in the river near Harrison Street. While no other fish data is available for the study area; it is likely that the river also supports a number of non-game fish including, other suckers such as redhorse (*Moxostoma* sp.), or the northern hogsucker (*Hypentelium nigricans*) as well as chubs, dace, and other minnows.

Strong, turbulent flow at the outlet of the Warner Dam appears to preclude upstream fish passage at this structure. Downstream beyond the Warner Dam there is one barrier to local fish passage and migration at the Dahlstrom Dam, near Buffalo Street and another potential blockage below the Dow Street bridge in Falconer. The elevation drop across the Dahlstrom Dam is approximately six feet, while the potential obstruction near Dow Street is a low head structure that may only act as a fish barrier during low flow conditions. Given these barriers, fish passage is limited to only downstream passage in the area between the Warner and Dahlstrom Dams. These structures prevent two-way passage for fish that reside in the Chadakoin (and other streams in the larger Conewango Creek watershed) and Chautauqua Lake. In addition to limiting fish passage, the barriers also inhibit non-motorized boat movement along the Chadakoin.

Related to fish passage are the migration and proliferation of freshwater mussels. Freshwater mussels have been identified by the United States Fish and Wildlife Service as being the most endangered group of organisms in North America as they are highly susceptible to channelization, sedimentation and hydromodification. Their unique life cycle requires a fish host to transport mussel larvae (glochidia) to new stream reaches, ensuring that mussel populations are continually transported to upstream areas. The Allegheny River and portions of the watershed are known to support globally significant populations of federally endangered freshwater mussels. Sixteen species of mussels, including one endangered species, were identified in Conewango Creek in 2005 (Pennsylvania Fish and Boat Commission, 2005). It is conceivable that these species could repopulate the Chadakoin if migration barriers are removed.

1.2.4. Regional Geology

The geology that defines the Conewango watershed is made up entirely of shale, including Marcellus shale formation (Figure 1.6). Aquifers exist within most of the major river valleys. While there are 129 primary soil series in the watershed, the major soil type is silt loam, formed by the weathering of the dominant shale bedrock.

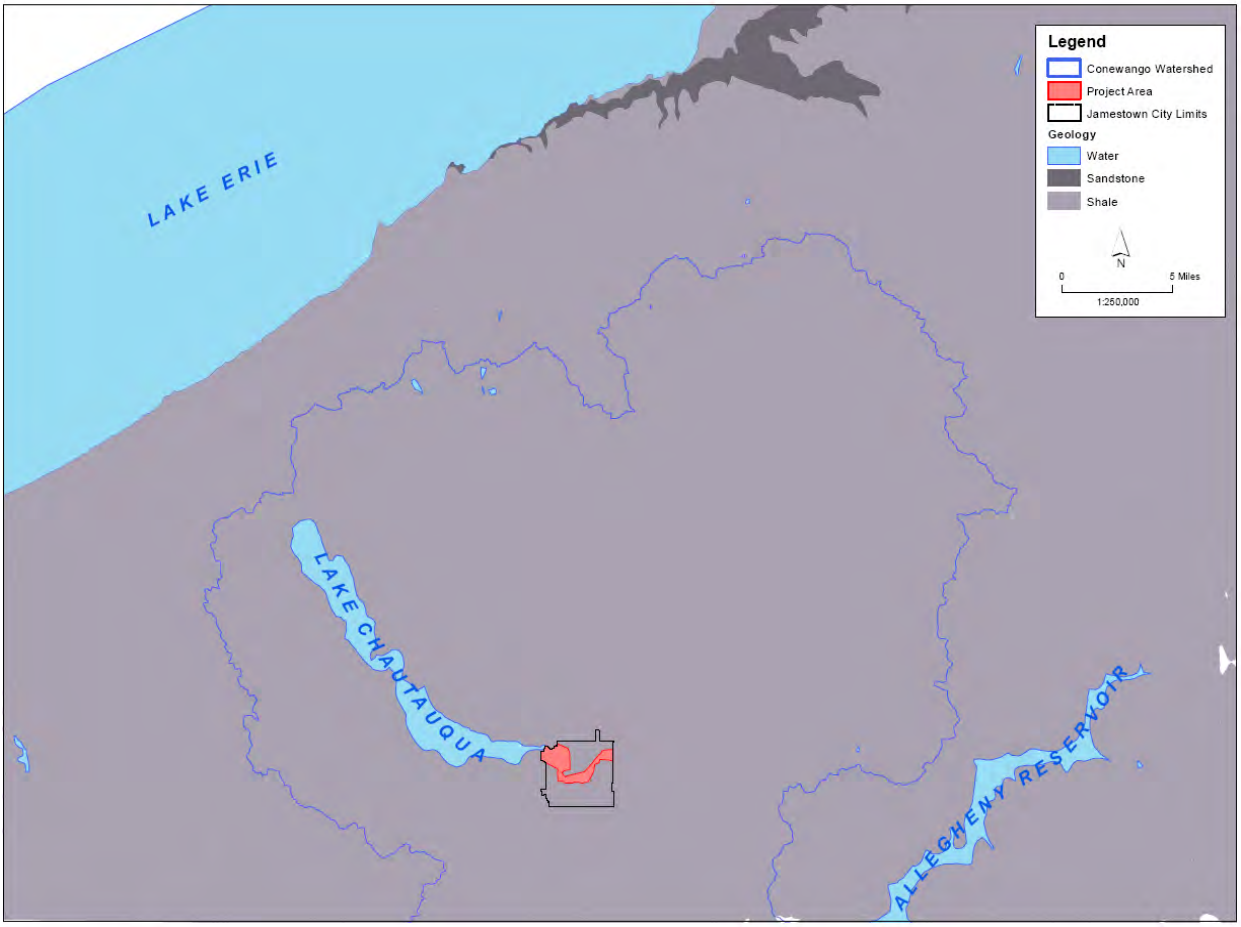


Figure 1.6. Geology of the Conewango Creek Watershed (refer to Appendix A for higher resolution version)

1.2.5. Regional Morphology

The Conewango watershed, which includes the Chadakoin River and Chautauqua Lake, lies within two physiographic provinces (Figure 1.7). The northwestern portion of the watershed is within the Erie-Ontario Lake Plain Province. This province was a glacial lakebed and therefore has limited relief; however, several large moraines and other glacial till formations add relief. This province parallels Lake Erie in a narrow band, approximately 4.5 to 6.5 miles from the coast. The remainder of the watershed is in the Allegheny Plateau Province. This area consists of rolling to steep hills carved by numerous creeks and streams. Three distinctive stream valleys are visible crossing the watershed in a northwest to southeast direction where they merge just east of Falconer and continue south into Pennsylvania. *(Reference: http://tapestry.usgs.gov/physiogr/physio.html)*

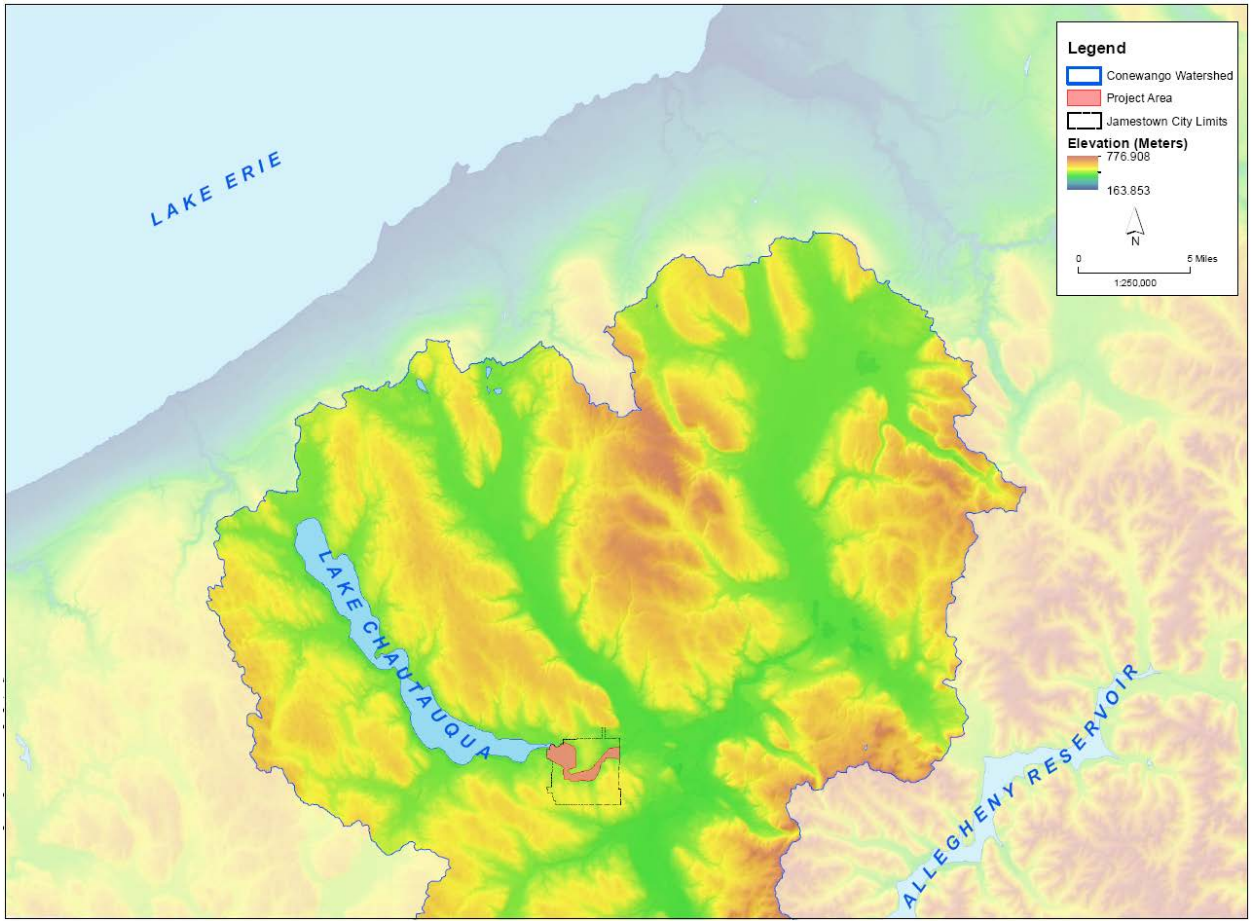


Figure 1.7. The morphology that defines the Conewango Creek watershed (refer to Appendix B for higher resolution version)

1.2.6. Regional Hydrology

The Conewango Creek watershed drains an area of nearly 900 square miles (Figure 1.8). The watershed contains approximately 780 miles of streams and 53 lakes. The Conewango is part of the larger Allegheny and Ohio River watersheds. The watershed is characterized by forest (47%) and agriculture (44%). The Chadakoin River, Cassadaga Creek, and Conewango Creek are the three main streams in the watershed, which also includes the 20 square mile Chautauqua Lake. (*Reference: http://www.conewangocreek.org/*)

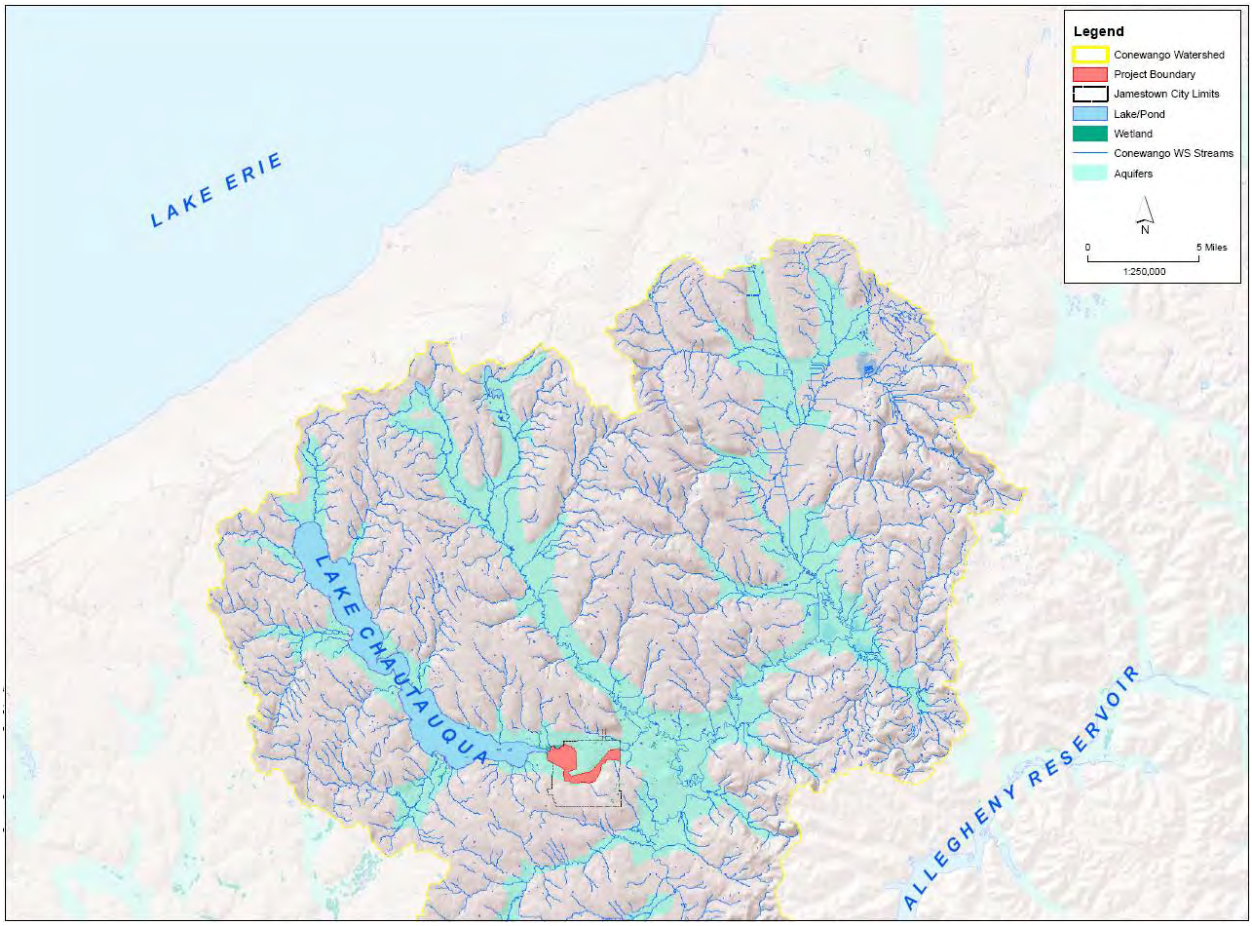


Figure 1.8. The streams, lakes and rivers that define the Conewango Creek watershed (refer to Appendix C for higher resolution version)

1.2.7. Regional Landcover

There is notable forest cover within the Conewango Creek watershed and this mapping provides the foundation for drawing potential ecological connections (Figure 1.9). Using this mapping, along with the regional hydrology, one begins to see potential wildlife corridors and habitat patches, for moving to and from significant forest and forested wetland patches for forage, breeding, and other habitat needs. Forests and agriculture dominate the land cover with varying wetland types dotting the larger stream valleys. Jamestown and surrounding areas make up the largest developed areas, although the overall urban footprint is only 4%.

Within the Conewango watershed there is limited urban development outside of the immediate vicinity of Jamestown. Developed open space areas are concentrated around the lakes and wetlands in the watershed. The watershed is dominated by deciduous and mixed forest, interspersed with areas of cultivation. Other important land cover in the watershed includes lakes, wetlands (forested and scrub-shrub), grassland and pasture.

1.3. Environmental Justice

Environmental justice becomes a concern for a community when a disproportionate amount of environmental harms, contamination and health issues are experienced by low income and minority individuals. Environmental Justice, or EJ, aims to provide for fairer treatment and meaningful involvement of all people in environmental decision-making (State of EJ 2008 conference). The State of New York has provided opportunities in past years to communities to apply for Environmental Justice Community Impact Grants. A majority of the study area for the BOA and LWRP studies has been identified by NYSDEC as a Potential Environmental Justice Area so there may be future opportunities to tap into this program for environmental restoration, urban agriculture, community gardening, environmental education, and other opportunities that could promote ecological health and community well-being along the Chadakoin River.

The "Potential Environmental Justice Area" designation, established in the State Commissioner's Policy 29 on Environmental Justice and Permitting, notes areas with populations that have met or exceeded at least one of the following statistical thresholds:

1. At least 51.1% of the population in an urban area reported themselves to be members of minority groups; or
2. At least 33.8% of the population in a rural area reported themselves to be members of minority groups; or
3. At least 23.59% of the population in an urban or rural area had household incomes below the federal poverty level.

This policy provides guidance for incorporating environmental justice concerns into the NYSDEC environmental permit review process and the NYSDEC application of the State Environmental Quality Review Act. The policy also incorporates environmental justice concerns into some aspects of the NYSDEC's enforcement program, grants program and public participation provisions. *(References: http://www.dec.ny.gov/public/36929.html; http://www.dec.ny.gov/public/899.html ; http://www.dec.ny.gov/public/31226.html)*

1.4. Concurrent and Complementary Ecologically Related Efforts

1.4.1. List of Publications and Studies

The following is a list of publications and studies that include all or a portion of the study area in their analysis and contain beneficial information related to the ecological analysis of said study area. The list is meant to provide a brief explanation as to the context of the document and is not intended to identify any potential data gaps or needs for additional studies.

Chautauqua County Equestrian Trail System Plan
(Chautauqua County Dept. of Planning & Economic Development, 2011. Chautauqua County Equestrian Trail System Plan, January 2011.)
This plan details the equestrian trail system plan for Chautauqua County, which showed no proposed trails near the study area.

Chautauqua 20/20 Comprehensive Plan

(Chautauqua County Dept. of Planning & Economic Development, 2011. Chautauqua 20/20 Comprehensive Plan, April 2011.)
Plan looks at four strategic issues; people and demographics, community, economy, and environment, which focuses on watershed, landcover and Chautauqua Lake data.

Chautauqua Lake Watershed Management Plan
(Chautauqua Lake Management Commission, 2010. Chautauqua Lake Watershed Management Plan, September 2010.)
Details management issues and background data on Chautauqua Lake and its watershed.

Chadakoin River Corridor Brownfield Opportunity Area Pre-Nomination Study
(City of Jamestown, 2008. Chadakoin River Corridor Brownfield Opportunity Area Pre-Nomination Study, October 2008.)
The pre-nomination study provides extensive background information on the Chadakoin and the environmental make-up of the study area and larger regional context.

Jamestown Riverfront Reclamation and Development Study
(City of Jamestown, Chadakoin Riverfront Planning Committee, 1991. Jamestown Riverfront Reclamation and Development Study, Addendum, November 1991.)
This study further examines the Chadakoin as five separate zones and looks to promote recreational, economical, and open space uses along the River.

City of Jamestown: Traffic and Streetscape Enhancement Plan
(City of Jamestown Department of Development, 2008. City of Jamestown: Traffic and Streetscape Enhancement Plan, September 2008.)
The plan examined existing traffic and circulation patterns, assessed the feasibility of making changes proposed in the Urban Design Plan, and developed guidelines for improvements to the physical streetscape within the City's downtown core.

Jamestown Neighborhood Revitalization Plan
(CZB LLC. Reinvesting in Itself: A Report to the City of Jamestown, March 2010.)
Key recommendations of plan were to develop gateways to the downtown at entry points to Jamestown and that riverfront development is unlikely to have a major appeal nor generate much expenditure by visitors.

Jamestown Urban Design Plan
(City of Jamestown, 2008. Jamestown Urban Design Plan, August 2008.)
The urban design plan identified three goals: transform the Chadakoin riverfront into a regional destination; strengthen the downtown core through new development, streetscaping and programming; and adopt and promote higher design standards for new development in keeping with Jamestown's character and heritage.

First Street: A Potential Proving Ground for Downtown and Neighborhood Revitalization Strategies
(Jamestown Renaissance Corp. First Street: A Potential Proving Ground for Downtown and Neighborhood Revitalization Strategies.)
This document highlighted a three-part vision which included: housing and retail at the Poulin Studio; dilapidated housing removal and community garden development; and industrial heritage park and parking improvements.

Porter Avenue Park: The Latent Link to a Riverfront Transformation
(Jamestown Renaissance Corp. Porter Avenue Park: The Latent Link to a Riverfront Transformation.)
Porter Avenue Park opportunities included utilization of three acres of undeveloped parkland, assemble multiple parcels adjacent to the riverfront for bundled demolition, Riverwalk development and park expansion, and linking a neighborhood, the Armory, and a school to the River and via Third Street to downtown.

The Allegheny River Drainage Basin: Sampling Years 1972-2002
(New York State Department of Environmental Conservation, 2006. The Allegheny River Drainage Basin: Sampling Years 1972-2002, May 2006.)
This NYSDEC report provides water quality assessments based on resident macroinvertebrates on the Chadakoin in Jamestown in three locations, which were all assessed as moderately impacted.

Brownfield Opportunity Areas Program: Guidance for Applicants
(New York State Department of Environmental Conservation, 2008. Brownfield Opportunity Areas Program: Guidance for Applicants, October 2008.)
Document details the application process for the NYSDEC BOA program.

CSLAP 2009 Lake Water Quality Summary: Chautauqua Lake
(New York State Department of Environmental Conservation, 2009. CSLAP 2009 Lake Water Quality Summary: Chautauqua Lake.)
Water quality summary provides detailed information on 2009 sampling of Chautauqua Lake including fish stocking and fish community.

CSLAP 2010 Lake Water Quality Summary: Chautauqua Lake
(New York State Department of Environmental Conservation, 2010. CSLAP 2010 Lake Water Quality Summary: Chautauqua Lake.)
Water quality summary indicated results close to normal in 2010 with assessments in the south basin slightly improving over recent years.

Draft 2012 Section 303(d) List of Impaired Waters Requiring a TMDL/Other Strategy
(New York State Department of Environmental Conservation, 2012. Draft 2012 Section 303(d) List of Impaired Waters Requiring a TMDL/Other Strategy, January 2012.)
Draft report indicated the Chadakoin is an impaired waterbody segment requiring a TMDL because of phosphorus from municipal/industrial urban runoff.

The 2003 Allegheny River Basin Waterbody Inventory and Priority Waterbodies List
(New York State Department of Environmental Conservation, 2007. The 2003 Allegheny River Basin Waterbody Inventory and Priority Waterbodies List, May 2007.)
Inventory identifies the Chadakoin's aquatic life and recreation as impaired and habitat/hydrology and aesthetics as stressed due to pollutants from various industrial, municipal, and other urban sources.

Warner Dam Flood Control Project
(New York State Department of Environmental Conservation, 2010. Warner Dam Flood Control Project, March 2010.)
Document details the history and technical information regarding the Warner Dam in Jamestown.

Chautauqua Lake Local Waterfront Revitalization Program
(New York State Department of State. Chautauqua Lake Local Waterfront Revitalization Program.)
This LWRP covered nine villages and towns around Chautauqua Lake and identified goals and objectives for the Lake.

Guidebook: Making the Most of Your Waterfront
(New York State Department of State, 2009. Guidebook: Making the Most of Your Waterfront.)
The guidebook details the LWRP, including case studies and background information about the application process.

Chautauqua County Greenways Plan
(Pashek Associates, 2012. Chautauqua County Greenways Plan, January 2012.)
This plan identified 10 high priority demonstration projects, which included the Chadakoin Park Trail (Jamestown Riverwalk Extension).

City of Jamestown Draft LWRP
(City of Jamestown, 2006. Draft LWRP.)
Organized project boundary into five zones and provided detailed information regarding regional environmental subjects.

1.4.2. Environmental Stakeholders

The following organizations and groups may be key environmental stakeholders as the BOA and LWRP studies progress:

- Chautauqua County Health Department - http://www.co.chautauqua.ny.us/departments/health/Pages/default.aspx
- Chautauqua County Planning Department – http://www.planningchautauqua.com
- Chautauqua County Soil & Water Conservation District – http://www.soilwater.org
- Chautauqua Lake Association – http://www.chautauqualake.org
- Chautauqua Rails-to-Trails – http://www.chaurtt.org
- Chautauqua Watershed Conservancy - http://www.chautauquawatershed.org/
- Cornell Cooperative Extension of Chautauqua County – http://www.cce.cornell.edu
- Jamestown Audubon Society – http://www.jamestownaudubon.org
- Jamestown Community College - http://www.sunyjcc.edu/
- NYSDEC (Region 9/Chautauqua County) – http://www.dec.ny.gov/outdoor/7786.html
- Roger Tory Peterson Institute – http://www.rtpi.org

2. STUDY AREA ANALYSIS

2.1. Study Area Description

The BOA and LWRP study area encompasses the Chadakoin River corridor within the City of Jamestown, stretching approximately seven river miles and including 1,414 acres of land. The river corridor begins at the outfall of Chautauqua Lake and flows through a series of Class I wetlands (as designated by NYSDEC), through downtown Jamestown and finally through predominately industrial sites at the eastern end of the corridor. The overall study area is actually three separate study areas based on their corresponding BOAs and the LWRP. For the purpose of this report, the study area is divided into four distinctive zones based on landscape form and position and the potential for ecological restoration and green infrastructure (Figure 2.1). Locations of the photos of the study area included in this section of the report are referenced in Figure 2.56.



Figure 2.1. Restoration and green infrastructure zones based on field and desktop assessments.

2.1.1. Zone 1: West End Natural Zone

Zone 1 coincides with the BOA Step 1 study area. It is bounded by the Western NY and PA rail line (located just south of Jones and Gifford Avenue) and West 8th Street on the south, the city boundary on the west, the Chadakoin River and Route 430 to the north, and Washington Street to the east. This zone encompasses the Chautauqua Lake outlet downstream to McCrea Point. The area is dominated by a large wetland complex west of the Chadakoin River (LW-10) and by Chadakoin Park to the east.

2.1.2. Zone 2: McCrea Point to Warner Dam

Zone 2 incorporates the western portion of downtown and is dominated by utility and transportation services. Starting at McCrea Point, the area is bound to the north by Route 394 and to the west by Hall Avenue. The southern and northern boundaries coincide with the LWRP and BOA Step 2 study area

boundaries. The Chadakoin is fairly confined in this stretch, with multiple bridge crossings and significant stretches of river walls and bulkheads.

2.1.3. Zone 3: Warner Dam to Gateway Center (Winsor Street)

Zone 3 includes the majority of Jamestown's downtown and commercial district. The zone is bound on the west by Washington Street and on the east by Winsor Street. At the center of the zone is the Gateway Center, which borders the Riverwalk and Chadakoin River.

2.1.4. Zone 4: Gateway Center to Tiffany Avenue (East of Winsor Street)

Zone 4 is dominated by industrial and vacant lots. The western boundary is Windsor Street, and the northern, southern and eastern boundaries coincide with the LWRP and BOA Step 2 study area boundaries.

2.2. Study Area Conditions

2.2.1. Study Area Geology

Located in the Appalachian Uplands physiographic province, the study area is composed of siltstone and shale with numerous exposed areas of bedrock. The Chadakoin River at the Chautauqua Lake outlet is kept broad and shallow by this bedrock.

2.2.2. Study Area Soils

Four major soils are identified within the study area based on the USDA NRCS Web Soil Survey. The western portion of the study area is dominated by Carlisle muck in wetlands LW-10 and Udorthents, landfill in the area of Chadakoin Park. The Udorthents, landfill soil type, because of the unknown fill components and potential for contaminants, could potentially influence ecological restoration and/or green infrastructure initiatives if excavation is required.

Soil types in the central part of the study area are composed almost entirely of urban land, again potentially limiting restoration and green infrastructure activities. Finally, the eastern portion of the study area includes two types of Chenango gravelly loam with a small ribbon of Hamlin silt loam along the Chadakoin River. These soils are typically well drained as they were formed in morainic glacial till and gravelly outwash deposits. (*Reference: http://websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.aspx*)

2.2.3. Study Area Morphology

A long history of varying industrial uses on the Chadakoin River have led to some dramatic changes in the site topography and associated drainage. Overall, the western portion of the study area is relatively flat. As the Chadakoin River passes McCrea Point it begins to change from a broad, wide river and floodplain, to a narrower river and corridor until it reaches Sprague Street. Historically the Chadakoin then entered a much broader floodplain extending the length of the study area, but industrial and commercial activities have essentially cut-off the Chadakoin from much of its floodplain. Various retaining walls, bulkheads, and buildings now form extensive stretches of riverbanks, thus removing traditional floodplain-river interaction. A number of these structures are in disrepair and present significant erosion hazards through potential failure. Several retaining walls were observed that had

been undermined and leaning into the river. On the north side of the Chadakoin River, the Western NY and PA Railroad bed has also changed the topography of the corridor and created a physical barrier to the river.

2.2.4. Study Area Hydrology

The Chadakoin River empties Chautauqua Lake. The lake and river's water level is maintained through a combination of the river's shallow bedrock channel, precipitation in the watershed, and by the Warner Dam. There is an approximate six-foot difference in surface water elevation above and below the dam. The Chadakoin is navigable by motorized boats up to McCrea Point, where it is also classified as a "5 mph No Wake Zone", and downstream to Warner Dam by small watercraft.

Between the lake outlet and McCrea Point, the Chadakoin is a broad, slow-moving river with fairly clear water (Figure 2.2). Once the river begins to narrow after McCrea Point, water clarity becomes poorer, although the river still exhibits the same, slow-moving nature. Once the river passes Warner Dam it flows more freely and includes riffles and pools. However, it is generally bound by some form of river walls, severely limiting access to its floodplain.



Figure 2.2. Chadakoin River at the Chautauqua Lake outlet at western end of Zone 1 (Source: Biohabitats; June 12, 2012)

The Chadakoin River is classified by the NYSDEC as a Class C stream, which identifies its best usage as supporting fisheries and suitable for non-contact activities. Only one tributary to the Chadakoin River is listed as a classified water body by the NYSDEC, being a small piped tributary that enters on the right bank between Institute Street and Foote Avenue. Historically there were most likely numerous tributaries within the study area, but based on the amount of industrialization in the river corridor, they would have been long ago piped and/or incorporated into the stormwater system. (*Reference: http://www.dec.ny.gov/imsmaps/ERM/viewer.htm*)

NYSDEC water quality assessment based on water column, sediments, invertebrate tissues and macroinvertebrate community were performed on the Chadakoin River in Jamestown in three locations in 1995 and two locations in Falconer from 1989 to 2002. All three sampling locations in Jamestown were assessed as moderately impacted with elevated levels of metals and Polycyclic Aromatic

Hydrocarbons (PAHs) documented in river sediments and invertebrate tissues. Water column samples also showed copper as a parameter of concern although toxicity testing of the water column showed no significant impacts. Most sampling indicated municipal and industrial inputs as the primary stressor. The Chadakoin also appears on the Draft 2012 Section 303(d) List of Impaired Waters Requiring a TMDL/Other Strategy based on phosphorus from municipal/industrial urban runoff and aquatic toxicity from agriculture. (*Reference: http://www.dec.ny.gov/docs/water_pdf/pwlallgy07.pdf*)

During the summer of 2011 the SUNY Jamestown Community College conducted water quality sampling as the request of the Conewango Watershed Association near the bridge in the center of Falconer on two separate occasions in June. Students sampled temperature, pH, dissolved oxygen, total phosphorus, nitrates, turbidity and fecal coliform with results falling within acceptable limits of NYS DEC's Water Quality Standards. (*Reference: http://www.dec.ny.gov/regs/4590.html*)

In addition to water quality sampling, sediment sampling of the Chadakoin River was conducted as part of a Remedial Investigation Report and a follow-up supplemental Remedial Investigation Report for the D.C. Rollforms/Ingersoll-Rand Site (Hazardous Waste Site #907019) in 1998. The original report indicated that concentrations of volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), polychlorinated biphenyls (PCBs) and certain metals were higher in the upstream samples, with SVOCs and PCBs more than twice as high as the sample adjacent to the site. A number of metals exceeded their specific NYSDEC sediment criteria levels, which also prompted the NYSDEC to request additional sampling adjacent to the site.

An additional six sediment samples were collected adjacent to and downstream of the site with two additional samples collected upstream of the site. Although VOCs were collected during both sampling events, none exceeded available screening criteria for VOCs as outlined in the NYSDEC Division of Fish and Wildlife Technical Guidance for Screening Contaminated Sediments. Several metals were detected in the adjacent and downstream samples at average concentrations that were lower than average upstream concentrations, thus they were subsequently excluded from the list of chemicals of potential concern (COPCs). A number of metal concentrations were less than the severe effect level (SEL) however; five COPCs (copper, iron, lead, nickel and zinc) were present in the adjacent and downstream samples at average concentrations greater than their respective SELs, indicating their potential to pose an ecological risk and possible need for remediation. Eventually a cleanup action known as an Interim Remedial Action was begun in 1998 to remove contaminated soils from the site. (*Reference: Supplemental Remedial Investigation Report, D.C. Rollforms\Ingersoll-Rand Site, Jamestown, NY, Site Code 907019, February 1999*) Additional clean-up measures were implemented in 2007 and 2008 to prevent contaminants from migrating into the Chadakoin, which included streambank restoration, fish habitat structures and riparian buffer enhancements. (*Reference: http://www.dec.ny.gov/docs/regions_pdf/dcrollfs.pdf*)

The City of Jamestown uses the Cassadaga and Conewango Aquifers as its primary water supply even though the City sits over the Jamestown Principal Aquifer. The confined nature of the Cassadaga and Conewango Aquifers make them more ideal aquifers as they have sufficient yields due to their relatively high permeability and hydraulic conductivities. The study area is served by a municipal water system that is operated by the City of Jamestown Board of Public Utilities. (*Reference: City of Jamestown, 2008. Chadakoin River Corridor Brownfield Opportunity Area Pre-Nomination Study, October 2008*)

Two portions of the study area are classified wetlands and are under both federal (U.S. Army Corps of Engineers) and state (NYSDEC) jurisdiction (Figure 2.3). The largest wetland encompasses 308.6 acres

and is located on the right bank of the Chadakoin from the Chautauqua Lake outlet downstream to approximately McCrea Point and bordered to the south by Jones and Gifford Avenue. This wetland is classified as "Class I", which is the highest rank in New York State's four class ranking system. The U.S. Fish and Wild Service identifies the wetland as palustrine, freshwater forested/shrub wetland, broad-leaved deciduous, that is seasonally flooded/saturated.

The second and smaller wetland straddles the Chadakoin River and Chadakoin Park. The Chadakoin Park may have been part of this wetland complex before it served as a municipal landfill. This 41.5 acre wetland is also classified as "Class I." These wetlands are protected by NYSDEC and USACE wetland regulations and serve an important role in absorbing and holding floodwaters from downstream populated areas (Figure 2.3). These wetlands represent the majority of accessible floodplain areas within the study area as a large portion of the Chadakoin downstream of McCrea Point has been channelized by retaining walls, rip-rap, bulkheads, and building foundations. Only in small narrow stretches does the river have access to narrow floodplains, with the majority of these areas concentrated in the eastern portion of the study area. Flooding has been mostly eliminated by the Warner Dam regulating water levels, the large upstream wetlands complex, and the building of river walls throughout large stretches of the river corridor. (*Reference: http://www.dec.ny.gov/imsmaps/ERM/viewer.htm and John Jablonski, Chautauqua Watershed Conservancy, Personal Interview, April 25, 2012*)



Figure 2.3. NYS DEC Environmental Resource Mapper showing State regulated wetlands in green

2.2.5. Rare, Threatened and Endangered (RTE) Species

A request was sent to the New York Natural Heritage Program inquiring about the presence of rare, threatened and endangered (RTE) species within or near the study area. In a response letter dated June 7, 2012, it was indicated that records of one species of State Special Concern, the Eastern spiny softshell turtle (*Apalone spinifera spinifera*), were found at or near the project site. During field work, a female Eastern spiny softshell turtle (*Apalone spinifera spinifera*) was observed near the Riverwalk Center along

the Riverwalk Trail laying eggs in a landscaped mulch area (Box 1). Several additional turtles were observed on the downstream end of the Warner Dam and further downstream in the Chadakoin River. Observation reports of the Eastern spiny softshell turtle (*Apalone spinifera spinifera*) were sent to both the NYSDEC and the New York Natural Heritage Program at their request.

Eastern spiny softshell turtle (*Apalone spinifera spinifera*)





The Eastern spiny softshell turtle seeks food by probing along the bottom or in clumps of submerged vegetation for a variety of aquatic organisms including crayfish, aquatic insects, mollusks, earthworms, tadpoles, frogs , and minnows. They will sometimes conceal themselves in mud or sand in order to ambush prey as it is swimming along the stream bottom. Mating occurs in mid to late spring depending on temperatures and water levels. The turtles excavate nests within 300 feet of the shoreline in sand or gravel substrate where there is little to no vegetation growing. Digging and excavation can last approximately 40 minutes. Nests are flask-shaped and approximately 3-5 inches in diameter and 10 inches deep. Females typically lay one clutch of about 13-21 eggs, which are rigid and heavily calcified. Incubation takes approximately 80 days. Hatchlings must emerge from nests in time to hibernate over winter under water. Basking in sunny areas in shallow water is an important behavior is this species, aiding in digestion, egg maturation, immune system response, overall growth and health – which all depend on solar energy in this cold-blooded species. On warm sunny days the turtle will emerge from the water in sheltered locations in order to bask in the sun for hours at a time. Sometimes the turtles will congregate in large numbers at favored basking locations- where they can remain close to the water and have their legs submerged.
Source:
http://www.vtfishandwildlife.com/library/reports_and_documents/nongame_and_Natural_Heritage/Recovery%20Plans/Eastern_Spiny_Softshell_Turtle_Recovery_Plan.pdf

Box 1. Natural History and Ecology of the Eastern spiny softshell turtle (Apalone spinifera spinifera)

In addition, a New York State Endangered plant, Burdick's wild leek (*Allium burdickii*), was identified in search results from the New York State Environmental Resource Mapper in wetlands LW-4 and LW-10, which encompass the bulk of the BOA Step 1 study area. Burdick's wild leek (*Allium burdickii*) is known only to occur in Chautauqua County and any harvesting or removal is prohibited. This plant was not observed during our field investigations. Additional information on these species can be found on the following websites:

- Burdick's Wild Leek (*Allium burdickii*)
  http://plants.usda.gov/java/profile?symbol=ALBU2
  http://www.dec.ny.gov/pubs/81418.html
  http://www.stlawu.edu/academics/sites/stlawu.edu.academics/files/wild_leek_conservation.pdf
- Eastern Spiny Softshell Turtle (*Apalone spinifera spinifera*)
  http://www.vtfishandwildlife.com/library/reports_and_documents/nongame_and_Natural_Heritage/Recovery%20Plans/Eastern_Spiny_Softshell_Turtle_Recovery_Plan.pdf

http://www.dnr.state.oh.us/Home/species_a_to_z/SpeciesGuideIndex/easternspinysoftshellturtle/tabid/6618/Default.aspx
http://nyfalls.com/wildlife/Wildlife-reptiles-turtles.html
http://www.dec.ny.gov/animals/44455.html

A request was also to the U.S. Fish and Wildlife Service New York Field Office regarding the presence of federal RTE species within or near the study site. The response, dated June 13, 2012, referenced their website which provided a list of federally endangered, threatened and candidate species for Chautauqua County and indicated requests be made to the New York Natural Heritage Program. The U.S. Fish and Wild Service listed three species, however, none were indicated by the New York Natural Heritage Program as occurring within or near the study site.

- Chautauqua County Federally listed RTE species
  - Bald Eagle (*Haliaeetus leucocephalus*) - Delisted, however the eagles continue to receive protection under the Bald and Golden Eagle Protection Act.
  - Clubshell (*Pleurobema clava*) - Endangered
  - Rayed Bean (*Villosa fabalis*) - Endangered

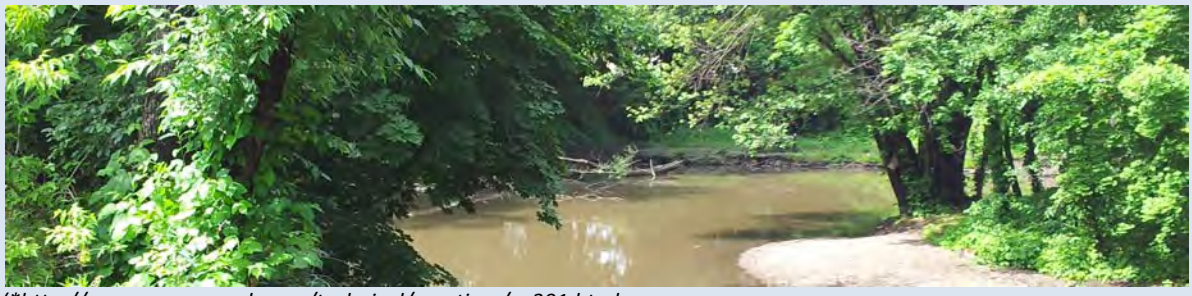
2.2.6. Riparian and Shoreline Conditions

Riparian Buffers

Riparian buffers are an important component of healthy stream and river corridors. These vegetated zones on either side of the river corridor are critical to watershed health and management. Functioning riparian corridors are composed of a diverse array of native plants including trees, shrubs and grasses, and they help reduce pollution entering waterways by slowing down and filtering runoff, while providing important habitat and shelter for native aquatic and terrestrial wildlife.

Damage incurred during development along our shorelines has led to unintended negative impacts to our streams and their associated vegetated buffers. Buffers help to reduce flooding and erosion by stabilizing shorelines and absorbing high-velocity flows by providing a gently sloping floodplain.

Riparian zones along both edges should include 85% of their area in vegetation, more than 50% of which should be taller than knee height; fescues and other turf grasses should represent less than 15% of the plants; native plants should dominate; noxious weeds should make up less than 15% of all plants growing in the riparian areas. Buffers range in size based on the size of the waterway, but a good minimum is about 100'.*



*(*http://www.ny.nrcs.usda.gov/technical/practices/pc391.html; http://www.catskillstreams.org/pdfs/Riparian%20health%20checklist.pdf; http://www.tompkins-co.org/planning/Water%20Resources/documents/Tompkins_Co_Riparian_Buffer_Protection_Agreement.pdf)*

Box 2. Ecological Significance of the Riparian Buffer

Riparian and shoreline conditions within the study area are different between the BOA Step 1 study area and the remainder of the study area. The 2.5 river miles of the Chadakoin from the Chautauqua Lake outlet to McCrea Point consist of predominately natural shoreline and riparian areas. The two Class I wetlands buffer the majority of the river and are categorized as freshwater forested/shrub wetland. As observed during June 2012 field assessments by Biohabitats, the overstory is dominated by silver maple (*Acer saccharinum*), black willow (*Salix nigra*), elm species (*Ulmus sp.*), and ash species (*Fraxinus sp.*) (Table 2.1). The understory is dominated in varying degrees by highbush blueberry (*Vaccinium corymbosum*), winterberry (*Ilex verticillata*), royal fern (*Osmunda regalis*), sensitive fern (*Onoclea sensibilis*), and skunk cabbage (*Symplocarpus foetidus*) (Figure 2.4).

The riparian buffers within the majority of this reach are extensive. Along the left bank they vary from 50-1,000 feet wide up to the rail trail corridor, except for the stretch paralleling Clifton Avenue where the homes predominately have lawn right to the water's edge. Along the right bank the buffer is even more extensive as the wetland width varies between 400 feet wide and 0.5 miles wide. Once the Chadakoin approaches Jones and Gifford Avenue the buffer begins to narrow and once the Chadakoin reaches the Chautauqua Lake Rowing Association dock the buffer is mostly nonexistent as it is reduced to turf grass.

Human impacts are limited to fill, debris and a patch of Japanese knotweed (*Fallopia japonica*)on the right bank near the Chautauqua Lake outlet; several small commercial and residential docks on the left bank where the river approaches Route 430; relic piling along the left bank across from McCrea Point; and the docks and grounds associated with McCrea Point itself.

In general, the shorelines are gently sloping, thus exposing them to seasonal and episodic inundation. These inundations, sheer size, and limited human encroachment and visitation make these wetlands important areas for amphibians and birds. The City has designated the larger wetland as a bird sanctuary. In addition, the nature of the river and shoreline interaction lends itself to large concentrations of submerged and floating aquatic vegetation, also ideal habitat for resident fish species.



Figure 2.4. Wetlands LW-10 with silver maple overstory and sensitive fern understory (Source: Biohabitats; June 12, 2012)

Table 2.1. Observed BOA Step 1 Study Area Riparian Species

Common Name	Scientific Name
silver maple	*Acer saccharinum*
black willow	*Salix nigra*
elm sp.	*Ulmus sp.*
ash sp.	*Fraxinus sp.*
highbush blueberry	*Vaccinium corymbosum*
winterberry	*Ilex verticillata*
royal fern	*Osmunda regalis*
sensitive fern	*Onoclea sensibilis*
skunk cabbage	*Symplocarpus foetidus*

As the Chadakoin River passes McCrea Point it enters a highly commercial and industrial area with narrow riparian buffers and varying degrees of river walls. Throughout the remainder of this reach buffers typically range from 0 to 50 feet wide with few exceptions (Figure 2.5). Concrete and stone walls, gabions, bulkheads, and building foundations dominate shorelines. There is minimal floodplain interaction within this reach as the river is channelized in most instances below the adjacent land. This disconnect appears to be impacting nesting turtles as they must concentrate nesting sites in the limited areas with floodplain access, which in many cases are industrial areas.



Figure 2.5. Typical example of narrow riparian corridor with hardened stream banks (Source: Biohabitats, June 12, 2013)

It was observed by Biohabitats staff that invasive and pioneer species more adapted to disturbed conditions dominate the riparian vegetation in this section of the study area (Table 2.2). Buffer canopies are typically limited to one to two tree widths, thus providing minimal ecological benefits.

Table 2.2. Observed Central and Eastern Study Area Riparian Species

Common Name	Scientific Name
elm sp.	*Ulmus sp.*
ash sp.	*Fraxinus sp.*
*honeysuckle sp.	*Lonicera sp.*
poison ivy	*Toxicodendron radicans*

silver maple	*Acer saccharinum*
grape vine	*Vitis sp.*
*multiflora rose	*Rosa multiflora*
*Norway maple	*Acer platanoides*
willow sp.	*Salix sp.*
*tree of heaven	*Ailanthus altissima*
box elder	*Acer negundo*
silky dogwood	*Cornus amomum*
cottonwood	*Populus deltoides*
sumac sp.	*Rhus sp.*
raspberry sp.	*Rubus sp.*
Virginia creeper	*Parthenocissus quinquefolia*
paper birch	*Betula papyrifera*
*crown vetch	*Securigera varia*
catalpa	*Catalpa sp.*
*buckthorn	*Rhamnus sp.*
*Japanese knotweed	*Fallopia japonica*
elderberry	*Sambucus canadensis*
sycamore	*Platanus occidentalis*
***indicates invasive species**	

2.3. Study Area Observations

Biohabitats staff conducted river corridor and upland field assessments within the study area in June 2012. Field observations are described below.

2.2.1. Zone 1: West End Natural Zone

Wetlands LW-10

- This large wetland encompasses 308.6 acres and is located on the right bank of the Chadakoin from the outlet downstream to approximately McCrea Point and bordered to the south by Jones and Gifford Avenue.
- This wetland is classified as "Class I", which is the highest rank in New York State's four class ranking system. It is palustrine in nature and classifiable as a deciduous hardwood swamp with its canopy dominated by silver maple, black willow, elm species, and ash species, with its understory dominated by highbush blueberry, winterberry, royal fern, sensitive fern, and skunk cabbage.
- The northwest portion of the wetland shows some evidence of disturbance as invasive plant species, including a small patch of Japanese knotweed. Areas of historic fill were also observed. The remainder of the wetland showed little evidence of invasive species, except the random barberry and multiflora rose along the Chadakoin itself where there was an opening in the canopy.
- The wetland understory varies between a dense fern/herbaceous and a dense shrub cover (Figure 2.6).
- Silky dogwood is present along the edge of the Chadakoin and several channels, where more light was available in addition to swamp white oak observed along the channel behind the muck farm and radio tower.
- Wildlife observed included frogs, mallards, and an osprey with its prey.

- Pedestrian access is limited to a small portion of the northwestern corner, otherwise the dense vegetation and saturated soil was extremely difficult to traverse.



Figure 2.6. Wetland LW-10 from Chadakoin River (Source: Biohabitats; June 13, 2102)

Chadakoin River: Outlet to McCrea Point

- Throughout this stretch of river, the Chadakoin is a broad, slow-moving river with relatively clear water clarity, dominated by submerged aquatic vegetation (SAV) and floating American white waterlilies (Figure 2.7).
- Class I wetlands dominate both banks; wetland LW-4 (41.5 acres) to the east, wetland LW-11 (175.2 acres) to the north, and wetland LW-10 (308.6 acres) to the south and west.
- Chautauqua Lake Rowing Association and McCrea Point are the only development/docks on the right bank throughout this reach (Figure 2.8).
- Where Clifton Avenue approaches the river on the left bank, there are several old commercial structures as well as approximately six private homes with docks.
- Just past the private docks the City's active storage yard is visible from the river and Japanese knotweed is apparent.
- Across from McCrea Point some old bulkheads, pilings, and trash are visible.
- Numerous individuals were fishing at McCrea Point.
- Boat access is available at McCrea Point, although boat traffic appears to be very limited on this reach.



Figure 2.7. Chadakoin River with American white waterlilies (Source: Biohabitats; June 13, 2012)



Figure 2.8. McCrea Point bulkheads and boat access (Source: Steve Centi, April 22, 2012)

Chadakoin Park, Rail Trail Corridor, and Washington Street Corridor

- The overall native plant health qualitatively appears to be good along the river corridor (skunk cabbage and ferns in the understory).
- Canopy species observed within the park, rail trail corridor and marsh complex included: willows, spruce, maples, walnuts in wetter areas, catalpa, oaks, elms, and several groves of aspen scattered across the open space. Understory and open fields included: redtwig dogwood, viburnum, sumac, equisetum, sedges, juncus, alder, phlox, Virginia creeper, riverbank grape, and milkweed. Skunk cabbage and ferns inhabit the spaces nearer the wetland fringe of the river on the western edge and a small grouping of sagitaria inhabit the canal.
- Some invasive plant cover was observed, although it is not extensive. Invasive species noted across the site in small patches included mugwort, some areas of common reed, and multiflora rose. In

more disturbed areas along the rail trail and the two canals coming in from the river: stilt grass, bush honeysuckle, thistles, and coltsfoot. While common reed is limited throughout Chadakoin Park and adjacent vacant spaces, in those areas where it does appear it would be wise to control now, to limit future expansion of this species

- There are many wet areas throughout Chadakoin Park, especially the southern and eastern side along Lafayette Street, that could be allowed to transition (e.g., stop mowing) to wetland habitat as a more functional extension of the existing wetland edge along the Chadakoin River and as a stronger ecological buffer for wildlife and wetlands species along this corridor (Figures 2.9, 2.10 & 2.11).



Figure 2.9. Forested wetland (western) edge along Chadakoin Park(Source: Biohabitats; June 13, 2012) .



Figure 2.10. Wetland areas within Chadakoin Park (Source: Biohabitats; June 13, 2012).



Figure 2.11. Wetland area within Chadakoin Park (Source: Biohabitats; June 13, 2012).

- An existing mown trail around the northern portion of the park could be maintained and perhaps formalized as a nature trail loop through the existing wetland, wetland fringe, and meadow complexes in the area Figures 2.12 & 2.13).



Figure 2.12. A mown trail that circulates through the northern portion of Chadakoin Park (Source: Biohabitats; June 13, 2012).



Figure 2.13. Native plants, including milkweed, along the mown trail (Source: Biohabitats; June 13, 2012).

- In this same general vicinity as the mown path, the existing meadow and wetland /marsh area could serve as a great location for a Nature/Education Center. Perhaps such a center could be co-sponsored by the Audubon Society, Peterson Institute, and the Chautauqua Watershed Conservancy as a gateway to the Chadakoin River as an ecological and passive recreation destination) - along the 18th street/17th Street corridor into the Park.
- Some of the playing fields contain areas of standing water or are completely overgrown with vegetation. These can be restored as natural areas, while existing fields not in the floodplain can be enhanced to provide active recreation space in addition to the existing playground and skatepark (Figure 2.14).



Figure 2.14. Playground, pavilion, and other active recreation areas in Chadakoin Park (Source: Biohabitats; June 13, 2012).

- Two areas in need of enhancement or restoration are two canals that are connected to the Chadakoin River. They display signs of pollution and disturbance, including invasive species and

discolored water. They also provide evidence of habitat for nesting turtles, with eggshells observed along their banks. These require further consideration in terms of enhancement, treatment, and restoration (Figures 2.15 , 2.16 & 2.17).

- The above mentioned ground pollution is most likely related to the Chadakoin Park's previous use as a landfill and current classification as a Superfund (Class 3) site #907009. Thus any future site work and excavation in the Park will need to take into account the site's classification.



Figure 2.15. Drainage canal at 17th street (Source: Biohabitats; June 13, 2012).



Figure 2.16. Vegetation along the drainage canal (Source: Biohabitats; June 13, 2012).



Figure 2.17. Native wetland vegetation in the north-south drainage ditch along the eastern edge of Chadakoin Park near Lafayette Street (Source: Biohabitats; June 13, 2012).

- Chadakoin Park appears to receive stormwater runoff from adjacent developed sites to the north and east. A large amount of surface area adjacent to the park along Washington Avenue is under use as auto storage, repair, and sales, which potentially contribute polluted stormwater runoff. Existing ditches in the park running alongside these parcels can be expanded and modified to treat stormwater runoff prior to the runoff flowing into more sensitive habitat within the park (Figure 2.18).



Figure 2.18. Stormwater runoff flowing into the park from adjacent development (Source: Biohabitats; June 13, 2012).

- 10th Street and 11th Street on the southwest side of the park appear to be underutilized. To limit fragmentation, and support ecological improvement and overall habitat patch size, consider removing impervious cover and revegetating these rights-of-ways.
- Opportunities for gateway enhancements exist at key entrances to Chadakoin Park, including vegetation enhancement, stormwater management demonstration gardens, as well as signage to make the park appear more welcoming and appealing. This is particularly true at the 12th Street entrance (Figure 2.19).



Figure 2.19. The main entry to Chadakoin Park (Source: Biohabitats; June 13, 2012).

- There are also opportunities along Washington Street to augment the streets leading west from the residential neighborhoods to the east of Washington Street with sustainable stormwater treatment and enhanced canopy and safer crossings. Currently, heavy vehicular traffic makes the street feel unsafe for bikers or pedestrians. Although sidewalks exist, there are inadequate boulevard strips to buffer the pedestrian from the travel lanes (Figures 2.20 & 2.21). Street crossings also feel precarious, even at the existing park entries. A narrowing of Washington Street, as well as the inclusion of a safer bike lane and several pedestrian crossings could mitigate this situation, and can be designed to integrate stormwater management practices, highlight native plant species within the park, and accentuate gateways to the park, the rail trail, and the internal trails and the proposed nature center. More street trees can also be planted along the corridor to provide shade and soften the street edge further to create more of a boulevard feel.



Figure 1.20. Washington Street along Chadakoin Park, wide and uninviting for pedestrians and cyclists (Source: Biohabitats; June 13, 2012).



Figure 2.21. Opposite view from above figure (Source: Biohabitats; June 13, 2012).

2.2.2. Zone 2: McCrea Point to Warner Dam

Chadakoin River

- The river is more confined in this reach due to the prevalence of steep banks and/or bulkheads dominating the riverbanks. Water clarity also reduced in this reach.
- Five bridges cross the river in this reach and a replacement crossing at Sprague Street is currently being constructed for a total of six crossings.
- Riparian vegetation transitions to more disturbance tolerant species, such as catalpa, black locust, and Norway maple with patches of Japanese knotweed. River birch clumps have also been planted along trail in a couple spots.

- On the left bank just prior to crossing under the Fairmount Avenue bridge is a parking lot with only a narrow strip of vegetation along the river's edge. On the right bank several houses back up to the river just before and after the West 3rd Street bridge. The Jamestown Public Works Department dominates the right bank at Panzarella Park and the Warner Dam. High concrete walls make up the left bank (Figure 2.22).



Figure 2.22. Approaching Panzarella Park on the rightbank (Source: Biohabitats, June 13, 2012).

- The Chadakoin widens at the Warner Dam pool with sheet piling from the old water release channel on the right bank (Figure 2.23).



Figure 2.23. Just upstream of the Warner Dam showing bulkhead at edge of channel (Source: Biohabitats, June 12, 2012).

Upland and Vacant Lands

- This corridor is mainly in use as industrial, mostly inaccessible, and provides few areas with potential for ecological restoration, including potentially unused train tracks along the north shore of the river (if letting a portion of that area be wild would be agreeable to the rail users.)

- Other areas where access is blocked (along the rails) could be allowed to grow and periodically controlled for invasive species, as access seems limited, in terms of trails, unless there's an opportunity for a trail along the rails (Figures 2.24 & 2.25). Planting milkweed and other meadow and warm season grasses in these vacant lands that were once active rails would be interesting as a pollinator and bird corridor.



Figure 2.24. Rail yard on the north shore of the Chadakoin near the BPU facility (Source: Biohabitats; June 12, 2012).



Figure 2.25. Rail yard looking east (Source: Biohabitats; June 12, 2012).

- Consider signage, and greater access to the Porter Avenue Park at Steele Street, where currently an informal connecting trail runs from the ridge down to the valley floor along Steele, switching back through a patch of woodland on a steep slope (Figure 2.26).



Figure 2.26. Trail at Porter Avenue Park (Source: Biohabitats; June 12, 2012).

- Panzarella Park is lacking diverse vegetative structure. Adding more native vegetation and a greater diversity of size and species will help strengthen this park's ecological function as a corridor patch and recreation spot (Figure 2.27). The boardwalk edge along the southern tip could use some enhancement or improvement and this might be an ideal location for floating wetlands for enhanced habitat value and educational/wildlife observance.



Figure 2.27. Panzarella Park (Source: Biohabitats; June 12, 2012).

- There is an opportunity east of the Jamestown Board of Public Utilities (BPU) facility to enhance the shoreline and upland areas, riverside trail interface with the native river shoreline

enhancement/stabilization, and perhaps some integrated stormwater management of runoff from the BPU site. The shoreline slopes into the river much more gradually at this location than elsewhere along the urbanized water front, providing an opportunity for fringe emergent wetland restoration (Figure 2.28). This should be considered a potential gateway opportunity.



Figure 2.28. Shoreline restoration and stormwater management opportunity at site near BPU facility (Source: Biohabitats; June 12, 2012).

- Another particularly interesting space is the area under the Washington Street Bridge overpass just west of the Warner Dam where stormwater from the overpass drains directly onto the pavement near the supports (Figure 2.29). Instead the stormwater could be treated in vegetated stormwater planters that help shape an interesting gathering and social space below the underpass. The planting scheme and stormwater management practices implemented at this location could be expanded through enhanced streetscape design that connects to the Chadakoin at other locations (13th Street, 17th Street, Washington Street, Main, Steele, Victoria, Foote, Allen Street, Hopkins Avenue, Blackstone Avenue, Buffalo Street) – see Section 3 for further description.



Figure 2.29. The area under the Washington Street bridge where stormwater management could be integrated in the design of a new gathering space (Source: Biohabitats; June 12, 2012).

- Native vegetation can be utilized to screen views of some of the adjacent industrial facilities along Steele Street from the Riverwalk, so the inhabitant feels more connected to the river.

2.2.3. Zone 3: Warner Dam to Winsor Street

Chadakoin River: Warner Dam to Gateway Center

- The stream becomes more freely flowing in this reach with a variety of riffle and pool habitats.
- The stream substrate consists of a mix of cobble and sand intermixed with bricks, concrete slabs and the remains of old weir structures.
- The channel remains confined between steep banks and infrastructure.
- Direct access is limited to the area nearest to the Warner Dam, between Washington and Main Streets. Downstream from this point, both banks are composed of high, concrete, brick and gabion walls that extend to within roughly 400 feet of Harrison Street, where the walls yield to a thin strip of young forest on steep banks composed of rubble (Figure 2.30). This condition continues to the Foote Avenue bridge, except where it is interrupted by the foundations of buildings, and steel sheet pile associated with the Institute Street and Foote Avenue bridges.



Figure 2.30. Looking downstream at the Riverwalk (Source: Biohabitats; June 12, 2012).

- Riparian vegetation continues to reflect urban and disturbance tolerant species such as catalpa, black locust, and Norway maple with patches of Japanese knotweed.

Upland and Vacant Lands (existing "Riverwalk" plus proposed extension to Gateway Center)

- Various types of plantings, river stabilization, facilities and furnishings dot the Riverwalk leading to some inconsistency of styles, vegetation health, shoreline function and habitat value. Turf should be limited to selected areas where picnicking and active use might be desired. A much more robust vegetated edge along the Riverwalk and river shoreline is preferred.
- Enhanced native vegetation can be utilized to screen views of some of the adjacent parking lots along Harrison Street from the Riverwalk, so the inhabitant feels more connected to the river (Figures 2.31 & 2.32).



Figure 2.31. The Riverwalk near Warner Dam (Source: Biohabitats; June 12, 2012).



Figure 2.32. The Riverwalk near Riverwalk Center (Source: Biohabitats; June 12, 2012).

- The pocket park with sculpture on the north shore near the Main Street crossing is wooded and should stand as an example for more of the shoreline along the southern edge (Figure 2.33).



Figure 2.33. Pocket park near Main Street crossing and memorial (Source: Biohabitats; June 12, 2012).

- There are a few points where the natural shoreline still exists and could offer direct access to the water. Enhancements should be designed primarily for overall ecological function but with some accessibility to the river's edge for pedestrians (Figure 2.34).



Figure 2.34. Shoreline on opposite bank where streambank restoration could not only enhance ecological function, but provide pedestrian access (Source: Biohabitats; June 12, 2012).

- Overall the vegetation palette can be diversified and expanded to include denser plantings of native species and to provide better shoreline stabilization for the river with a more natural approach.
- A turtle was observed laying her eggs in the mulch alongside the Riverwalk Center. Creation of habitat and nesting areas along this reach of the river for turtles would be beneficial.
- There are steep banks along this corridor, requiring tailored restoration solutions.
- It is clear from interactions with members of the community that there is interest and care shown for the wildlife along this corridor, most importantly the waterfowl and turtles, and therefore there is an investment in wildlife health and survival among residents that can be strengthened in terms of stewardship and care of habitat areas.
- This corridor shows indications of Jamestown's service-oriented programs and facilities with the presence of the Gateway Center, churches, and health centers – most notably the Western New York Cancer Care Center at Foote Avenue (Figures 2.35 & 2.36).



Figure 2.35. Western New York Cancer Care Center at Foote Avenue (Source: Biohabitats; June 12, 2012).



Figure 2.36. Open space where urban agriculture and therapeutic gardens could provide amenity for nearby community members including the Gateway Center and Western New York Cancer Care Center (Source: Biohabitats; June 12, 2012).

- Associated with these locations there are vacant lands and shoreline areas (particularly on the southern shore) to draw connections to enhanced green spaces to promote ecological health, outdoor access, gardening, therapeutic landscapes, green jobs training locations, occupational health etc. This is particularly noted along Victorian Avenue from Harrison to Foote and even along Water Street. The vacant lands along the river shoreline here provide ample space for an extension of the Riverwalk eastward, expanding the church's open access raised bed vegetable garden at Victoria and Institute and utilizing the vacant lots for expansion of those public access gardens, broader shoreline buffers, therapeutic gardens, and orchards if the soils were found to be safe (Figures 2.37 & 2.38). See Section 3 for further details on study area potential.



Figure 2.37. Open space along Victoria Avenue near existing St. James garden that could be expanded providing stronger buffer along river and productive landscapes for surrounding residents (Source: Biohabitats; June 12, 2012).



Figure 2.38. Community Garden (Source: Biohabitats; June 12, 2012).

- There is potential along Victoria for narrowing or discontinuing car traffic to expand shoreline vegetation and buffer at this pinch point (Figure 2.39). There is also an opportunity for integrated stormwater management along this section too, before it enters the river (Figure 2.40).



Figure 2.39. Victoria Avenue near St. James Church, looking west (Source: Biohabitats; June 12, 2012).



Figure 2.40. Victoria Avenue along the Chadakoin (Source: Biohabitats; June 12, 2012).



Figure 2.41. Expanse of paved area behind Gateway Center (Source: Biohabitats; June 12, 2012).



Figure 2.42. Shoreline along Gateway Center property (Source: Biohabitats; June 12, 2012).



Figure 2.43. Chadakoin River behind Gateway Center property (Source: Biohabitats; June 12, 2012).

- According to anecdotal accounts, a few weeks before the June 2012 fieldwork, several turtles were observed behind the Gateway Center trying to nest in the asphalt upland of the river (Figures 2.41, 2.42 & 2.43). Employees at the Gateway Center described one turtle that bloodied herself by continuously trying to dig in the hot asphalt and the workers kept trying to move her to a better spot near the natural edge of the river.
- Downstream of Foote Avenue, the left bank remains hardened and stabilized for approximately 500 feet, then gives way to a narrow degraded forest. Here the stream passes behind the Western New York Cancer Care center and a number of attached warehouses. Along the right bend behind the warehouses, the river is easily accessible from a gravel parking lot that is adjacent to, and only about five feet above the river.
- From the warehouses down to King Street, the channel is free flowing and the riparian area is composed of a thin strip of young forest on steep banks composed of rubble.

- Riparian vegetation reflects more disturbance-tolerant and invasive species where the riparian edge is narrow. However, in areas of broader floodplain forest native species become much more prevalent.

2.2.4. Zone 4: Winsor Street to Tiffany Avenue (East of Winsor Street)

Chadakoin River: Winsor Street to Tiffany Avenue

Upland and Vacant Lands

- A number of vacant lands in this portion on both the northern and southern shores that are overgrown with vegetation, some native, some not.
- Species include: catalpa, maples, oaks, green ash, ferns, skunk cabbage, willows, maples, viburnum, riverbank grape, wild ginger, jack in the pulpit, may apple, warm season grasses and meadow plants in the upland near parking areas including milkweed, sumac, cottonwood, witch hazel, walnut, limited confers including some planted spruces.
- Nonnative and invasive species include: knotweed – quite prevalent along river shoreline the further east one travels, garlic mustard, poison ivy, stilt grass, vinca, ivy.
- Many of these spaces, especially those along the river by Harrison Street before Winsor, Allen Street, Buffalo Street, Blackstone Street are candidates for management, mainly invasive species management with some shoreline restoration where there is evidence of erosion or need for stabilization. Banks need restoration and stabilization near the vacant area west of Blackstone Fabrication (Figure 2.44).



Figure 2.44. Chadakoin River near Blackstone property (Source: Biohabitats; June 12, 2012).

- A few particularly important nodes include the vacant lots near the old Dahlstrom site (southwest of Buffalo Street), the lot and parking area at the elbow of the Chadakoin to the east of the Dahlstrom site, and the areas that connect to the Hope's Chadakoin Health/Nature Trail, mainly the south shore.
- The Dahlstrom building crosses over the river at one point and is currently being demolished from the eastern edge to just beyond the western bank of the river. This provides an opportunity to remove the walls along the river, grade the banks back to provide substrate for habitat and

reconnect the river to the flood plain – all of which can vastly improve river health and visitor experience in this location (Figures 2.45, 2.46 & 2.47).



Figure 2.45. Open space near Blackstone property (Source: Biohabitats; June 12, 2012).





Figure 2.46 & 2.47. Former parking for Dahlstrom property where open space could incorporate natural breakdown of pavement (Source: Biohabitats; June 12, 2012).

- In the floodplain area to the east of Bigelow, both north and south of the river, invasive species management is recommended, as the floodplain seems functional but is in need of an invasive species management plan (Figures 2.48, 2.49 & 2.50).



Figure 2.48. Wooded open space along Bigelow that could serve as a public park near eastern edge of LWRP (Source: Biohabitats; June 12, 2012).



Figure 2.49. Floodplain conditions near Bigelow open space node (Source: Biohabitats; June 12, 2012).



Figure 2.50. Floodplain conditions along Chadakoin, on eastern edge of LWRP (Source: Biohabitats; June 12, 2012).

- The Hope Chadakoin Trail, established by Hope Window's employees in 2007, is a highlight in this zone and could be used as a reference site for other portions of this zone in terms of trail form, design, maintenance, stewardship and vegetation (Figures 2.51, 2.52 & 2.53).



Figure 2.51. Hope's Chadakoin Trail signage at entry (Source: Biohabitats; June 12, 2012).



Figure 2.52. Hope's Chadakoin Trail (Source: Biohabitats; June 12, 2012).



Figure 2.53. Healthy fern understory along the Chadakoin Trail (Source: Biohabitats; June 12, 2012).

- Brick paving along Hopkins Avenue is a reminder of earlier aesthetics and urban forms (Figure 2.54). There is evidence of brick streets throughout the project area. Restoring some of these brick roadways (Section 3 Study Area Potential) as part of streetscape improvements would support an urban ecological design aesthetic and sustainable approach through the reuse of local materials and a permeable pavement option (stormwater management).



Figure 2.54. Old brick paving along Hopkins Avenue (Source: Biohabitats; June 12, 2012).

- Other vacant lots in the vicinity of the potential nature area and trail connection at Bigelow could be used for playing fields and other active recreation (Figure 2.55). There are fields that have started to show character of meadow or successional scrub/shrub that could be maintained as such.



Figure 2.55. Open space extension from Chadakoin River buffer (Source: Biohabitats; June 12, 2012).

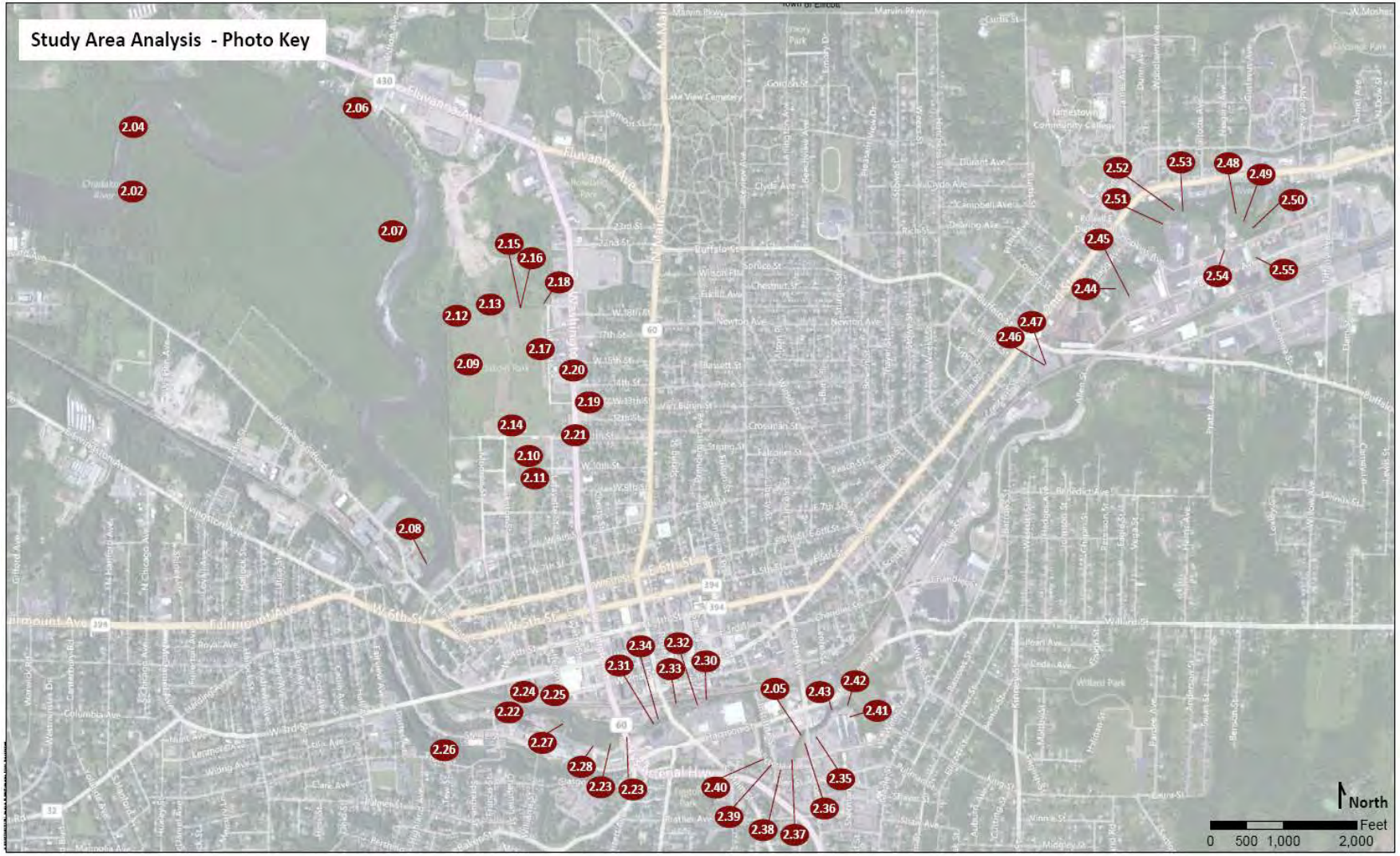


Figure 2.56. Study Area Analysis Photo Key (refer to Appendix D for higher resolution version)

2.4. Local Landscape Ecology

Jamestown was originally named "the Rapids" since the roaring Chadakoin River provided an important power supply for the early mill industry (saw mills, grist mills, and woolen mills) which helped to place the town on the map. Processed wood from these mills would be sent to towns as far away as the Ohio and Mississippi Rivers. Over time, the river became more and more polluted, and with only few exceptions attention turned away from the river as a natural resource as it became more of a dumping ground for various industries.

Despite this history there is hope for a thriving natural habitat community along the river, as well as the reintroduction of the river as a recreational and natural resource for the community. Several areas within the immediate vicinity of Jamestown provide valuable insight into the restoration and habitat potential along the Chadakoin (Figure 2.57). These sites include remnant wooded wetlands, marshes and older forest stands, as well as newer woodland in parks that host important tributary streams to the Chadakoin. Using the information below, along with the regional hydrology and landcover mapping, there are potential wildlife corridors and habitat patches, for moving to and from significant forest, forested wetland and meadow patches for forage, breeding, and other habitat needs. Each of the natural resource areas highlighted hosts impressive numbers of bird, amphibian and other wildlife species and provides habitat patches that may well be strengthened by the restoration and enhancement of the Chadakoin corridor. Because of their relative vicinity to the Chadakoin River and the broader Great Lakes/Niagara Escarpment Corridor, as well as their common landscape character traits, these local ecotypes provide indicators for the type of habitat that could be restored along the Chadakoin, providing expanded habitat corridors or ecological stepping stones. (http://www.rtpi.org/index.php?option=com_content&view=section&id=17&Itemid=166)

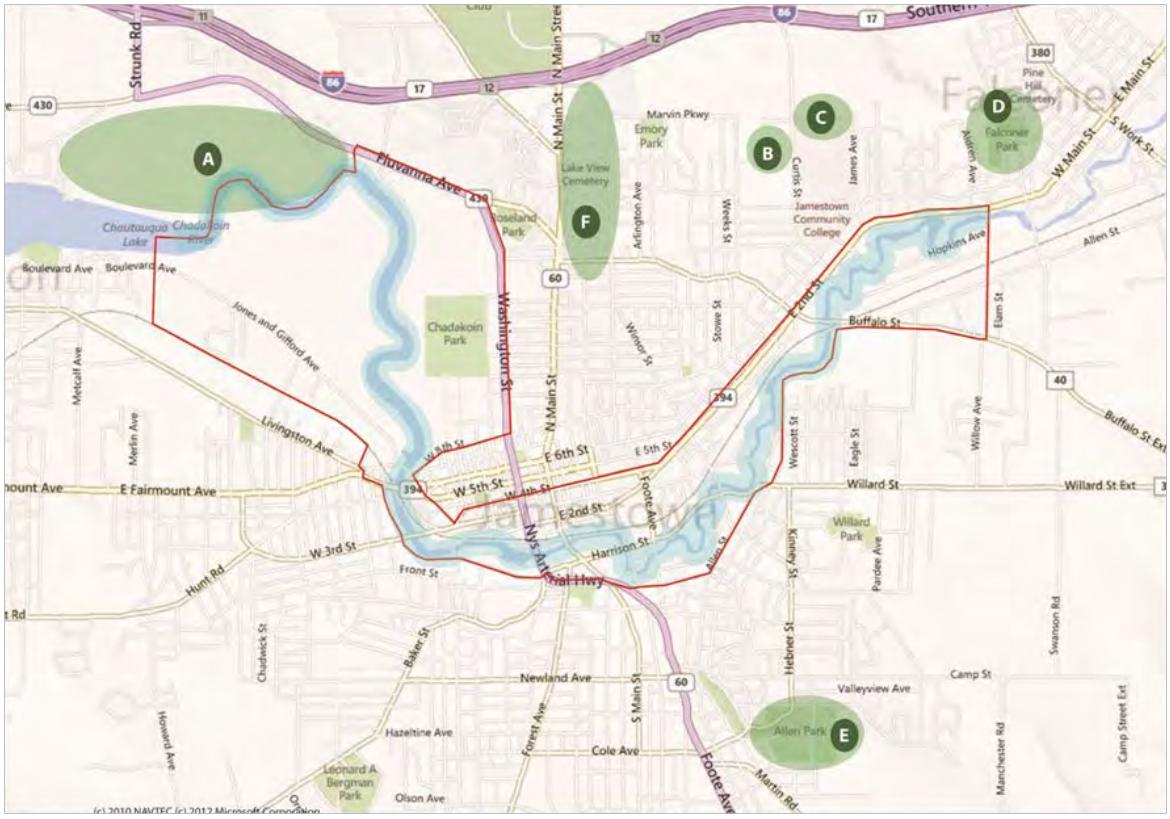


Figure 2.57. Local ecological reference sites (Map source: Bingmaps.com © 2010 NAVTEC © Microsoft Corporation)

The Chautauqua Watershed Conservancy's **Chautauqua Lake Outlet Wetland Greenway Preserve (A)**, encompasses 81 acres along the north shore of the outlet dominated by red maple and shrub swamp. A variety of ferns, as well as cardinal flower and buttonbush dominate in open areas. It provides important habitat for migratory birds and waterfowl at the southern end of Chautauqua Lake. Species that have been observed here include the pied-billed grebe, horned grebe, tundra swan, Canada goose, common merganser, hooded merganser, red-breasted merganser, common goldeneye, bufflehead, ospreys, bald eagles, great blue heron, green heron, black-crowned night heron and American bittern.

The Roger Tory Peterson Institute (B), dedicated to the legacy of ornithologist, educator, and naturalist Roger Tory Peterson (Figure 2.58). The 27-acre grounds include young stands of trees and a few large specimens of Eastern hemlock, American beech, and black cherry. Other native plants found on site include: American Hornbeam, red-osier dogwood, Northern arrowwood, serviceberry, witch Hazel, wintergreen and lowbush blueberry. The forest floor includes Christmas fern, hayscented fern, sensitive fern, cinnamon fern, and New York fern. Wildflowers in the meadow areas include blue flag, mayapple, Canada mayflower, star flower and spotted touch-me-not. Breeding snapping turtles are known to cross the site each spring. Other observed species include: smooth green snake, brown snake, common garter snake, and redbelly snake. Among the amphibians that may be found here are Northern leopard frog, bullfrog, wood frog, spring peeper, redback salamander, Eastern newt, and spotted salamander. Birds seen include: green heron, sandhill crane, great horned owl, broad-winged hawk, red-shouldered hawk, Cooper's hawk, sharpshinned hawk, American woodcock, wild turkey, ruffed grouse, Eastern phoebe, tree swallow, Eastern bluebird, pileated woodpecker, veery, wood thrush, tufted titmouse, common redpoll, purple finch, Eastern towhee, fox sparrow, brown thrasher, hooded warbler, prairie warbler, common yellowthroat, indigo bunting, and scarlettanager.



Figure 2.58. Landscape plantings and the surrounding woods at the Roger Tory Peterson Institute's visitor's center (Source: Biohabitats; June 12, 2012).

The Jamestown Community College Preserve (C), or "College Park" or the "100-acre lot," is a wooded preserve north of the main campus which provides a living learning/research lab for students as well as a recreational area for regional residents (Figure 2.59). The woodland, typified by eastern deciduous forest species – especially those in seasonally flooded and swampy areas, also hosts Moon River, a tributary to the Chadakoin River, which makes it a good reference for ecological function along wooded areas of the Chadakoin. Riffles along the creek host crayfish, mayflies, and caddisfly nymphs among

other aquatic species. Among the most prevalent species in the woodland are American beech, Black cherry, yellow birch, Eastern hemlock. Spring ephemeral herbaceous species include Spring beauty, red trillium, yellow trout lily, goldthread, Canada mayflower, and star flower. Amphibian species attracted to this habitat include: Spring peeper, wood frog, American toad, Northern leopard frog, bullfrog, spotted salamander, redback salamander, Northern two-lined salamander, and Northern Spring salamander. Other wildlife seen in the preserve include: wild turkey, spotted sandpiper, belted kingfisher, yellow warbler, common yellowthroat, mink, red fox, raccoon, muskrat, and deer.



Figure 2.59. College Park's woods and associated trails and facilities (Source: Biohabitats; June 12, 2012).

Falconer Millrace County Park (D), is a 7-acre preserve named for the old millrace located in the park, which dates back to the time when milled lumber was a major export from Jamestown to cities along the Allegheny, Ohio and Mississippi Rivers. While the prevalence of some invasive species (garlic mustard, poison ivy, and Japanese knotweed) has been noted as a problem in the wooded areas the park also features Northern Riverine Forest species including large silver maples and American sycamores. Other native species present include hickory, American basswood, box elder, slippery elm, and several large specimens of green ash and a large white oak. Large stands of native jewelweeds (spotted and pale) are also notable in this park. This park has river access and may provide further reference for trail connections along the Chadakoin River.

Allen Park (E), is considered a "small but scenic park" nestled into a mostly residential area in southern Jamestown. Minnow Creek is a prominent stream that runs along exposed shale walls in a ravine through the 35-acre park (Figure 2.60). There are a number of large Northern red oaks in the park, as well as wooded groves and shrub edges that provide important bird habitat for birds including black-capped chickadees and white-breasted nuthatches, migrating warblers and vireos, and summer breeding residents such as American robins and blue jays.



Figure 2.60. Minnow Creek runs through a wooded portion of Allen Park (Source: Biohabitats; June 12, 2012).

Lake View Cemetery (F), north of downtown Jamestown, is an 83-acre cemetery that boasts some of the oldest hardwood trees in the city. The cemetery location was chosen in 1858 for its well-drained soils. The glacially deposited sand and gravel arrived as meltwater, which flowed off a pausing or receding glacier approximately 15,000 years ago. The largest tree specimens include white oaks and red oaks. Other mature species include sugar maple, shagbark hickory, horse chestnut, Eastern hemlock, Eastern white pine, and red pine. Bird species seen in the cemetery include: American robin, blue jay, black-capped chickadee, Northern flicker, Eastern screech owl, and wood duck. A long list of sightings includes red-tailed hawk, Cooper's hawk, red-bellied woodpecker, yellow-bellied sapsucker, tree swallow, Eastern bluebird, Eastern kingbird, warbling vireo, Cape May warbler, ovenbird, bay-breasted warbler, Northern parula, Tennessee warbler, Northern mockingbird, and chipping sparrow. *(Reference: http://www.rtpi.org/index.php?option=com_content&view=section&id=17&Itemid=166)*

3. STUDY AREA POTENTIAL

3.1. A Living Infrastructure Approach

A living infrastructure approach integrates a site's rich ecological legacy with proposed redevelopment, creating a functional and sustainable landscape while cultivating thriving and complimentary human and natural resource communities.

For living infrastructure, the first step in understanding the site's potential for fostering ecological functionality is to examine the landscape's natural and hydrologic patterns (both current and historic) and the ecosystem services that could potentially be provided if the site was restored to its full ecological potential. Ecosystem services include food and raw material production, fresh water availability, treatment of stormwater runoff, air quality regulation, moderation of extreme weather events including flooding, pollination, erosion prevention and soil fertility, functional habitat, recreation space, tourism opportunity, aesthetics and a sense of place (The Economy of Ecosystems and Biodiversity, 2010).

Taking a living infrastructure approach provides a way to weave those ecosystem services into redevelopment by identifying the most important ecological nodes, restoration needs, and green corridors and connections as a framework that is responsive to ecological function and hydrologic management. Living infrastructure provides a palette of innovative practices which filter stormwater runoff, restore habitat, enhance local biodiversity, lower irrigation water demand, reduce fuel and maintenance costs, provide safer pedestrian and bicycle access routes and create new social and gathering spaces. This approach reinforces the connection between the urban fabric and the river, with a nod toward improving ecological function and water quality, and increasing green spaces, tree canopy, and productive landscapes within the river's most sensitive buffer zone on both banks.

Through this lens, Jamestown reconnects to the Chadakoin River corridor and neighboring natural areas, redefining its relationship with the resource that had once been its main economic driver, enhancing and restoring the river's ecological vitality while providing a renewed amenity for the community. Full restoration is not realistic, as the economic vitality of the city depends on mixed uses being integrated into the riparian fabric. However important ecosystem services within the living infrastructure framework provide for enhanced function and vitality of the river and its inhabitants.

3.2. Living Infrastructure Framework

A number of different opportunities for ecological restoration, urban ecological design in parks and natural spaces, and stormwater treatment begin to take shape along the Chadakoin River corridor, based on the field observations, as part of a living infrastructure framework for the BOA and LWRP study area.

Moving from west to east they vary from the natural and recreational opportunities in Chadakoin Park and the marsh/wetland complex along the western shore of the river to participatory landscapes in central city along the Riverwalk and extending to the Gateway Center. Moving further east many opportunities for restoring the river's floodplain functionality can be combined with new opportunities to invite residents along nature trails that highlight natural wooded shoreline habitat as the river regains its natural form. Table 3.1 below describes many of the practices that contributed to the overall living

infrastructure framework. Figure 3.1 shows the living infrastructure framework that can serve to inform design and redevelopment along the Chadakoin River.

Table 3.1. Living Infrastructure Practices

Practice	Description	Location
Vegetated stormwater treatment	Bioswale, bioretention, tree pits - Biofiltration uses a combination of plants and soil media in the removal of pollutants such as bacteria, nitrogen, phosphorus, heavy metals, oil and grease from stormwater runoff via adsorption, filtration, sedimentation, volatilization, ion exchange and biological decomposition. Swales can collect and convey surface stormwater runoff from streets, sidewalks and plazas. These practices are placed adjacent to impervious areas and should be designed to complement or enhance the existing landscape plantings.	Riparian buffer, streetscapes, site design
Green streets/ complete streets	Vegetated stormwater treatment integrated into streetscape improvements and design (green streets) that can be expanded to include safer pedestrian and bicycle access (complete streets). Practices may include stormwater tree pits, infiltration swales or curb bump-outs.	Perpendicular and parallel streets
Open space design & stormwater amenity	Larger-scale bioretention or wetlands can be artistically integrated into a site as naturalized water features, providing an aesthetic amenity as well as enhanced spaces for recreation and respite; planted with native vegetation that provide aesthetic accents, vibrant colors and texture, and spatial organization.	Site design
Productive landscapes	Especially in landscapes dominated by urban fill, conditioning the soil with a balance of nutrients, mycorrhizal fungi, compost, and other organic elements like biochar, promotes healthy soil function and processes. Urban agriculture can provide community space with productive lands for vegetables, fruit trees and other plants.	Site design, some areas of riparian buffer, where appropriate.
Novel aquatic habitat/ecosystem restoration practices & living shoreline restoration	Marsh/wetland plantings integrated into restored bulkheads, fish ladders, stream corridor restoration, etc.	Along the river's edge or in the river corridor
Green roofs	Lightweight vegetated roof system consisting of waterproofing material, growing medium, and specially selected plants	Roofs of new or restored buildings
Sedum rail plantings	Within rail lines, as green alternative to stone fill	Rails
Water harvesting	Harvested rainwater may be collected from most impervious areas such as rooftops or	Building Design

	plazas. Cisterns can be either above ground and integrated into the architecture of the building, or buried. Stormwater can be collected and reused for non-potable water uses within a building like flushing toilets, for landscape irrigation purposes, or for other uses like HVAC system make up water to support cooling systems.	
Wastewater treatment wetlands	Treatment of wastewater through vegetated wetland systems that are integrated into a site, as aesthetic amenity and treatment area	Site design

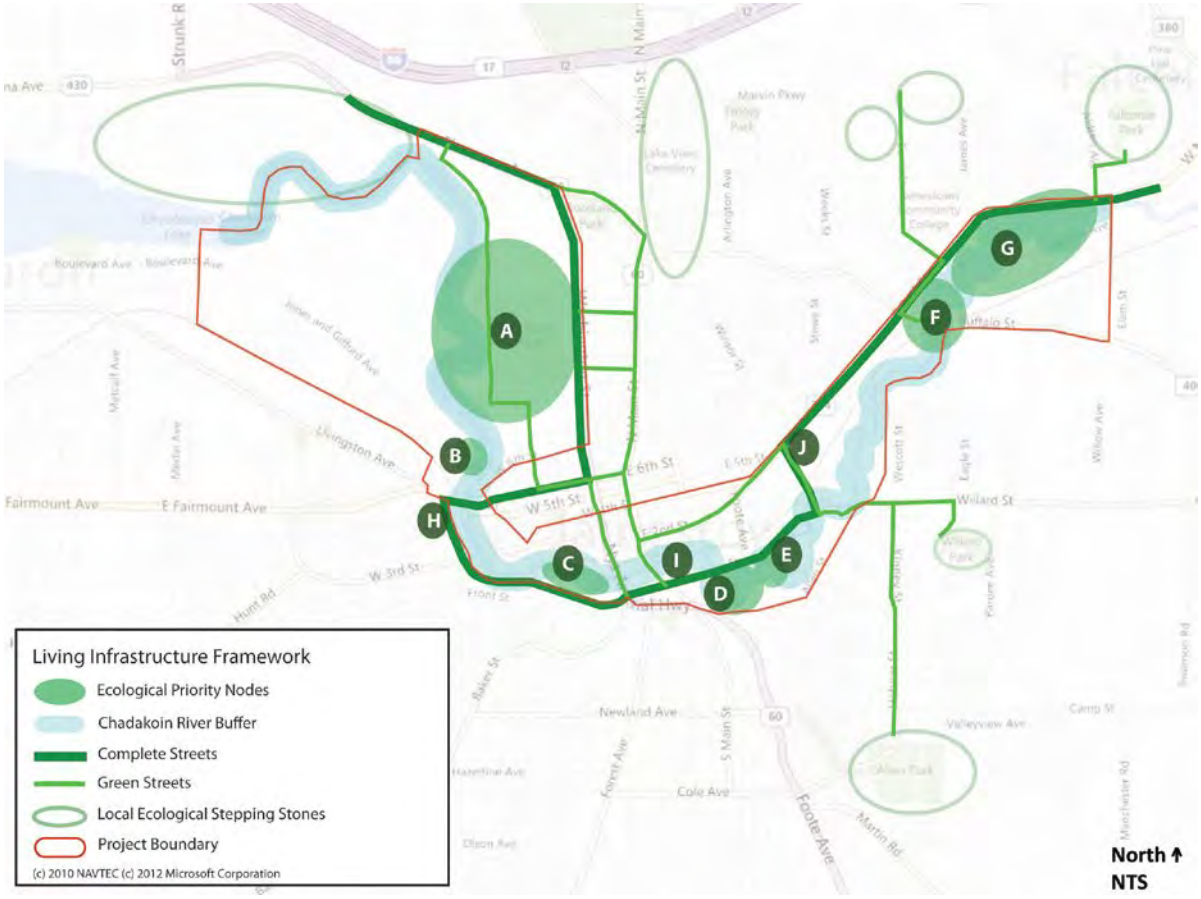


Figure 3.1. Living infrastructure framework for Jamestown (Source: Biohabitats, July 2012)

River Buffer Overlay Zone

As noted in Section 2, functioning riparian corridors are composed of a diverse array of native plants including trees, shrubs and grasses, which help reduce pollution that is entering waterways by slowing down and filtering runoff. They also provide important habitat and shelter for native aquatic and terrestrial wildlife. Their conservation and protection is critical to watershed health and management. The Chadakoin River's buffer width through the study area is variable in size and quality. It needs enhancement, in order to promote ecological function, water quality, and aesthetic appeal. The box below details the findings and provides context for the suggested enhancement potential described in this Section.

A riparian buffer is a permanent, naturally-vegetated area located adjacent to a stream, river, lake, pond or wetland. The wider the buffer, the more benefit it provides in terms of wildlife habitat, water temperature modulation, protection from nonpoint sources of pollution, flood mitigation, sediment removal, and bank stabilization. Ideally there would be no development within a functional riparian buffer, but along rivers like the Chadakoin where there already is a very large presence of development along the river it is suggested that the river corridor have a riparian buffer overlay zone, defining buffers along both banks of the river where living infrastructure design strategies help to improve habitat for turtles and other local wildlife, treat stormwater, increase tree canopy, and decrease paved surfaces (Figure 3.2).

The recommended buffers along the Chadakoin vary in width based on existing urban development characteristics and land use (Table 3.2). The east and west ends of the study area, Zones 1 and 4, have recommended buffer widths of 100 to 200 feet, while the central zones have recommended buffer areas of 50 to 100 feet minimum. Where possible, an enhanced wooded (vegetation only) buffer should be the preferred approach but where development is likely to occur, all new design should incorporate living infrastructure practices, as described in this section. Further detail can be provided on impacts and constraints, needs and opportunities, recommended native vegetation cover, buffer composition, and design and redevelopment techniques within the buffers.

Table 3.2. Buffer Characteristics

Zone	Location	Landcover	Character	Existing buffer widths	Proposed buffer widths for Buffer Overlay Zone
1	West End Natural Zone	wetland on both shores, more intact floodplain, some limited commercial/industrial	sloping , natural shoreline dominated by native vegetation with some limited areas of invasive species	Avg. 100' or more, limited areas of less 0- 25’	100-200'
2	McCrea Point to Warner Dam	commercial and industrial development, rail lines	steep, hardened in places; less floodplain, more areas of hardened shoreline, concrete or stone walls, gabion walls, prevalence of species associated with disturbed urban landscapes	0-50'	50-100'
3	Warner Dam to Gateway Center	downtown and commercial, limited industrial & residential	steep, hardened in places; less floodplain, more areas of hardened shoreline, concrete or stone walls,	0-50'	50-100'

			gabion walls, prevalence of species associated with disturbed urban landscapes		
4	Gateway Center to Tiffany Avenue	industrial, vacant and limited residential	naturalized shoreline, some areas hardened near old industrial sites, some areas of broad floodplain but some areas of steep slopes and with erosion	0-50'	100-200'

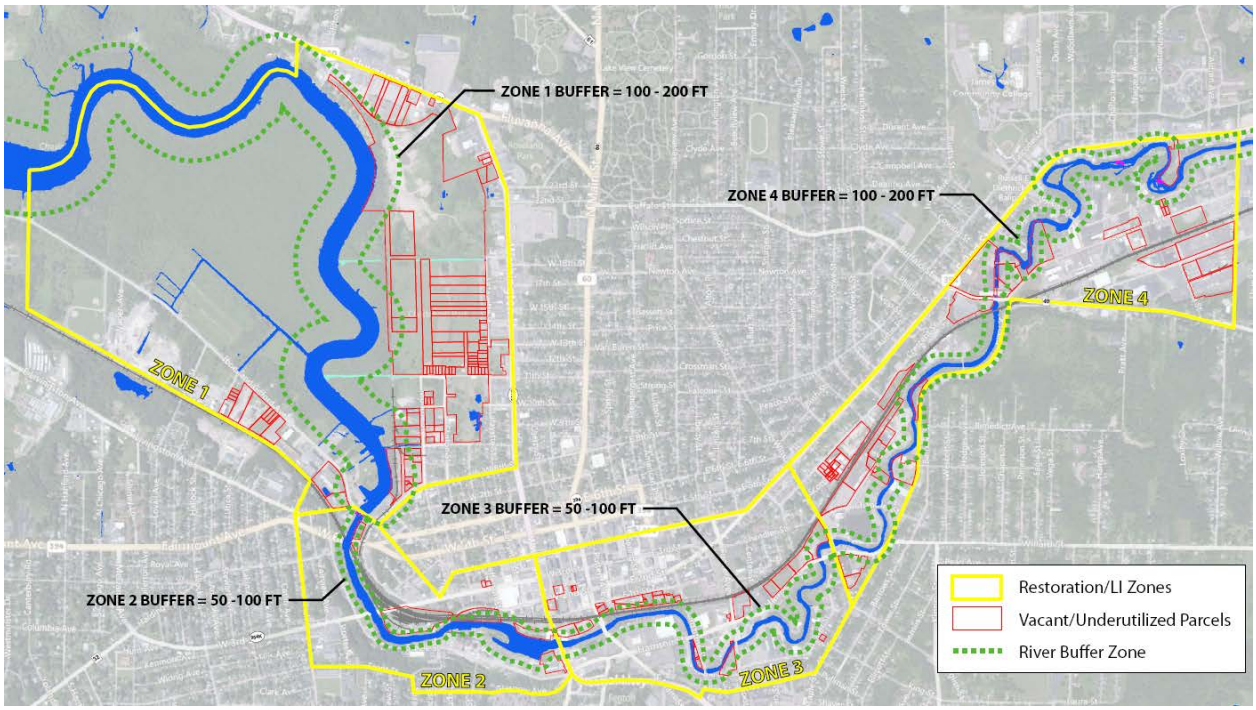


Figure 3.2. Buffer Overlay Zone Map (refer to Appendix E for a higher resolution version)

Ecological Priority Nodes Along the Chadakoin River

In order to help inform the overall regional planning efforts for the BOA and LWRP study area the following ecological priority nodes are identified as part of the suggested living infrastructure framework for Jamestown and the Chadakoin River (See Figure 3.1):

A. Chadakoin Park and Wetland/Marsh complex – combination of habitat enhancement, restoration, and active recreation with the potential inclusion of an environmental education center (partnership opportunity for Chautauqua Watershed Conservancy, Jamestown Audubon Society, and Roger Tory Peterson Institute)

B. McCrea Point – living shoreline restoration and stormwater management as needed

C. Panzarella Point and BPU site – shoreline restoration, stormwater management, native plant enhancement

D. Harrison Street to Foote Avenue permaculture/urban agriculture – productive and participatory landscapes that invite urban gardeners to help shape the landscape and enhance the riparian buffer with a series of gardens

E. Gateway Center habitat restoration and stewardship zone – shoreline restoration and impervious cover removal, potential for stewardship opportunities, productive landscapes partnered with food bank, green jobs training

F. Dahlstrom site river restoration node – restoration of riparian area floodplain and shoreline

G. Hope Windows to Bigelow Street to floodplain and upland park zone – management and enhancement of shoreline and floodplain, broadening connections of nature trail, creating new open space access areas and strengthening ecological character of river buffer, integrated stormwater management in parking lots with continued use

System Wide Recommendations

H. An expanded continuous trail system along the whole of the Chadakoin through Jamestown

I. Integrated living infrastructure practices required within the buffer zone on both banks of the river for any new development (see list of practices below)

J. Beyond the buffer, green extensions reach out from the river along major and secondary roads. These provide safe routes for pedestrians and bicyclists and create a more livable and functional urban environment with the integration of a suite of sustainable design practices. These extensions also provide a sense of entry along the river corridor as one arrives into Jamestown from the east and west.
   - Complete streets design on major roadways into and out of Jamestown including Washington Street, Main Street, 2nd Avenue, Harrison to Allen. (complete street = a street that incorporates pedestrians, bicyclists, drivers, and transit users in a safe manner, while incorporating stormwater management and native vegetation in street and curb design)
   - Green streets design along secondary streets from Chadakoin Park to the east into the neighborhoods, from the river to Allen Park, Falconer Park, and Jamestown Community College '100-Acre Lot' Woodland and the Roger Tory Peterson Institute. These sustainable streetscape designs promote ecological function along the street through integrated stormwater management and native vegetation, and improved access to green space.

Regional Implications

More broadly, a functional living infrastructure in Jamestown promotes ecological health in the region, providing improved habitat connections for migratory birds and other species that may be moving between various forest and wetland patches and along the river corridor. It also reduces the effects of urban heat island along the river providing for improved aquatic and terrestrial habitat and provides a

new recreational destination for visitors interested in ecotourism activities. Figure 3.3 shows the study area with green fingers that extend from the river corridor (along the suggested complete and green street corridors). Regional and local habitat areas that would be served include Chautauqua Lake (1), Hartson Swamp and Clay Pond Wildlife Management (2), Chautauqua Watershed Conservancy's Chautauqua Lake Outlet Wetland Greenway Preserve (3), The Roger Tory Peterson Institute (4), The Jamestown Community College Preserve (5), Falconer Millrace County Park (6), Allen Park (7), Lake View Cemetery (8), and Willard Park (9).

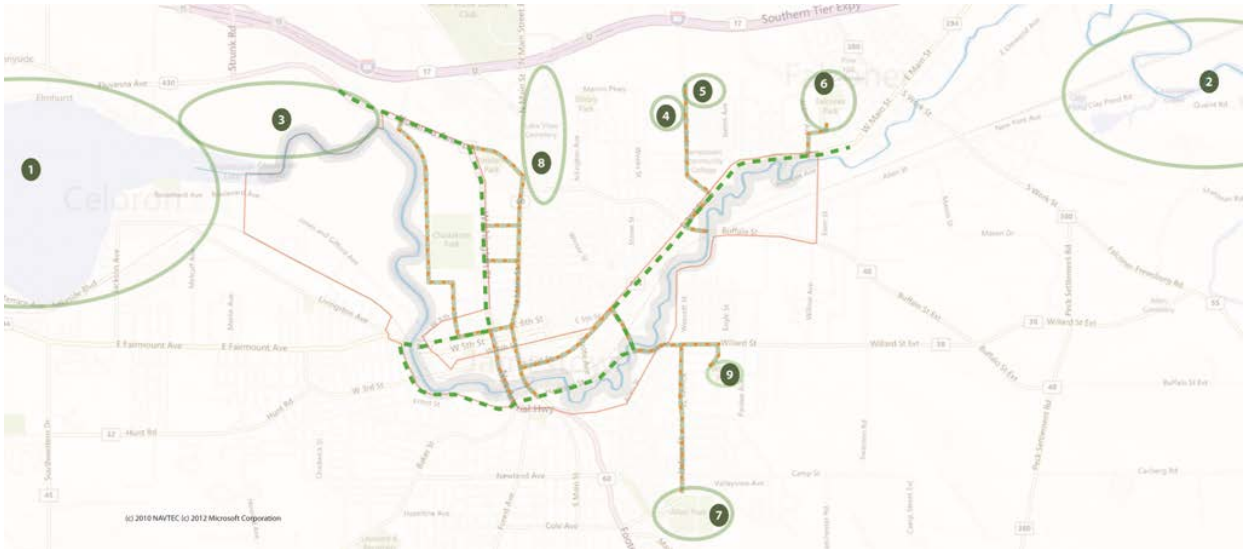


Figure 3.3. Living infrastructure promotes broad regional ecological connections (Biohabitats, July 2012)

3.3. Ecological Priorities in the Jamestown BOA and LWRP

Opportunities for ecological restoration and protection exist throughout the study area (Figure 3.4). Although the physical and land use characteristics of the zones differ greatly, the Chadakoin River is an element common to all zones, providing a basis for a holistic and comprehensive restoration strategy. The following sections provide specific priorities and recommendations regarding ecological restoration and protection within individual zones.

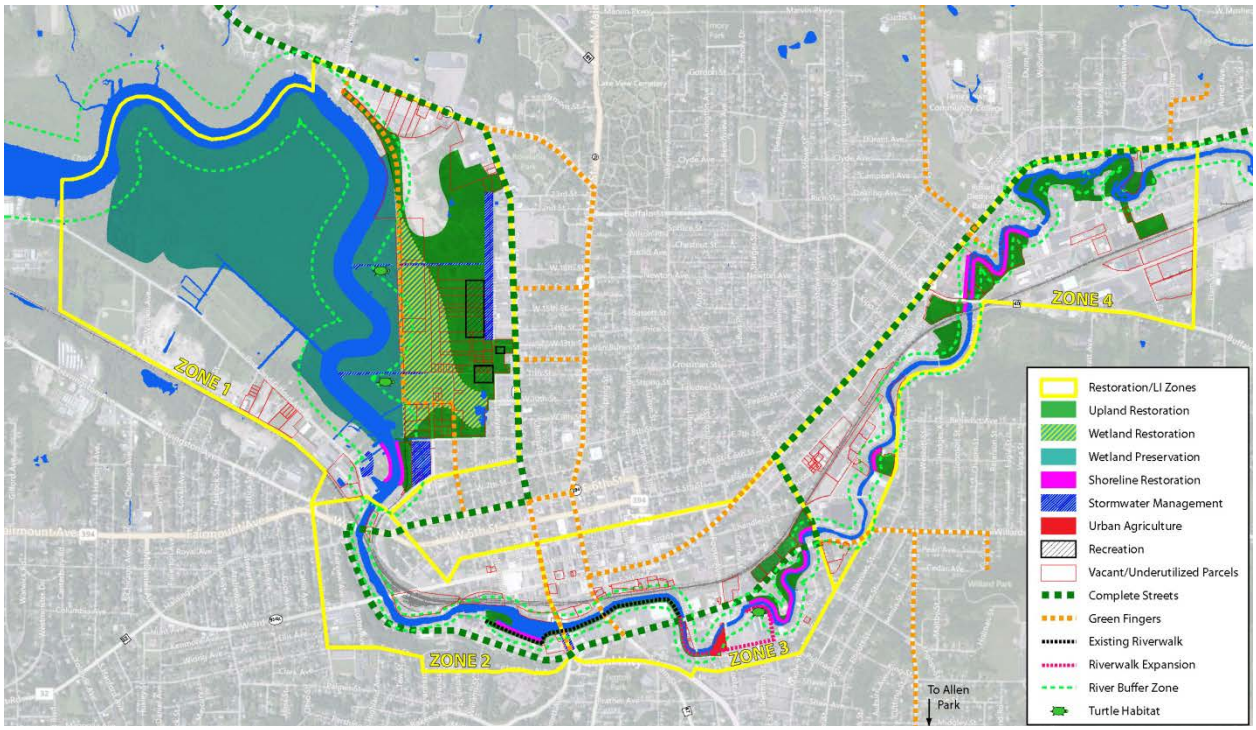


Figure 3.4. Jamestown ecological and living infrastructure opportunities (Source: Biohabitats July 2012)
(refer to Appendix F for a higher resolution version)

3.3.1. Zone 1: West End Natural Zone

Zone 1 is dominated by approximately 350 contiguous acres of Class I wetlands, making this the most significant ecological feature not only in Zone 1, but also within the entire study area. Combined with the adjacent expanse of additional Class 1 wetlands just outside the study area northwest of Zone 1, the wetland complex totals approximately 525 acres of palustrine forested wetland. The majority of this area is inaccessible due to dense vegetative cover and mucky soil, however the affects of humans are visible in a number of locations. In the northwest corner of wetland LW-10 there is evidence of past fill disturbances where Japanese knotweed has become established (Figure 3.5). The aggressive nature of this invasive plant with its rapid form of colonization through rhizome sections and new seedlings make this a formidable riparian invasive. At the present time the patch of knotweed is fairly small and manageable, and therefore should be addressed immediately before it spreads further downstream or to other parts of the wetland. If any significant forest openings were to occur in its vicinity it would likely become further established and could gain a significant foothold in the wetlands. Japanese knotweed was also observed on the edge of the municipal landfill where it meets the Chadakoin River. Clearing and disturbances have facilitated establishment at this location and should also be targeted for treatment before it becomes established in the river and greenway corridors. Additional invasive plant species observed in the wetlands however were limited to the river's edge on tussocks and stumps, so are less of a priority for short-term invasive species management.



Figure 3.5. Patch of Japanese knotweed found in wetland LW-10 (Source: Biohabitats, June 12, 2012)

Another key area within Zone 1 where invasive species management should be implemented is at Chadakoin Park. Most of the area west of the proposed greenway trail is classified as wetland, and judging by the existing hydrology, lands to the east were very likely wetlands prior to use of the area as a landfill and the subsequent creation of Chadakoin Park. There is some invasive cover, but not extensive. One species of note is common reed, which similar to knotweed once established, in that it can form extensive monoculture stands where eradication becomes extremely difficult. Common reed patches should be treated as soon as possible before they form extensive stands and spread into less disturbed wetland areas creating a more complicated management scenario. Per the request of the City, a separate invasive species memo was developed to address invasive species management in this Zone.

Due to its historic land use as part of the lake outlet wetland complex, coupled with the inability to support recreational activities on such saturated soils, the western portion of Chadakoin Park could be managed or restored to wetlands, fostering more passive ecologically focused forms of recreation. Perhaps the creation of a wetland boardwalk trail where park users can hike and observe wildlife could help create a new vision and purpose for the park. Other possibilities within the park include expanding the palustrine forested wetland on the western edge of the park, allowing wet areas in the south and east to naturally transition to wetland habitat, maintaining and expanding the mown trail in the northern portion of the park as a formal nature trail, and creating a nature/education center (Figure 3.6). Significant stormwater runoff from sites to the north and east of the park can be treated by retrofitting the existing ditches running parallel to said properties. Finally, the two canals connecting the park to the river can be modified to restore the local hydrology and to further enhance the wetland ecosystems. Evidence of turtle nesting habitat, fairly limited along the main stem of the Chadakoin once it passes McCrea Point, is also evident along these canals, providing an opportunity for enhanced habitat for some of the most impacted species in the region (see section 2.2.5 for more information on the Eastern spiny softshell turtle's habitat needs).



Figure 3.6. A mown trail in Chadakoin Park to be expanded, as part of recommended enhancements at the park that support ecological restoration and public access for education and passive recreation (Source: Biohabitats, June 12, 2012)

Washington Street along Chadakoin Park provides an important gateway opportunity for Jamestown. Redesign of this street as a complete street, (with narrower driving lanes, separate pedestrian and bike lanes, integrated stormwater management in tree pits, curb extensions, swales, and increased tree canopy) will improve the environmental quality and human experience of this corridor. Redesigning Washington Avenue will breathe new life into the adjacent spaces, as well as improve ecological and visual connection to the park. Additional green streets treatment (integrated stormwater management and enhanced tree canopy) along a few of the neighborhood streets that lead to the park will create further connections between residents and their valuable public spaces. (See Table 3.1 for further description of practices.)

Further downstream from Chadakoin Park there is evidence of dumping along Monroe Street, an active auto repair shop and scrap recycling facility (Figure 3.7). All of these activities are located upslope of the Chadakoin River as Monroe Street is only 475 feet from the river at its most narrow point. These facilities most likely contribute polluted stormwater runoff to the river and riparian corridor. This corridor between Monroe Street and the greenway trail falls within the 100-foot wetland adjacent area buffer as shown on the New York State Environmental Resource Mapper, thus under the Freshwater Wetlands Act is subject to NYSDEC regulations (Figure 3.8). (*Reference: http://www.dec.ny.gov/lands/4937.html*)



Figure 3.7. Dumping along the western side of Monroe Street (Source: Biohabitats, April 25, 2012)

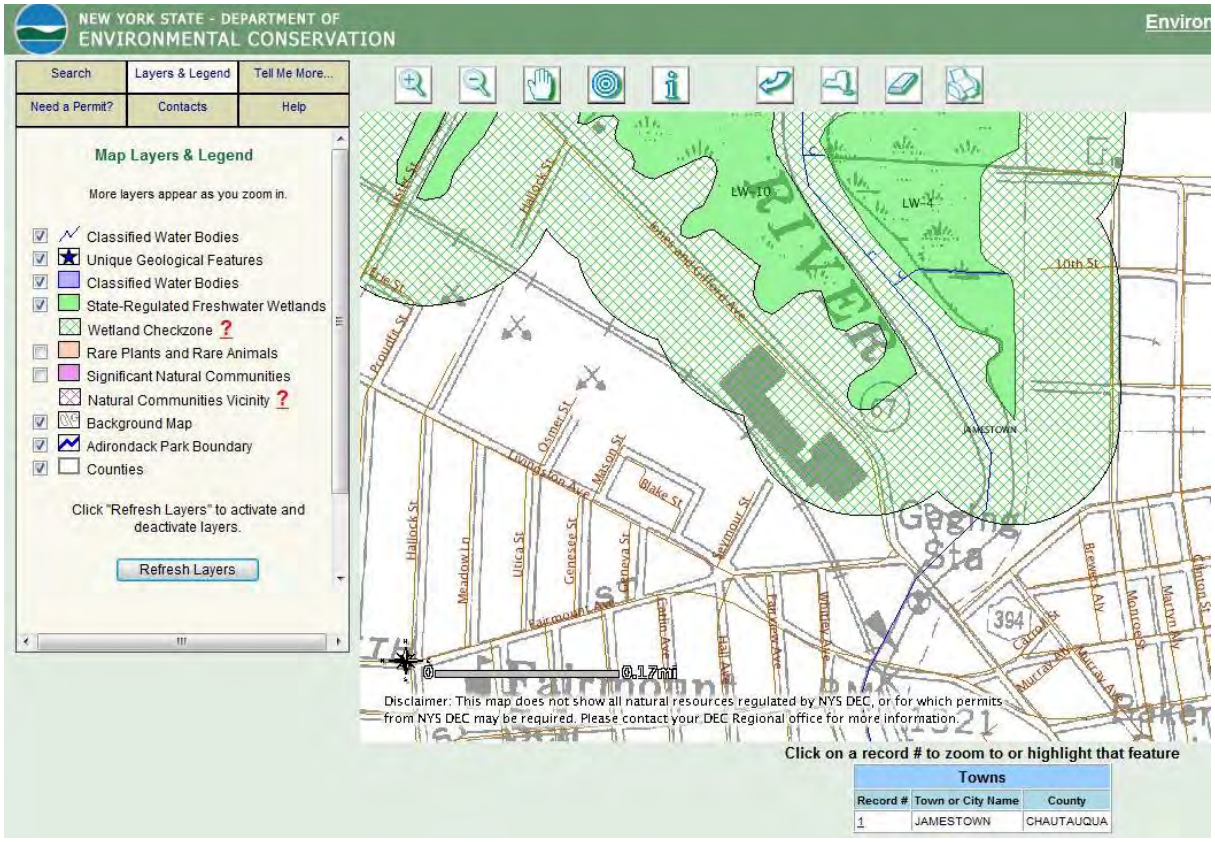


Figure 3.8. NYSDEC Environmental Resource Mapper (screen capture) showing hatched 100-foot adjacent wetland area near McCrea Point.

Scrap recycling facilities face a multitude of pollution prevention issues including soil, groundwater, atmospheric and surface water contamination from the release of hazardous material during the salvage and recycling process. On-site contamination often occurs during vehicle disassembly and fluid drainage operations, which can quickly lead to off-site contamination. Based on its close proximity and uphill

location to the Chadakoin and a Class I wetland , it can be postulated that the facility has contributed pollutants to the watershed in the past and may be doing so today (Figure 3.9). Active scrap recycling facilities can be considered a non-compatible use within a 100-foot adjacent wetland area. Ideally the facility would be relocated elsewhere where appropriate best management practices could be installed and its negative impacts to the watershed better managed. However, relocation in most circumstances is not an option, thus stormwater best management practices (BMPs) should be implemented at the current location as it appears there are no existing stormwater management measures currently on-site and stormwater is free to move to adjacent streets and properties and eventually the Chadakoin River. Stormwater BMPs have been developed specifically for scrap recycling facilities and could be employed on-site and/or in between the facility and the Chadakoin.



Figure 3.9. Scrap recycling facility entrance (Source: Biohabitats, April 25, 2012)

Furthering the notion of the regulated 100-foot "adjacent area" wetland buffer, the Chadakoin River itself is not protected by any state or local riparian buffer ordinance. Because of the unique wetland habitat in Zone 1 and the ecosystem services provided by the wetlands and the river, a minimum 100-foot buffer, with a preferred width of 300 feet, should be established. This buffer will provide additional and complimentary nesting and forage habitat for birds and wildlife, provide travel corridors for migration and dispersal for birds and other wildlife, increase local genetic and habitat diversity, and help regulate microclimate. Although the majority of the buffer in this Zone is robust, once the Chadakoin passes south of Isabella Avenue the riparian buffer on both sides of the river shrinks drastically, averaging only 0-75 feet in width. Besides the scrap recycling facility, the most critical area in regards to buffering is the municipal yard north of Chadakoin Park, both of which lie within the 100-foot "adjacent area" wetland buffer. Japanese knotweed has also become established and activities on the property are visible from the Chadakoin River (Figure 3.10). If riparian buffer restoration efforts are initiated within this zone, Table 3.3 provides a suggested plant palette, specifically tailored to this zone and riparian conditions.



Figure 3.10. Piles of rubble at the municipal yard visible from the Chadakoin River (Source: Biohabitats, June 13, 2012)

Zone 1 Riparian Buffer Restoration Suggested Plant Palette	
Canopy	
Characteristic Species	
**Acer saccharinum*	silver maple
Platanus occidentalis	American sycamore
**Salix nigra*	black willow
**Ulmus americana*	American elm
Associates	
Acer negundo	box elder
Juglans nigra	black walnut
Larix laricina	tamarack
Populus deltoides	eastern cottonwood
Quercus bicolor	swamp white oak
Woody Understory	
Characteristic Species	
Cornus amomum	silky dogwood
Cornus sericea	red-osier dogwood
**Ilex verticillata*	winterberry
**Vaccinium corymbosum*	highbush blueberry
Associates	
Alnus serrulata	hazel alder
Alnus rugosa	speckled alder
Aronia melanocarpa	black chokeberry
Cephalanthus occidentalis	buttonbush
Clematis virginiana	Virgin's bower
Parthenocissus quinquefolia	Virginia creeper
Rosa palustris	swamp rose
Salix bebbiana	Bebb's willow
Salix discolor	pussy willow

Zone 1 Riparian Buffer Restoration Suggested Plant Palette	
Salix eriocephala	heart-leaf willow
Salix interior	sandbar willow
Salix lucida	shining willow
Salix petiolaris	meadow willow
Salix sericea	silky willow
Salix serissima	Autumn willow
Vitis riparia	riverbank grape
Herbaceous Understory	
Characteristic Species	
Buphthalmum salicifolium	ox-eye
Carex emoryi	Emory's sedge
Eupatorium purpureum	joe-pye weed
**Onoclea sensibilis*	sensitive fern
**Osmunda regalis*	royal fern
Solidago gigantea	smooth goldenrod
Symphyotrichum lanceolatum	white panicled aster
**Symplocarpus foetidus*	skunk cabbage
Verbesina alternifolia	wingstem
Associates	
Cinna arundinacea	sweet woodreed
Elymus virginicus	Virginia wildrye
Impatiens capensis	jewelweed
Laportea Canadensis	Canadian woodnettle
Leersia virginica	whitegrass
Muhlenbergia frondosa	wirestem muhly
Pilea pumila	Canadian clearweed
Teurium canadense	Canada germander
*species dominating existing wetlands	

Table 3.3. Suggested riparian buffer restoration plant palette for Zone 1.

In addition to providing and protecting habitat for birds and wildlife, McCrea Point offers an excellent opportunity to increase aquatic habit through the creation of living shorelines and incorporating fishing friendly structures to existing bulkheads. Riprapped, bulkheaded, mown, and eroding streambanks can be replaced with living shorelines, which use native plants, including grasses, trees and shrubs to provide stabilization while also adding beauty and habitat (Figure 3.11). Rather than weaken over time, these ecosystems get stronger, offering ongoing protection as well as habitat, water quality improvement and beauty. Fishing access areas could also be incorporated into the living shorelines, as McCrea Point appears to be the most popular fishing area in Jamestown. Where bulkheads are to remain, living seawall habitats techniques, such as steel/mesh baskets, can be anchored to the structure and planted with submerged or emergent vegetation to provide cover and support an invertebrate food base for fish.



Figure 3.11. Eroding mown banks at McCrea Point where living shorelines could be utilized (Source: Biohabitats, April 25, 2012)

3.3.2. Zone 2: McCrea Point to Warner Dam

As the Chadakoin River passes McCrea Point and enters Zone 2, not only does the river itself narrow considerably, but also so does its riparian vegetated buffer. The river is crossed by multiple bridges with Steele Street encroaching and paralleling the right bank while the Western NY and PA rail line parallels the left bank. Where present, the existing riparian buffer constitutes only a one to two tree width canopy or approximately 50 feet due to the close proximity of structures and infrastructure to the river. Although a 100-foot riparian buffer would be preferred, given the existing urban conditions establishing a 50-foot buffer is more realistic and feasible as a minimum width. Although this size buffer will not provide ideal wildlife habitat, it will provide some bank stabilization, aquatic habitat, water temperature modification, as well as, reductions in sediment loading. Although structures currently exist within the 50-foot buffer, the establishment of a regulated city buffer ordinance could limit future encroachment and provide requirements for a native vegetation zone, shoreline treatments, approved native plant species, and turtle nesting habitat. Table 3.4 provides a suggested list of appropriate plant species for the more urban riparian conditions and steep banks of Zones 2 and 3.

Zones 2 and 3Riparian Buffer Suggested Plant Palette	
Canopy	
Characteristic Species	
Acer rubrum	red maple
Acer saccharinum	silver maple
Carya ovata	shagbark hickory
Liriodendron tulipifera	tulip tree
Platanus occidentalis	American sycamore
Pinus strobes	white pine
Populus deltoides	eastern cottonwood
Quercus bicolor	swamp white oak
Tilia americana	American basswood
Associates	

Zones 2 and 3Riparian Buffer Suggested Plant Palette	
Betula populifolia	grey birch
Carya cordiformis	bitternut hickory
Juglans cinerea	butternut
Juglans nigra	black walnut
Larix laricina	tamarack
Nyssa sylvatica	black gum
Quercus macrocarpa	burr oak
Quercus palustris	pin oak
Ulmus americana	American elm
Woody Understory	
Alnus serrulata	hazel alder
Alnus rugosa	speckled alder
Amelanchier canadensis	Allegheny serviceberry
Carpinus caroliniana	ironwood
Cercis Canadensis	Eastern redbud
Clematis virginiana	Virgin's bower
Cornus amomum	silky dogwood
Cornus florida	flowering dogwood
Cornus sericea	red-osier dogwood
Hamamelis virginiana	witchhazel
Ilex verticillata	winterberry
Lindera benzoin	spicebush
Myrica pensylvanica	Northern bayberry
Parthenocissus quinquefolia	Virginia creeper
Physocarpus opulifolius	ninebark
Salix bebbiana	Bebb's willow
Salix discolor	pussy willow
Sambucus canadensis	American elderberry
Sassafras albidum	sassafras
Herbaceous Understory	
Ageratina altissima	white snakeroot
Arisaema dracontium	greendragon
Boehmeria cylindrica	false nettle
Impatiens capensis	spotted jewelweed
Impatiens pallida	pale touch-me-not
Laportea canadensis	Canadian wood nettle
Lobelia cardinalis	cardinal flower
Lobelia siphilitica	great blue lobelia
Onoclea sensibilis	sensitive fern
Peltandra virginica	green arrow arum
Polygonum virginianum	Virginia knotweed
Saururus cernuus	lizard's tail
Symphyotrichum puniceus	purple stem aster

Table 3.4. Suggested riparian buffer restoration plant palette for Zones 2 and 3.

The rails are a prominent part of the northern shore through this zone and therefore access and ecological restoration potential is limited. However, by working with the rail users and owners there may be ways to retrofit the rails including low plantings (e.g., sedum) between the rails. If there are portions of the rails or associated rail yards that are no longer in use there may be a way to plant them for pollinator habitat (Figure 3.12).



Figure 3.12. Overgrown area along the rail line on the north shore of the Chadakoin near the BPU plant (Source: Biohabitats, June 12, 2012)

In conjunction with riparian buffer protection, Zone 2 offers a number of opportunities for buffer restoration, specifically downstream of the BPU facility. Panzarella Park and the Riverwalk present opportunities for living shorelines. The shoreline between the Riverwalk and the Chadakoin River, just downstream of Panzarella Park, is very narrow, mown, and shows signs of erosion (Figure 3.13). These areas not only provide excellent opportunities for restoration, but for environmental education as well. Interpretive signage, informational kiosks or maps could provide insight into the history of the Chadakoin, the importance of watershed protection, and the resident Eastern spiny softshell turtles that inhabit the area.



Figure 3.13. Opportunities for living shoreline restoration along the Riverwalk (Source: Biohabitats, June 12. 2012)

Pockets for fishing and kayak/canoe access could be incorporated into the native plantings and additional plantings could be used to screen adjadcent industrial and business activities from the Riverwalk (Figure 3.14). Stormwater management could also be incorporated to capture runoff from the neighboring BPU parking and storage lots.



Figure 3.14. Area along the Riverwalk where increased native vegetation could be added to provide amenity, riparian habitat and some screening (Source: Biohabitats, June 12, 2012)

Similar to McCrea Point, the bulkhead at Panzarella Park provides an excellent opportunity to hang or anchor additional baskets that can be planted with submerged or emergent vegetation to provide cover and foraging opportunities.

3.3.3. Zone 3: Warner Dam to Gateway Center

The narrow, confined riparian buffers in Zone 2 continue throughout the majority of Zone 3. Like Zone 2, a 100-foot riparian buffer would be preferred. Given the existing urban conditions establishing a 50-foot buffer is more realistic and feasible as a minimum width, see Table 3.4 for suggest plant species. Establishing a buffer will not only improve water quality, but also provide wildlife habitat critical to the breeding and survival of the Eastern spiny softshell turtle, a species of special concern in New York. During fieldwork a spiny softshell was observed laying eggs just off the Riverwalk near Gateway Center in a mulch bed, and many other anecdotal nesting attempts were reported by others.

Natural shoreline and buffer access throughout this reach is fairly limited, thus turtles are forced to nest in less than ideal locations or congregate in areas with easier floodplain access although nesting substrate may not be ideal (Figure 3.15). Active turtle breeding areas should be identified and buffers should be expanded in these areas if needed.



Figure 3.15. Typical high riverwalls preventing turtle access to floodplain (Source: Biohabitats, June 12, 2012)

The area directly behind the Gateway Center, along the river, may be an ideal location to work with the landowner to restore the shoreline, create more turtle habitat and increase green space through integrated stormwater management (Figures 3.16 and 3.17). This location is ideal for green jobs training associated with shoreline and habitat restoration, as well as ample opportunity for stewardship, and education associated with turtle and other important riverine habitat.



Figure 3.16. Narrow vegetated shoreline edge along the Chadakoin behind the Gateway Center (Source: Biohabitats, June 12, 2012)



Figure 3.17. The riparian shoreline behind the Gateway Center, where according to local residents a few dozen soft shell turtles tried to lay eggs unsuccessfully in the asphalt (Source: Biohabitats, June 12, 2012)

Just to the west of Foote Avenue there is ample opportunity on vacant/underutilized land to create an expanded urban agriculture/permaculture/productive garden space that ties into an extension of the Riverwalk from its current end point at Harrison Avenue, mainly on the south shore of the river (Figure 3.18). A portion of the river this corridor along Victoria Avenue is channelized and lacks a vegetated buffer. An extension of the Riverwalk could bring native vegetation along a new trail, expanded pedestrian access, and better connections to the river from the neighborhood to the South. The existing expanse of green space invites an expansion of the "Free Garden" concept started by St. James Church at the corner of Victoria Avenue. This space, along the space on Foote Avenue, across from the Cancer Care Center of Western New York could provide ample space for raised bed gardening, meditative gardens, even an orchard if the soils are suitable. Stormwater management could be integrated and an

increased tree cover along Foote could provide further benefit for the river's health and function, as well as the surrounding neighborhood. This expanded urban agriculture and participatory landscape node will be an important habitat location for pollinators (e.g., butterflies and bees) and birds as well.



Figure 3.18. Open space where gardens and enhanced shoreline tree plantings could be integrated (Source: Biohabitats, June 12, 2012)

The existing vacant/underutilized lots along Harrison to the east of Foote are a combination of scrub shrub, meadow and riparian woodland remnants (northern shore of the river). These lots should be preserved and managed as habitat nodes with some limited picnicking or viewpoint access areas for passing cyclists along Harrison. Shoreline and floodplain conditions along this portion of the river should be enhanced, with a combination of invasive species management, shoreline stabilization and native vegetative plantings as needed. Overall access is limited to the river, but one or two access points could be identified as overlooks and wildlife viewing areas. The meadow here will be important as pollinator habitat (Figure 3.19).



Figure 3.19. The meadow in an underutilized lot along Harrison (Source: Biohabitats, June 12, 2012)

3.3.4. Zone 4: Gateway Center to Tiffany Avenue (East of Winsor Street)

Within Zone 4 river access is limited because of active use on both north and south shores. Where access is available or where there is evidence of steep slopes along portions of southern shore, stabilization is recommended (Figure 3.20). There is a parcel identified as vacant/underutilized south of Benedict Avenue that should be conserved as an ecological node and restored as wooded riparian habitat.



Figure 3.20. Shoreline requires restoration and stabilization at this sensitive point south of River Street (Source: Biohabitats, June 12, 2012)

The Zone 4 riparian buffer should be a minimum of 100 feet, with a preferred width of 200 feet. Within this buffer riparian woodland plantings and other native vegetative plantings are recommended for stabilization and structure as well as habitat. Where redevelopment is planned or where existing development is slated to remain, living infrastructure practices should be incorporated, to enhance and increase tree and vegetative cover and promote water quality treatment. Although Zone 4 includes similar urban buffer conditions as Zones 2 and 3, it does include a number of broad floodplain features more representative of Zone 1, thus the suggested plant palette includes a number of species from both palettes (Table 3.5).

Zone4 Riparian Buffer Suggested Plant Palette	
Canopy	
Characteristic Species	
Acer rubrum	red maple
Acer saccharinum	silver maple
Carya ovata	shagbark hickory
Liriodendron tulipifera	tulip tree
Platanus occidentalis	American sycamore
Pinus strobes	white pine
Populus deltoides	eastern cottonwood
Quercus bicolor	swamp white oak
Tilia americana	American basswood

Zone4 Riparian Buffer Suggested Plant Palette	
Associates	
Acer negundo	box elder
Betula populifolia	grey birch
Carya cordiformis	bitternut hickory
Juglans cinerea	butternut
Juglans nigra	black walnut
Larix laricina	tamarack
Nyssa sylvatica	black gum
Quercus macrocarpa	burr oak
Quercus palustris	pin oak
Salix nigra	black willow
Ulmus americana	American elm
Woody Understory	
Alnus serrulata	hazel alder
Alnus rugosa	speckled alder
Amelanchier canadensis	Allegheny serviceberry
Aronia melanocarpa	black chokeberry
Carpinus caroliniana	ironwood
Cephalanthus occidentalis	buttonbush
Cercis Canadensis	Eastern redbud
Clematis virginiana	Virgin's bower
Cornus amomum	silky dogwood
Cornus florida	flowering dogwood
Cornus sericea	red-osier dogwood
Hamamelis virginiana	witchhazel
Ilex verticillata	winterberry
Lindera benzoin	spicebush
Myrica pensylvanica	Northern bayberry
Parthenocissus quinquefolia	Virginia creeper
Physocarpus opulifolius	ninebark
Rosa palustris	swamp rose
Salix bebbiana	Bebb's willow
Salix discolor	pussy willow
Salix sericea	silky willow
Sambucus canadensis	American elderberry
Sassafras albidum	sassafras
Vaccinium corymbosum	highbush blueberry
Vitis riparia	riverbank grape
Herbaceous Understory	
Ageratina altissima	white snakeroot
Arisaema dracontium	greendragon
Boehmeria cylindrica	false nettle
Buphthalmum salicifolium	ox-eye
Carex emoryi	Emory's sedge
Eupatorium purpureum	joe-pye weed

Zone4 Riparian Buffer Suggested Plant Palette	
Impatiens capensis	spotted jewelweed
Impatiens pallida	pale touch-me-not
Laportea canadensis	Canadian wood nettle
Lobelia cardinalis	cardinal flower
Lobelia siphilitica	great blue lobelia
Onoclea sensibilis	sensitive fern
Osmunda regalis	royal fern
Peltandra virginica	green arrow arum
Polygonum virginianum	Virginia knotweed
Saururus cernuus	lizard's tail
Solidago gigantea	smooth goldenrod
Symphyotrichum lanceolatum	white panicled aster
Symphyotrichum puniceus	purple stem aster
Symplocarpus foetidus	skunk cabbage
Verbesina alternifolia	wingstem
Associates	
Arisaema triphyllum	jack in the pulpit
Asarum canadense	wild ginger
Cinna arundinacea	sweet woodreed
Elymus virginicus	Virginia wildrye
Impatiens capensis	jewelweed
Laportea Canadensis	Canadian woodnettle
Leersia virginica	whitegrass
Muhlenbergia frondosa	wirestem muhly
Phodophyllum peltatum	mayapple
Pilea pumila	Canadian clearweed
Teurium canadense	Canada germander

Table 3.5. Suggest riparian buffer restoration plant palette for Zone 4.

One stretch in particular of the Chadakoin presents a prime opportunity to improve stream channel morphology and restore riparian habitat, from immediately downstream of the Dahlstrom Dam to the downstream end of the vacant Dahlstrom Factory Complex, which currently function as a barrier and a bottleneck, impairing the river's health.

Along this reach, the river is channelized and runs approximately 850 feet straight through a remnant raceway. At the end of the raceway, the flow reconnects to the downstream reaches of the Chadakoin, characterized by a more natural meandering flowpath with gently sloping banks and vegetated floodplain. Conversely, immediately upstream of the dam, the river is constricted by steeper banks with roads and development very close to the top of bank. In addition, the dam's approximate 6-foot height makes it a barrier to fish passage. The modifications to the river, which served to drive the industrial activities at the Dahlstrom complex, now serve as impairments to the Chadakoin.

At the time of this report, the Dahlstrom building was under demolition. Collapsing portions of the structure over and immediately flanking the river have been or are to be removed. In addition to removing the building, it would benefit the river to also remove the channel walls, grade the banks back at a minimum 3:1 slope and revegetate to a minimum of 100 feet from the river's edge. In addition, fish

passage could be attained at the dam (Figure 3.21)by gradually raising the channel invert immediately downstream of the dam via a fish ladder, rock ramp, or step pool structure. The dam could also be removed partially or entirely, potentially opening this section of river to passage by personal watercraft. This could have the dual impact of mitigating stream impairments to the quality habitat immediately downstream in Zone 4 by slowing and extending the flow, while also allowing aquatic life to migrate beyond this barrier.



Figure 3.21. The Dahlstrom Dam, located just upstream of the Dahlstrom facilities. (Source: Steve Centi, April 22, 2012)

In addition to channel restoration near the former Dahlstrom location, there is potential for a shoreline and floodplain restoration along the Chadakoin that could also incorporate mixed used development. Existing woodland along the river corridor should remain with some invasive species management recommended. A new nature trail through the property that connects to the bikeway along East Second Street/ Route 394 (New York State Bicycle Route 17) will help extend access to the river and the new continuous Jamestown Chadakoin River Trail. The open parking lot that has begun to revert to natural vegetation could become a public open space that incorporates the natural breakdown of the pavement as a design feature that explores the interface between historic development footprint the re-emerging ecology (Figures 3.22, 3.23 and 3.24).



Figure 3.22. The existing conditions at the Dahlstrom parking lot (Source: Biohabitats, June 12, 2012)



Figure 3.23. Rubble meadow at Washington Avenue Green, along the Delaware River in Philadelphia, PA (Source: Biohabitats, 2012)



Figure 3.24. Dendritic decay garden at Washington Avenue Green, Philadelphia, PA (Source: Biohabitats, 2012)

East of the Dahlstrom property the shoreline needs stabilization and restoration, as it rounds the bend, where there is a large outfall from the south. The shoreline requires stabilization and restoration and there is trash collecting at this bend in the river that needs to be removed (Figure 3.25). The existing upland open space (meadow) and parking properties near the Blackstone property should be maintained and restored as a combination of upland meadow and riparian woods (Figure 3.26). A new nature trail through this would help connect and expand on the existing Hope Window's Chadakoin trail just to the east.



Figure 3.25. Trash and debris along the Chadakoin east of the Dahlstrom property (Source: Biohabitats, June 12, 2012)



Figure 3.26. Parking and open space to the west of the Blackstone property along the river corridor (Source: Biohabitats, June 12, 2012)

The Hope shoreline property and nature trail would continue to be maintained as a functioning riverine corridor with integrated nature trail and access could be afforded to users from the community (Figure 3.27).



Figure 3.27. Hope Chadakoin Trail (Source: Biohabitats, June 12, 2012)

East of the Hope property the trail would continue along the riparian woodland behind the VFW to Bigelow Street, where a new park would serve as an end node of the expanded Jamestown Chadakoin River Trail system (Figure 3.28). This ecological pocket park would be maintained as woodland and floodplain with limited access to the river at this sensitive location. The riverbend to the east of Bigelow should remain floodplain with further management of invasive species and collection of trash (Figure 3.29).



Figure 3.28. Wooded open space at Bigelow across from the VFW (Source: Biohabitats, June 12, 2012)



Figure 3.29. Riverbend floodplain (Source: Biohabitats, June 12, 2012)

Upland of the riverbend floodplain there are two vacant lots that should be included as expanded buffer space, planted in riparian vegetation and maintained as park space (Figure 3.30). There is a grove of aspens on one of the lots that could use management and enhancement.



Figure 3.30. Underutilized lot south of Bigelow, which could incorporate new park. Source: Biohabitats; June 12, 2012

Appendix A:
Regional Geology



Biohabitats

CITY OF JAMESTOWN

CHADAKOIN RIVER
REVITALIZATION STUDY

Regional
Geology

Legend

- Conewango Watershed
- Project Area
- Jamestown City Limits

Geology

- Water
- Sandstone
- Shale

N

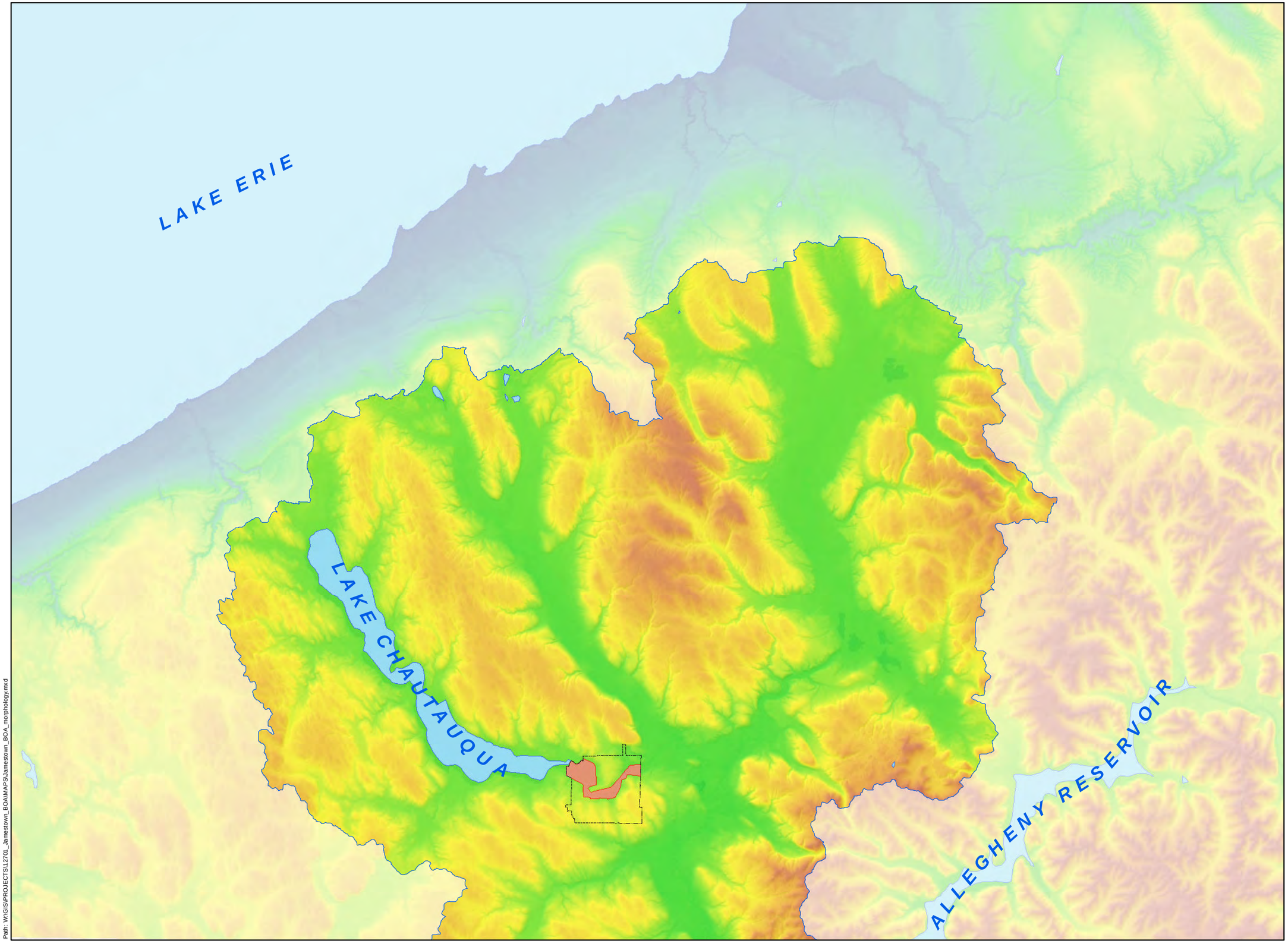
0 5 Miles

1:250,000

Labella Project No:
212251

Path: W:\GIS\PROJECTS\12701_Jamestown_BOA\MAPS\Jamestown_BOA_geology.mxd

Appendix B:
Regional Morphology



Biohabitats

CITY OF JAMESTOWN

CHADAKOIN RIVER
REVITALIZATION STUDY

Regional
Morphology

Legend

- Conewango Watershed
- Project Area
- Jamestown City Limits

Elevation (Meters)

776.908

163.853

N

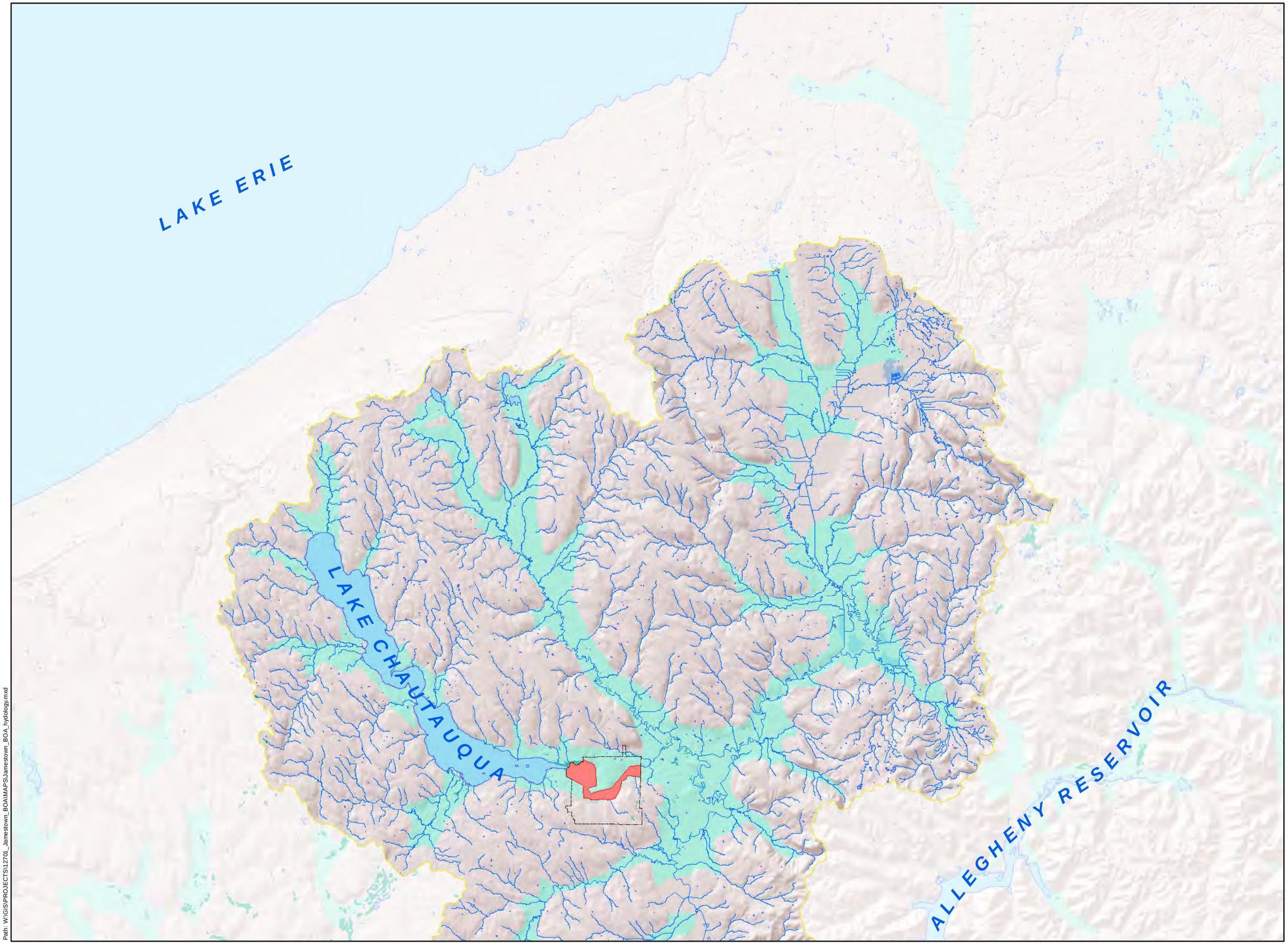
0 5 Miles

1:250,000

Labella Project No:
212251

Path: W:\GIS\PROJECTS\12701_Jamestown_BOA\MAPS\Jamestown_BOA_morphology.mxd

Appendix C:
Regional Hydrology



Biohabitats

CITY OF JAMESTOWN

CHADAKOIN RIVER REVITALIZATION STUDY

Regional Hydrology

Legend

- Conewango Watershed
- Project Boundary
- Jamestown City Limits
- Lake/Pond
- Wetland
- Conewango WS Streams
- Aquifers

N

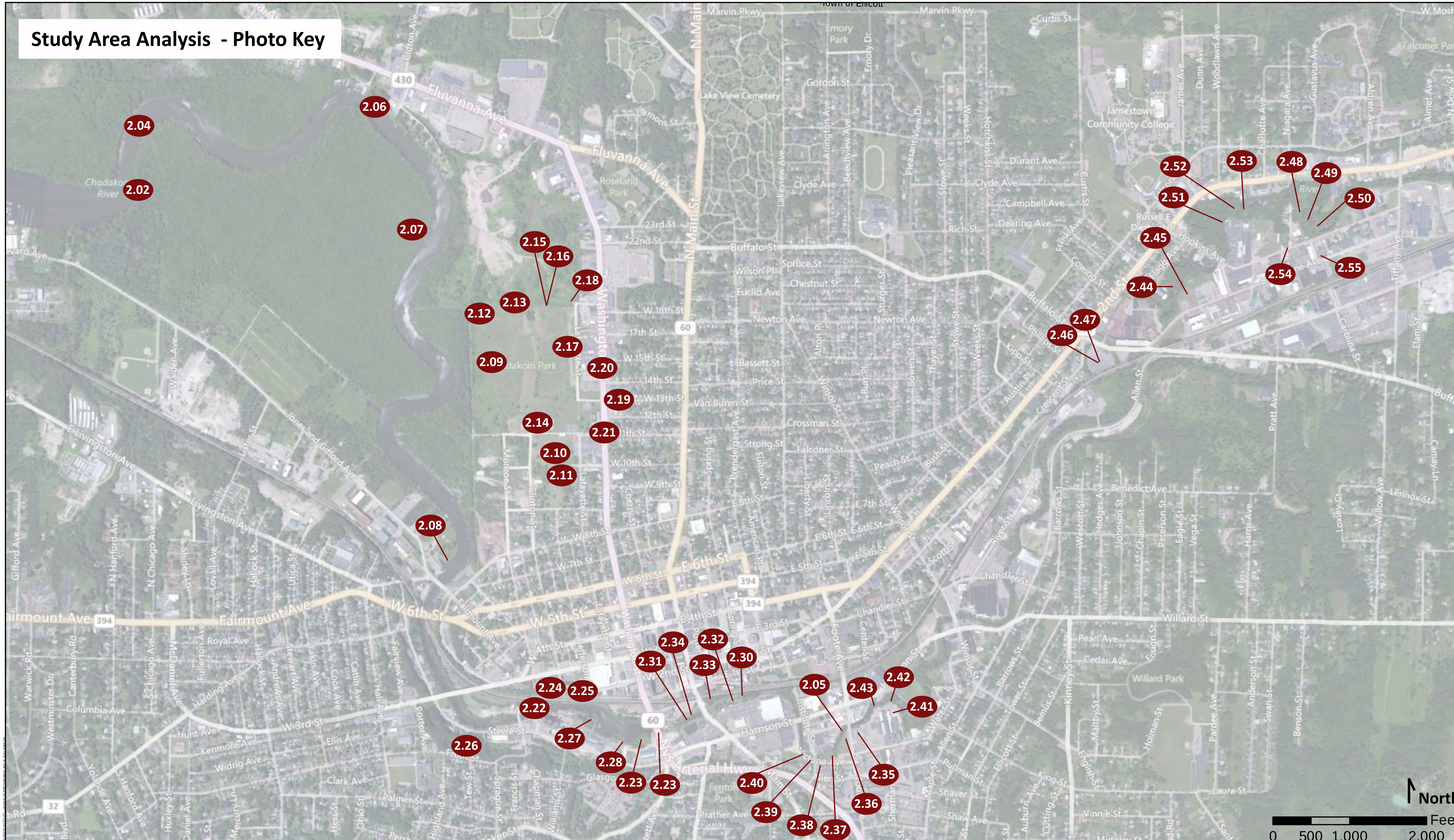
0 5 Miles

1:250,000

Labella Project No: 212251

Path: W:\GIS\PROJECTS\12701_Jamestown_BOA\MAPS\Jamestown_BOA_hydrology.mxd

Appendix D:
Photo Key


Study Area Analysis - Photo Key
2.02
2.04
2.05
2.06
2.07
2.08
2.09
2.10
2.11
2.12
2.13
2.14
2.15
2.16
2.17
2.18
2.19
2.20
2.21
2.22
2.23
2.23
2.24
2.25
2.26
2.27
2.28
2.30
2.31
2.32
2.33
2.34
2.35
2.36
2.37
2.38
2.39
2.40
2.41
2.42
2.43
2.44
2.45
2.46
2.47
2.48
2.49
2.50
2.51
2.52
2.53
2.54
2.55
Chadakoin River
Fluvanna Ave
Lake View Cemetery
Jamestown Community College
Buffalo St
N Main St
Washington St
Fairmount Ave
W 6th St
E 6th St
W 5th St
E 2nd St
Livingston Ave
Jones and Gifford Ave
Harrison St
Nys Arterial Hwy
Willard St
Willard Park
Fenton Park
Emory Park
Roseland Park
Chadakoin Park
Falconer Park
Foote Ave
Winsor St
Allen St
Hopkins Ave
394
430
60
32
North
Feet
0 500 1,000 2,000

Appendix E:
Riparian Buffers

ZONE 1 BUFFER = 100 - 200 FT

ZONE 4 BUFFER = 100 - 200 FT

ZONE 3 BUFFER = 50 -100 FT

ZONE 2 BUFFER = 50 -100 FT

ZONE 1

ZONE 2

ZONE 3

ZONE 4

Restoration/LI Zones

Vacant/Underutilized Parcels

River Buffer Zone

To Allen Park

Jamestown Chadakoin River Buffers

0 500 1,000 2,000 Feet

Appendix F:
Restoration/Living Infrastructure Zones

ZONE 1

ZONE 2

ZONE 3

ZONE 4

- Restoration/LI Zones
- Upland Restoration
- Wetland Restoration
- Wetland Preservation
- Shoreline Restoration
- Stormwater Management
- Urban Agriculture
- Recreation
- Vacant/Underutilized Parcels
- Complete Streets
- Green Fingers
- Existing Riverwalk
- Riverwalk Expansion
- River Buffer Zone
- Turtle Habitat

To Allen Park

Jamestown Restoration/Living Infrastructure Zones

0 500 1,000 2,000 Feet

TECHNICAL MEMO:

TO: Dan Riker, LaBella PC

FROM: David Spillane and Amy Kohn (Goody Clancy)

RE: Jamestown BOA/LWRP urban design analysis

DATE: August 31, 2012

As part of the LaBella Associates team for the Chadakoin River Revitalization Study – a combined Brownfield Opportunity Area (BOA) / Local Waterfront Revitalization Program (LWRP) initiative – Goody Clancy has prepared an urban design analysis of the BOA/LWRP study area. This analysis is informed by a review of prior planning documents including the Jamestown Urban Design Plan and the Chadakoin Riverfront Reclamation Study, participation in a public meeting, two days of stakeholder interviews, and two days of field study.

This assessment is intended to complement analyses being undertaken by other members of the team, addressing market and economic conditions, environmental and infrastructure factors, and planning and regulatory conditions. Ultimately all of these perspectives will be evaluated together and will provide a foundation for shaping BOA/LWRP recommendations.

The urban design analysis identifies:

- **Opportunity Zones:** Areas that contain a concentration of major community and/or economic assets, and where near-term efforts could yield tangible benefits.
- **Key development sites**: Development sites, largely located within Opportunity Zones, selected for their potential to:
    - Reinforce existing successes and anchors;
    - Improve access to the River; and/or
    - Support growth within economic "hubs": downtown, the emerging medical district, and the industrial corridor on the city's east side
- **Future Riverwalk segments:** Locations where future segments of the Riverwalk might be established as priorities, advancing the community's long-term goal of continuous public access along the River from Chautauqua Lake to downtown.

Opportunity Zones, key development sites, and future Riverwalk segments are identified within the *Jamestown BOA/LWRP Urban Design Analysis Diagrams.* **Diagram 1** serves as a summary diagram for

the full LWRP/BOA study area. **Diagrams 2, 3, and 4** each focus more closely on one portion of the study area.

Because the BOA/LWRP study area has distinctly different characteristics along the length of the River from a land use, economic and community perspective, for the purposes of this urban design analysis, the study area is considered in the following three segments:

- McCrea Point-Chadakoin Park Area (western segment): This portion of the study area extends from the edge of the city to the West Third Street bridge, and includes two major parks (McCrea Point and Chadakoin Park). *Shown in Diagram 2.*

- Downtown and Medical Area (central segment): This portion of the study area extends from the West Third Street bridge to just past Foote Avenue. This area includes portions of both downtown and the emerging medical district. *Shown in Diagram 3.*

- East End Industrial Area (eastern segment): This portion of the study area extends from just east of Foote Avenue to Tiffany Avenue. It includes a mix of industrial and non-retail commercial activities, and is part of a larger regional industrial corridor. *Shown in Diagram 4.*

The section that immediately follows summarizes key findings of this analysis. The remaining sections of this memo provide, for each segment of the study area noted above, a discussion of land use; character and use of the River; key assets; Opportunity Zones; key development sites; and potential near- and mid-term opportunities for Riverwalk expansion.

Summary of Findings

Initial findings of the urban design analysis can be summarized follows:

Recent successes provide a foundation for unlocking further successes.
The last decade has been one of notable successes within Jamestown. Successes include strengthening downtown; growth of the city's medical cluster; clean-up of several vacant industrial sites; and expanded public access to the River. This history of positive change provides a foundation for 'next steps'; Jamestown can build off what's already working well, and reinforce progress to date.

- **Efforts to improve public access to the River have been particularly successful**. Over the past decade, Jamestown has expanded the downtown Riverwalk, provided new and enhanced parks and plazas along it, formally extended the boundaries of a large neighborhood park (Chadakoin Park) to meet the edge of the River, and added new features to McCrea Point, a city-wide destination for River recreation. These improvements have strengthened the River as a

community amenity, with areas that are actively used for kayaking, canoeing, rowing, fishing, or simply sitting or walking beside.

- **Active public use of the Riverwalk and the riverfront parks is a credit to City staff, who do an excellent job maintaining parks and public spaces, both new and old, in an environment of tightly constrained resources.** Further expansion will need to be mindful of maintenance burdens.

<u>The study area includes a substantial inventory of vacant or underutilized land and buildings, reflecting a gap between market demand and available land.</u>

If future investments are widely dispersed throughout the district, there is a risk that the impact of these improvements will be diluted. A more targeted approach that generally seeks to focus on investment in a defined number of clusters would enable the community to maximize the potential impact of new investment.

- **The Chadakoin River Revitalization Study is an opportunity to focus on places (areas, sites, and linkages) with near-term potential to catalyze both a more accessible riverfront *and* renewed investment – where community benefits are likely to be greatest.** The State of New York LWRP (Local Waterfront Revitalization Program) is intended to help cities develop a community-supported framework for use and activity along a waterfront. The Brownfield Opportunity Area (BOA) program is intended to support identification, clean-up and redevelopment of contaminated sites. By combining these grants into a single initiative, Jamestown can plan simultaneously, in a coordinated way, for reinvestment along the riverfront and in key areas beyond.

- **Three "Opportunity Zones" have been identified as areas with significant near-term potential for positive change.** All three Opportunity Zones are already important areas for the city as a whole – because of recreation amenities, economic anchors, or both. They are places that offer access to the River; places where recent public and private investments have created a foundation for future success; and places where near-term attention could reinforce progress already made – and bring near-term community and economic benefits. Opportunity Zones may become the focus of additional urban design analysis and planning later within the study process.

  Opportunity Zones are represented within the Diagrams by red circles. One could walk from the center of each Opportunity Zone to its edge in approximately 5 minutes. The three Opportunity Zones are as follows:

  - *The McCrea Point Opportunity Zone,* which encompasses McCrea Point park, portions of Chadakoin Park, and adjacent commercial and industrial areas.

- *The Downtown Riverfront Zone*, which encompasses the heart of the downtown Riverwalk, both north and south of the River, and commercial areas along Washington and Main Streets.

- *The Medical Area Opportunity Zone,* which encompasses the Harrison-Foote-Institute area where a growing cluster of major medical facilities are located: the Riverwalk Medical Center, the Cancer Care of WNY center, and the WCA Hospital.

- **16 key development sites, some composed of several parcels, have been identified as priority near-term development opportunities**. Key development sites represent a combined total approximately 70 acres, and are generally located within Opportunity Zones. These are sites with potential to reinforce existing successes and anchors; to expand River access; and/or to **s**upport growth within economic "hubs": downtown, the emerging medical district, and the industrial corridor on the city's east side. While it is the intention of this analysis to identify a relatively limited number of sites that could become a focus for future initiatives, other sites within the study may also have potential for development – for instance, within portions of downtown north of the River, where the Jamestown Urban Design Plan already serves as a framework for development.

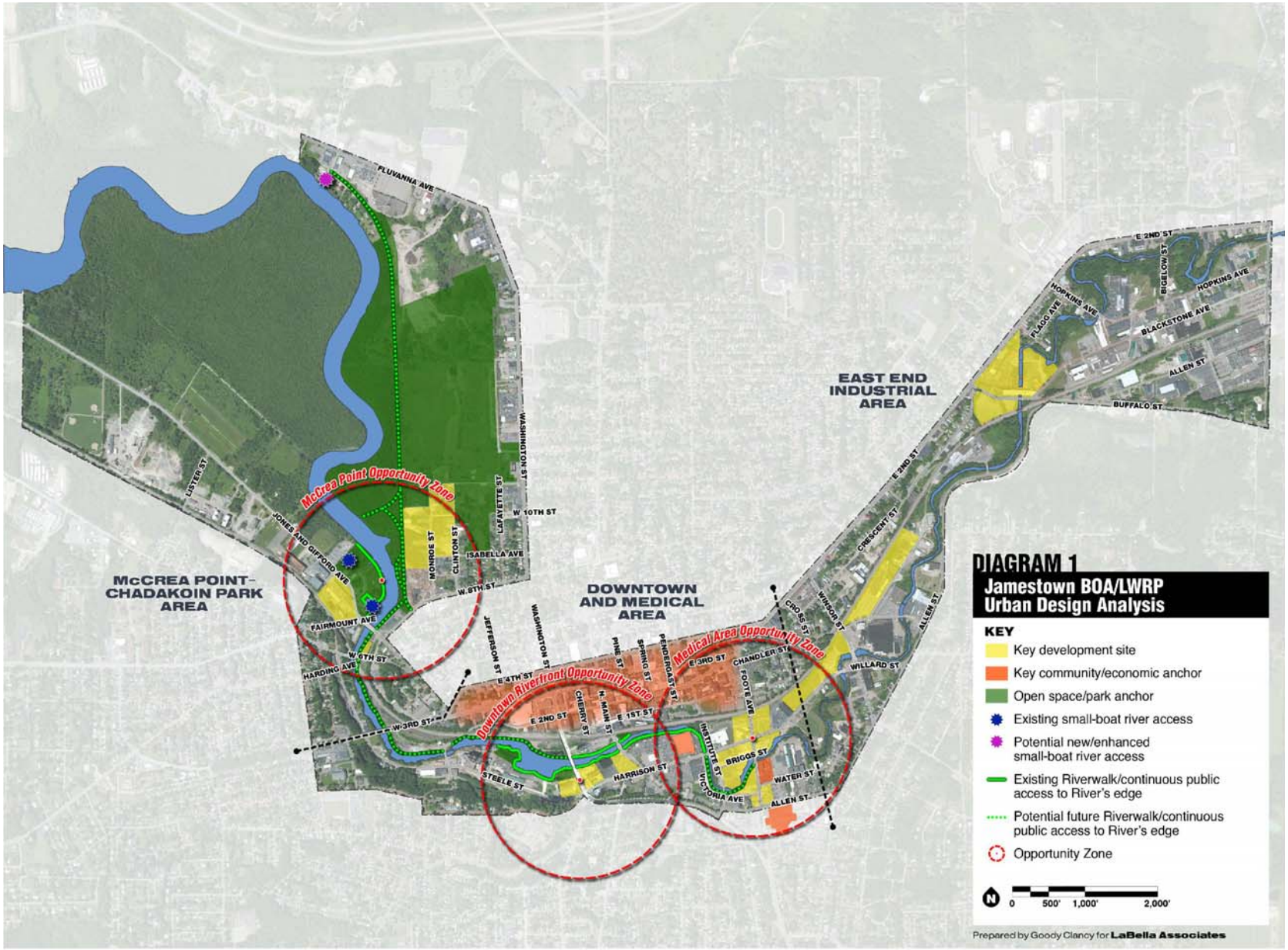
  Key development sites are shown in yellow within Diagrams. Many of the key development sites have also been identified by LaBella and City leadership as "vacant or underutilized parcels."

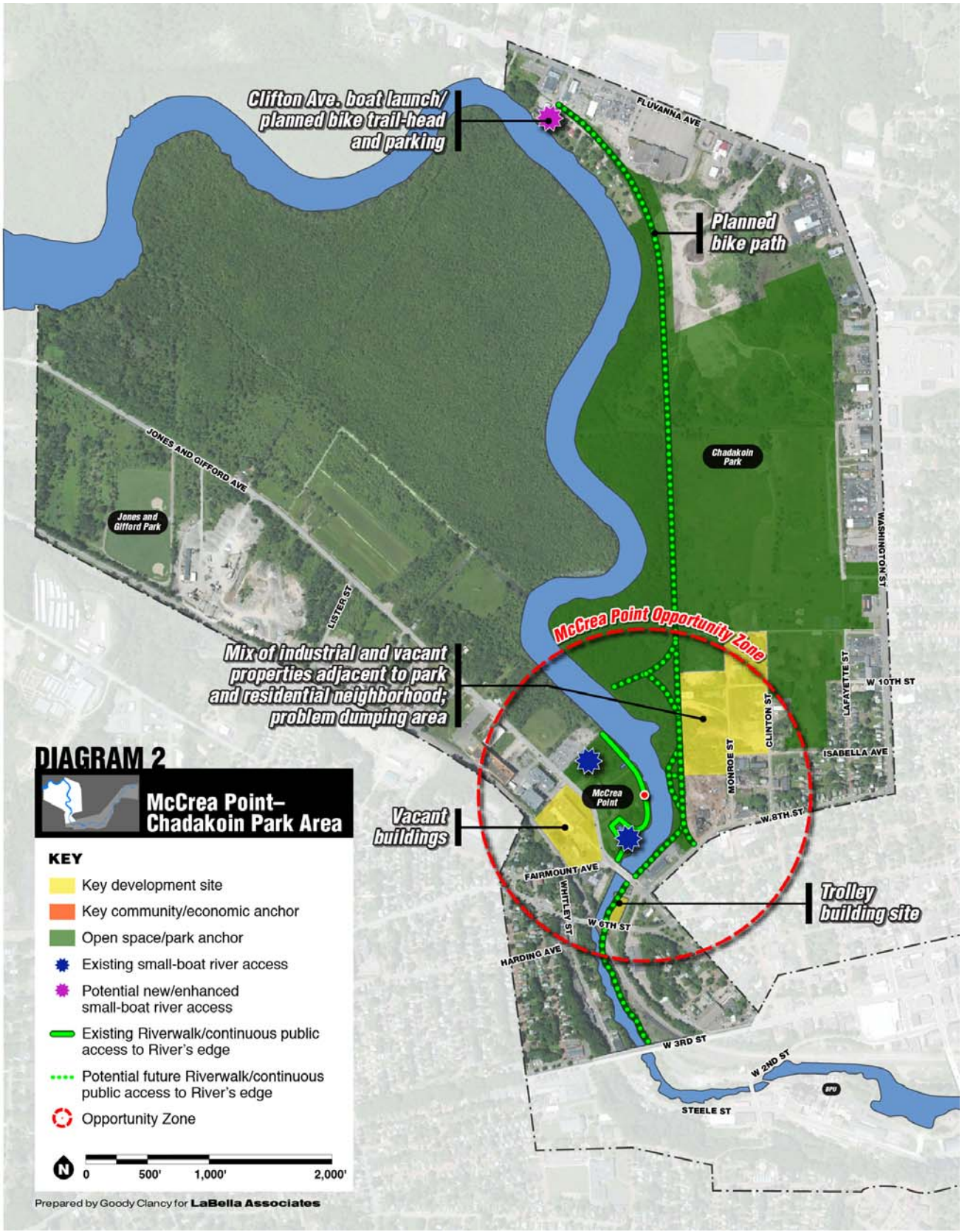
While continuous public access to the River from downtown to Chautauqua Lake is a long-term community goal, near- and mid-term efforts will be important to long-term success.

Efforts to expand River access in the near- and mid-term might focus on extending those segments of the Riverwalk that are already in place. In conjunction with expansion of the Riverwalk, efforts should focus on preserving the long-term viability of the system as a whole. For instance, preventing new barriers (e.g., development of incompatible uses along current or future Riverwalk segments, or construction of new buildings in future Riverwalk right-of-way) and engaging in cooperative efforts with land owners and other stakeholders to secure agreements that would ease potential longer-term expansion. The Diagrams identify potential priorities for future expansion of the Riverwalk.

- **The planned Chadakoin River Trail that will connect through Chadakoin Park linking Clifton Avenue and West 8th Street will strengthen the Chadakoin Park/McCrea Point area as a recreation destination**. The multi-use trail should be considered – and branded – as an element of the city's Riverwalk system. While not running directly along the water's the edge, the trail will provide access to natural areas along the River with spurs linking directly to the River's edge across from McCrea Point. With this step, the city would have completed two major Riverwalk segments – downtown and Chadakoin Park – and would have set the stage for completing the missing links over time.

- **Potential for water uses varies as the River changes in depth.** The segment of the River between Chautauqua Lake and McCrea Point is well-suited to support a variety of boating activities, including rowing, kayaking, canoeing and use by small motor boats. This is due to water depth, the absence of dams, and the connection to Chautauqua Lake. Three public boat launches (two at McCrea Point, one at Clifton Avenue) are located within this area. Beyond McCrea Point, the River narrows and shallows. From McCrea Point east to the Warner Dam, the River can accommodate seasonal use by shallow-water boats such as kayaks, canoes, paddle boats and pedal boats. The stretch of the River east of Warner Dam does not lend itself to boating but could accommodate fishing and passive recreation (e.g., places to sit, picnic or stroll beside the River). Publicly accessible areas of the River west of Institute Street – along the Riverwalk and at McCrea Point – already draw people for fishing and passive recreation.


McCREA POINT–
CHADAKOIN PARK
AREA
DOWNTOWN
AND MEDICAL
AREA
EAST END
INDUSTRIAL
AREA
McCrea Point Opportunity Zone
Medical Area Opportunity Zone
Downtown Riverfront Opportunity Zone
FLUVANNA AVE
LISTER ST
JONES AND GIFFORD AVE
FAIRMOUNT AVE
HARDING AVE
W 6TH ST
W 8TH ST
MONROE ST
CLINTON ST
WASHINGTON ST
LAFAYETTE ST
W 10TH ST
ISABELLA AVE
JEFFERSON ST
W 3RD ST
E 4TH ST
E 2ND ST
CHERRY ST
PINE ST
SPRING ST
N. MAIN ST
E 1ST ST
PENDERGAST ST
E 3RD ST
CHANDLER ST
FOOTE AVE
INSTITUTE ST
VICTORIA AVE
HARRISON ST
STEELE ST
BRIGGS ST
WATER ST
ALLEN ST
WILLARD ST
WINSOR ST
CROSS ST
CRESCENT ST
E 2ND ST
ALLEN ST
BUFFALO ST
HOPKINS AVE
PLAGG AVE
BLACKSTONE AVE
BIGELOW ST
E 2ND ST
DIAGRAM 1
Jamestown BOA/LWRP
Urban Design Analysis
KEY
Key development site
Key community/economic anchor
Open space/park anchor
Existing small-boat river access
Potential new/enhanced small-boat river access
Existing Riverwalk/continuous public access to River's edge
Potential future Riverwalk/continuous public access to River's edge
Opportunity Zone
N
0
500'
1,000'
2,000'
Prepared by Goody Clancy for LaBella Associates


Clifton Ave. boat launch/ planned bike trail-head and parking
Planned bike path
Chadakoin Park
Jones and Gifford Park
JONES AND GIFFORD AVE
LISTER ST
FLUVANNA AVE
WASHINGTON ST
McCrea Point Opportunity Zone
Mix of industrial and vacant properties adjacent to park and residential neighborhood; problem dumping area
Vacant buildings
Trolley building site
McCrea Point
W 10TH ST
LAFAYETTE ST
CLINTON ST
MONROE ST
ISABELLA AVE
W 8TH ST
FAIRMOUNT AVE
WHITLEY ST
W 6TH ST
HARDING AVE
W 3RD ST
W 2ND ST
STEELE ST
BPU
DIAGRAM 2
McCrea Point–Chadakoin Park Area
KEY
Key development site
Key community/economic anchor
Open space/park anchor
Existing small-boat river access
Potential new/enhanced small-boat river access
Existing Riverwalk/continuous public access to River's edge
Potential future Riverwalk/continuous public access to River's edge
Opportunity Zone
N
0
500'
1,000'
2,000'
Prepared by Goody Clancy for LaBella Associates

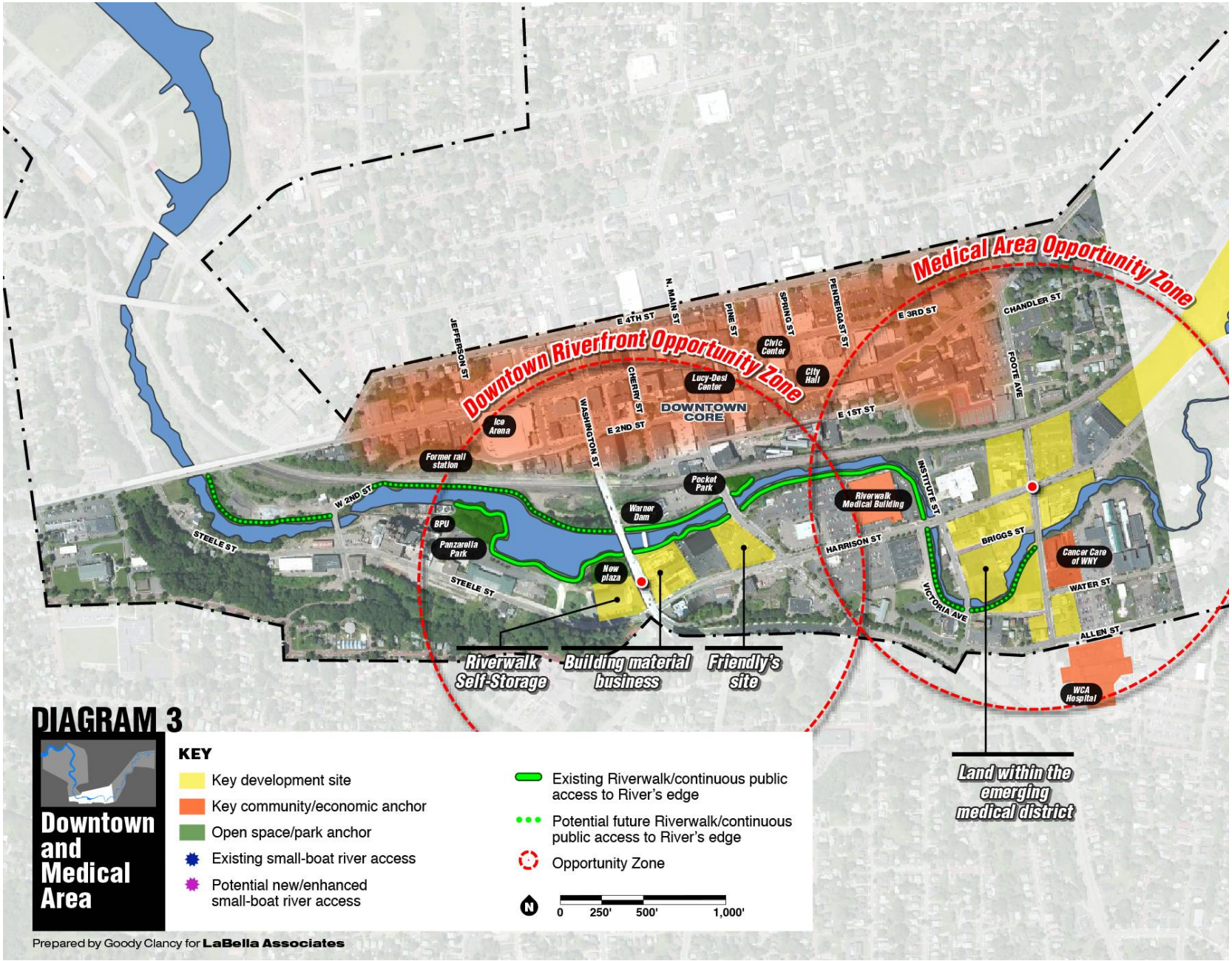


DIAGRAM 3

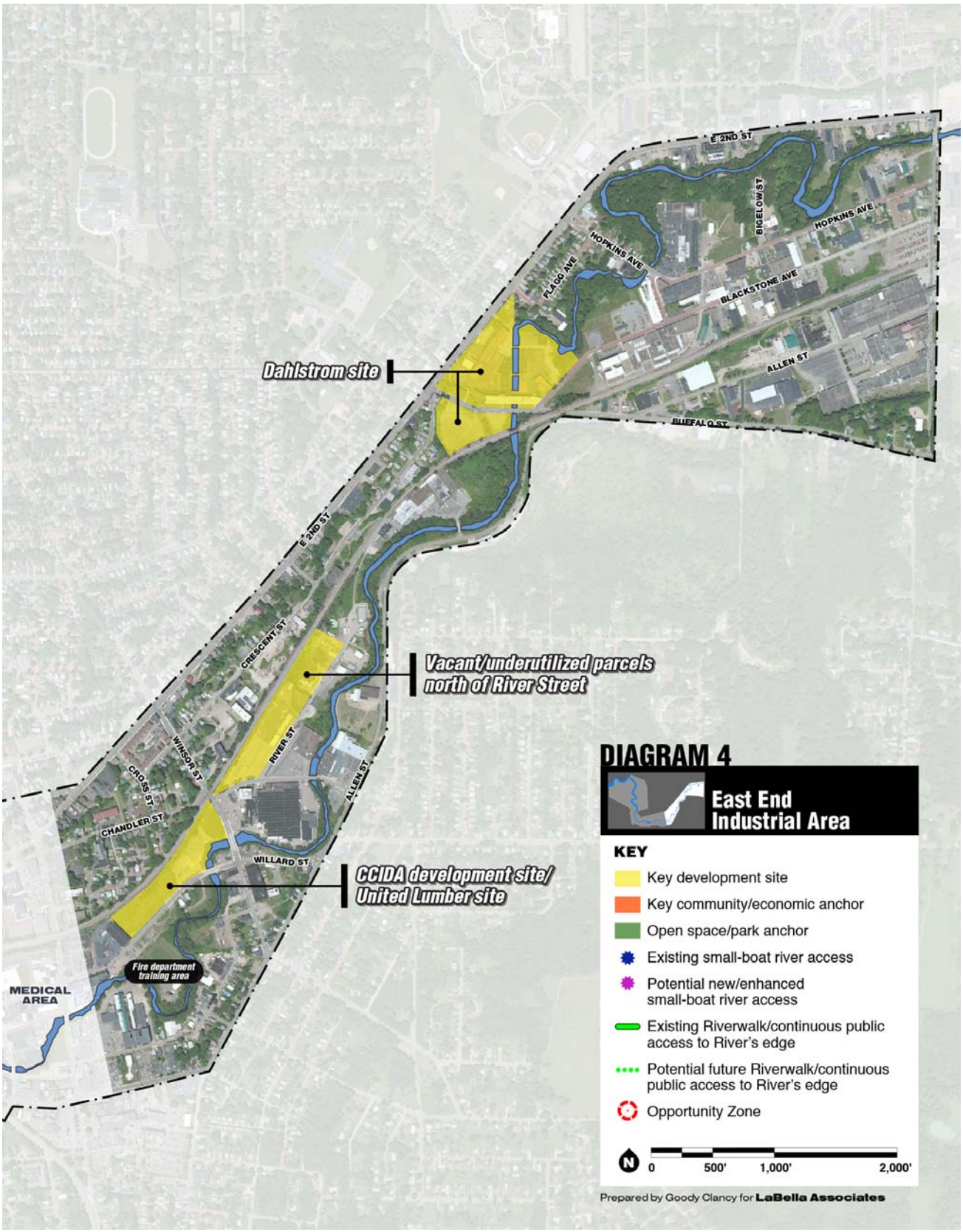
Downtown and Medical Area

KEY

- Key development site
- Key community/economic anchor
- Open space/park anchor
- Existing small-boat river access
- Potential new/enhanced small-boat river access
- Existing Riverwalk/continuous public access to River's edge
- Potential future Riverwalk/continuous public access to River's edge
- Opportunity Zone

N 0 250' 500' 1,000'

Prepared by Goody Clancy for **LaBella Associates**


Dahlstrom site
Vacant/underutilized parcels north of River Street
CCIDA development site/ United Lumber site
Fire department training area
MEDICAL AREA
E 2ND ST
BIGELOW ST
HOPKINS AVE
PLAGG AVE
BLACKSTONE AVE
ALLEN ST
BUFFALO ST
CRESCENT ST
WINSOR ST
CROSS ST
CHANDLER ST
RIVER ST
WILLARD ST
DIAGRAM 4
East End Industrial Area
KEY
Key development site
Key community/economic anchor
Open space/park anchor
Existing small-boat river access
Potential new/enhanced small-boat river access
Existing Riverwalk/continuous public access to River's edge
Potential future Riverwalk/continuous public access to River's edge
Opportunity Zone
N
0
500'
1,000'
2,000'
Prepared by Goody Clancy for LaBella Associates

McCrea Point-Chadakoin Park Area | From the edge of the city to West Third Street

Land Use & Vacancies

Within the McCrea Point-Chadakoin Park Area, approximately 80% of the land is occupied by open space – including large areas of wetlands (largely under city ownership), city-owned parkland, and privately-owned land used for muck farming (agricultural use of drained bogs). Two major public parks are located along the River within this area: 6-acre McCrea Point and 150-acre Chadakoin Park. 60-acre Jones Memorial Park is located approximately a quarter of a mile south of the River. Approximately 15% of the land area within the McCrea Point-Chadakoin Park Area is occupied by commercial or industrial uses, which are located primarily along Fluvanna Avenue and Washington Street (both primarily commercial corridors), and Jones and Gifford Avenue (primarily an industrial corridor). Several industrial and non-retail commercial businesses, including a scrap yard, are also located along Monroe and Clinton Streets south of Chadakoin Park. North of Isabella Avenue and the scrap yard, this area consists primarily of vacant parcels and parcels with vacant and derelict structures. Residential uses occupy approximately 5% of the land area McCrea Point-Chadakoin Park Area. Residential neighborhoods can be found near Chadakoin Park (adjacent to the Isabella Avenue area noted above), west of Whitley Avenue, and on Clifton Avenue.

Character and Use of the River

From McCrea Point north, this segment of the River is uniquely well-suited within Jamestown to support recreational boating due to water depth; the absence of dams; the attractive natural environment along the banks; and the connection to Chautauqua Lake. Here, the River is actively used for rowing, kayaking, and other small-boat activities. McCrea Point, located at a highly visible "hinge" in both the River and the road network, is the city's focal point for river-related recreation and boat access. A less visible small boat launch is located off Clifton Avenue. The Clifton Avenue boat launch area will also serve as the trailhead for the planned Chadakoin River Trail, and several public parking spaces will be added.

Beyond McCrea Point, the River narrows and shallows. Between McCrea Point and West Third Street – and as far east as the Warner Dam – the River can accommodate seasonal use by kayaks, canoes, paddle boats and pedal boats.

Key Assets

Within the McCrea Point-Chadakoin Park Area, the River and riverfront parks represent important assets. McCrea Point offers amenities unique among the city's riverfront parks (e.g., boat launches and public restrooms), as well a picnic pavilion, a playground and boardwalks with seasonal plantings. A city-owned building used as a Chautauqua Lake Rowing Association boat house is located along the northern

edge of the park. McCrea Point is actively used for boating, fishing, and passive recreation (e.g., sitting or strolling beside the River). The park draws people from across the community and beyond.

Chadakoin Park extends over 2/3 of a mile along the eastern bank of the Chadakoin, and serves primarily as a neighborhood park. Portions of the park between 11th and 14th Streets near Lafayette Street are well-utilized. This area includes a playground, a skateboard park, a baseball field, a picnic pavilion used for occasional citywide events, and an informal nature trail. Other areas of the park see more limited use. Currently, there are no River views or access points from the Park. However, the planned Chadakoin River Trail, a multi-use path which will extend from Clifton Avenue to 8th Street, will include trail spurs with two points of access to the River in Chadakoin Park, directly across from McCrea Point.

Opportunity Zones

- **The McCrea Point Opportunity Zone:** This Opportunity Zone encompasses an important cluster of riverfront assets (e.g., McCrea Point, Chadakoin Park the planned Chadakoin River Trail) at a highly visible, highly boat-able section of the River – just 5 to 10 minutes walk from Panzarella Park and the downtown Riverwalk. Near-term efforts could reinforce this area as Jamestown's focal point for River recreation through clean-up of poorly maintained vacant land adjacent to Chadakoin Park, and new Riverwalk links. Given the appeal of McCrea Point, there may be potential for new commercial activity on nearby parcels.

Key Development Sites & Linkages

- **Parcels along Monroe and Clinton Street, north of the scrap yard:** The area along Monroe and Clinton Streets above the scrap yard – adjacent to Chadakoin Park and a residential neighborhood – is largely occupied by poorly maintained vacant land and dilapidated buildings. The area is prone to illegal dumping. Current conditions in the Monroe-Clinton Street area have a detrimental impact on the adjacent neighborhood and on Chadakoin Park. As there appears to be limited demand for additional residential or commercial development in this area, one approach to addressing clearance, clean-up and prevention of dumping would be to incorporate these parcels into Chadakoin Park.

- **Vacant Buildings across from McCrea Point:** Redevelopment of land across from McCrea Point on high-visibility Jones and Gifford Avenue for commercial uses could reinforce this area as a community destination.

- **The Trolley Building site:** Redevelopment of the former Trolley Building site could bring this riverfront parcel back to active use, helping to reinforce the McCrea Point area as a destination. Redevelopment for commercial or other types of uses could be explored. The current condition of the Trolley Building may prevent its reuse**.**

- **Expansion of the Riverwalk:** Near-term steps in longer-term Riverwalk expansion efforts - beyond construction of the planned Chadakoin River Trail and associated River access points – might include a riverfront path between Chadakoin Park and the Fairmount Avenue Bridge, which would establish a stronger connection between Chadakoin Park and McCrea Point, and a link to the planned trail. The east bank of the River may hold the highest potential for additional Riverwalk expansion within this area, which could eventually link with downtown segments of the Riverwalk. Barriers to near-term Riverwalk expansion include property ownership, the railroad right-of-way, and topography.

Please refer to Diagram 2: McCrea Point - Chadakoin Park Area for more information.







McCrea Point is Jamestown's focal point for river-oriented recreation along the Chadakoin. This park attracts people from across the city and beyond to launch small boats, fish, or sit beside the River.





Portions of Chadakoin Park – including the playground, the skateboard park, the picnic shelter, the nature trail, and a baseball field – see active use, while other portions of this large park see more limited use. The planned Chadakoin River Trail will provide a new recreation amenity that passes through the park, and that will provide points of access to the River.



The area south of Chadakoin Park, along Monroe and Clinton Streets north of Isabella Avenue, is largely occupied by vacant parcels. Illegal dumping is an ongoing challenge within this low-visibility area adjacent to the park and a residential neighborhood.



The Trolley Building is located along the River on West Eighth Street. Redevelopment of this site for commercial use could help strengthen the McCrea Point-Chadakoin Park area. Due the condition of the building, reuse may not be possible.

Downtown and Medical Area | From West Third Street to Foote Avenue

Land Use & Vacancies

This middle portion of the study area extends from the river bridge on West Third Street to just past Foote Avenue. North of the River, this area includes key portions of downtown, including the ice arena, the Lucy-Desi Center and the Civic Center. South of the River, this area includes portions of the emerging medical district – a growing cluster of medical institutions and human service/health-related organizations. Anchors include the Riverwalk Medical Center (occupied by the Jamestown Area Medical Associates) and the Cancer Care of WNY center, as well as the WCA Hospital (located just south of the study area). The area south of the River also includes the riverfront Board of Public Utilities (BPU) plant, a mix of commercial businesses and several shopping centers (primarily located along Harrison near Washington and Main Streets), industrial facilities (particularly along Steele-Harrison Street), and several churches. Both north and south of the River, most parcels and buildings are in active use.

Character and Use of the River

This area contains the longest publicly accessible segment of the Chadakoin. With Riverwalk segments along portions of both banks, enhanced by riverfront parks and plazas such as Panzarella Park, much of the riverfront serves as an amenity, used by city residents and area employees for fishing, walking, sitting or picnicking. South of Harrison, where the Riverwalk ends, the River loses its strength as an amenity as it travels behind a shopping center and a manufacturing facility.

West of the Warner Dam, the River can accommodate seasonal use by small boats such as kayaks, canoes, paddle boats and pedal boats. Near Panzarella Park and the BPU plant, the River broadens to create a "basin" that could be particularly well-suited for small, shallow-water boats. East of the Warner Dam, however – just beyond Washington Street – shallow, rocky conditions present a significant barrier for any boating activity. Safe public use of motor boats within the Downtown and Medical Area would require costly dredging.

Key Assets

This area is a center of government and medical care for the community and the region, containing much of downtown Jamestown and the medical area. North of the River and along the riverfront, recent investments among public, private, and non-profit entities have had a visible impact on the level of activity and visual appeal of the downtown area. There are new businesses, several significant renovation projects are underway, and with ground floors largely active, property owners have begun efforts to lease upper floors of buildings. Events (e.g., the annual Lucy Fest) and public art (e.g., POTTERS gALLErY) have also added vitality to downtown. The downtown Riverwalk is a recreation asset,

and provides a foundation for more walkable development beside the Riverwalk along Washington and Main Streets. South of the River, the new Cancer Care of WNY center has further reinforced the Foote Avenue-Harrison Street area as a regional center for health care. This area represents an important and growing part of the city, but has not yet benefited from the focused planning that has served portions of downtown north of the River.

Opportunity Zones

- **The Downtown Riverfront Opportunity Zone:** This Opportunity Zone encompasses the heart of the downtown Riverwalk, both north and south of the River; portions of downtown (including the Ice Arena and the Lucy-Desi Center); and commercial areas along Washington and Main Streets. The evolution of this area will be key to:
    - Reinforcing downtown as a vibrant environment that can continue to attract activity and investment.
    - Reinforcing the Riverwalk as a downtown riverfront amenity – following a wave of recent investments (e.g., a new public plaza and Panzarella Park on the south bank of the River, a pocket along Main Street on the north bank of the River) that have significantly strengthened this area as a community destination.

  The type and character of future development within this Opportunity Zone will be important. Uses with potential to activate the Riverwalk (e.g., restaurants, stores, a small hotel) and to reinforce downtown as a walkable environment are preferable to uses such as industrial or manufacturing activities, storage facilities, and gas stations or auto repair centers.

- **The Medical Area Opportunity Zone:** This Opportunity Zone encompasses the Harrison-Foote-Institute area where a growing cluster of major medical facilities are located: the Riverwalk Medical Center, the Cancer Care of WNY center, and the WCA Hospital. Jamestown's leadership has talked about envisioning the area as a "medical corridor" that might extend along Foote Avenue, Harrison Street and the River, linking the Riverwalk Medical Center, the Cancer Care center, and the WCA Hospital, as well as other health and social service related resources in the area (e.g., the Resource Center). However, no formal plans yet guide investments in this area, or support its development as a coherent district. Medical districts nationally – for instance, the Buffalo Niagara Medical Complex in Buffalo and the Longwood Medical Area in Boston – are generally guided by development plans that involve a consortium of medical and health-related institutions within the district. These plans identify coordinated approaches for addressing:
    - The range of medical and support services located within the district
    - Sites for future expansion

- Circulation, parking and transit links
- Growth of the area as a cohesive and easily navigable district with a strong pedestrian environment

Coordinated planning, the type and character of future development within this area, and the quality of the physical environment are important factors in Jamestown's ability to preserve and strengthen its position as a regionally competitive medical district.

Today, the medical and health-related facilities within this Opportunity Zone are interspersed among a range of small- to mid-sized commercial establishments, industrial businesses, homes, and vacant buildings and parcels – providing a less-than-optimal environment for growth among any of the active uses within the area. The Medical Area Opportunity Zone would benefit from a plan that addresses the needs of *all* types of uses within this area.

Key Development Sites & Linkages

- **Downtown, North of the River**: The *Jamestown Urban Design Plan* provides a framework for continued improvements within the portion of downtown north of the River, and for advancing the significant successes already achieved and underway. Redevelopment efforts within this area could continue to be pursued as feasible to advance community goals identified within the *Urban Design Plan.*

- **The Medical Area (parcels along Institute Street and Foote Avenue):** Parcels along Foote, Institute and Harrison Streets near the WCA, the Riverwalk Medical Center and Cancer Care of WNY center are all located within the emerging medical district, and may ultimately be key to its continued development. It is not anticipated that every site identified within this analysis will be redeveloped but all of these parcels should be considered as part of coordinating planning for this area.

- **Parcels along Harrison at Washington and Main:** With proximity to downtown and the medical corridor, and highly visible locations on busy thoroughfares, these sites may be well-suited for redevelopment that could further activate the Riverwalk and reinforce downtown as a walkable environment.

- **Expansion of the Riverwalk:** Near-term efforts might focus on extension of the Riverwalk south of Harrison Street, where relatively modest investments could establish a 'medical area Riverwalk' that begins where the downtown Riverwalk now ends. This new segment of the Riverwalk could reinforce the River as an amenity that helps distinguish Jamestown's growing medical area, and would provide a strong riverfront pedestrian link to the heart of downtown. On the north bank of the River, near- or mid-term efforts might extend the Riverwalk west of the Washington Street Bridge.

Jamestown leadership has explored the potential for a Porter Avenue Park, which would create a continuous band of parkland from the residential neighborhood near the Armory to the Steele Street riverfront south of 3rd Street. Implementation of this concept would involve development of a formal path through the steep wooded hillside now served by informal paths. Challenges would include:

- Acquisition of approximately a dozen properties along Steele and Front Street, including 7 homes and businesses
- The significant change in grade between Front Street at the top of the hill and Steele Street below
- The presence of Steele Street, which would run through the expanded park
- The presence of the BPU plant, which would preclude continuous riverfront access between West 2nd Street and the downtown Riverwalk to the east

This ambitious initiative could enhance neighborhood River access. In the near term, given the likely cost and complexity, it may be most desirable to focus on continuing to enhance neighborhood access to McCrea Point and to the downtown Riverwalk, with expansion efforts shifting toward a Porter Avenue Park in the longer term.

Please refer to Diagram 3: Downtown and Medical Area for more information.



The new Riverwalk plaza west of the Washington Street bridge (top left) and Panzarella Park (below left) beside the BPU plant are examples of new amenities along the Riverwalk that are now seeing active use by the community. The Riverwalk and its parks benefit from excellent maintenance and seasonal plantings (below right).





In addition to medical area anchors such as the WCA Hospital, the Riverwalk Medical Center, and the new Cancer Care of WNY / WNY Urology Associates center (below left), this area contains an eclectic mix of other uses, including health and human service organizations, churches, industrial facilities, commercial activities, homes, and vacant parcels and buildings.











The Riverwalk could be extended south of Harrison Street to the medical area through a new link along this attractive segment of the River (as seen from the Harrison Street bridge, across from the Riverwalk Medical Center). The path could travel along Victoria Avenue - now a little-used service road behind a shopping center, located just beyond the trees on the right hand side of this image.

The Riverwalk could then continue between Institute Street and Foote Avenue, to the vacant parcel across from CCIDA Building (shown at right) and the Cancer Care of WNY center.





Riverwalk Self-Storage is located along the River just west of the Washington Street bridge, behind a new Riverwalk plaza.



A building supply company is located along the River and Riverwalk, just east of the Washington Street bridge.

East End Industrial Area | From east of Foote Avenue to Tiffany Avenue

Land Use & Vacancies

The eastern end of the study area is occupied by a mix of manufacturing, light industrial, non-retail commercial uses and transportation-oriented (e.g., shipping/trucking) activities. This area is part of a regional industrial corridor that extends beyond the city's boundary to Falconer and the I-86 interchange. Approximately 10% of the land area is occupied by housing, with the largest residential clusters located north of the railroad tracks: just east of the high school and downtown, as well as on the north side of Crescent Street. Vacancy of both land and buildings within the East End Industrial Area is high; well over a third of the land area has been identified through the BOA/LWRP process by city leadership and LaBella as vacant or underutilized. Vacancies are dispersed across the East End Industrial Area.

Character and Use of the River

The River is narrow within this area, and lined primarily by industrial uses. The River is primarily visible from five road bridges that span it, as well as from the area beside a dam off Buffalo Street, across from the Dahlstrom Site. The River runs along Allen Street for over half a mile, but given high banks and brush, the River itself is not easily visible from the road. The Fire Department Training Area on Harrison Street represents a large, publicly owned green space, however there are no major public parks or formal River access points within this area. This stretch of the River does not lend itself to boating but could accommodate fishing and passive recreation along the riverfront (e.g., places to sit, picnic or stroll beside the River).

Key Assets

Businesses within Jamestown's East Industrial Area continue to play an important role within the city and region. Although finding new uses for vacant and underutilized parcels has posed challenges (e.g., sites are relatively small, many are brownfields, other nearby industrial areas offer closer highway access), these sites offer potential opportunities to accommodate expansion of businesses already located within the area, as well as to attract new businesses in need of small or medium-sized sites where industrial, manufacturing, and related uses would be welcomed.

Key Development Sites & Linkages

A focus on several key sites through the BOA/LWRP initiative might advance ongoing efforts by the City and the Chautauqua County Industrial Development Agency (CCIDA) to retain existing businesses within this area as well as to attract new ones. Larger, higher visibility sites that have been cleared and where remediation efforts are underway or already complete may offer the most suitable sites for redevelopment.

- **Dahlstrom Site:** Efforts to clear and remediate this relatively large and visible site are already underway. Once clean-up efforts are complete, this site could be appropriate for light industrial, manufacturing, or related uses.

- **CCIDA Development Site/United Lumber Site:** Together, these contiguous properties represent a relatively large development site that has been cleared of prior buildings. Located on high-visibility Harrison Street, in a transitional area between the downtown and medical area to the west and the industrial area to the east, these parcels might be appropriate for a range of uses including new health-related facilities.

- **Vacant/Underutilized Parcels North of River Street:** Five contiguous parcels north of River Street, all identified through the BOA process as vacant or underutilized properties, together represent a relatively large area that could be appropriate for uses such as light industrial or manufacturing activities.

- **River Access:** Public amenities might be provided in selective locations in conjunction with planned infrastructure projects or site development, for use by area residents or employees. Alternately, businesses along the River may improve portions of their properties to provide riverfront eating areas or fishing spots. Improvements within the East End Industrial Area should be made with sensitivity to the transportation and operational needs of area businesses. Public investments in River access and amenities are likely to have a greater impact further west within the study area, closer to downtown, residential neighborhoods, and existing riverfront parks and public spaces.

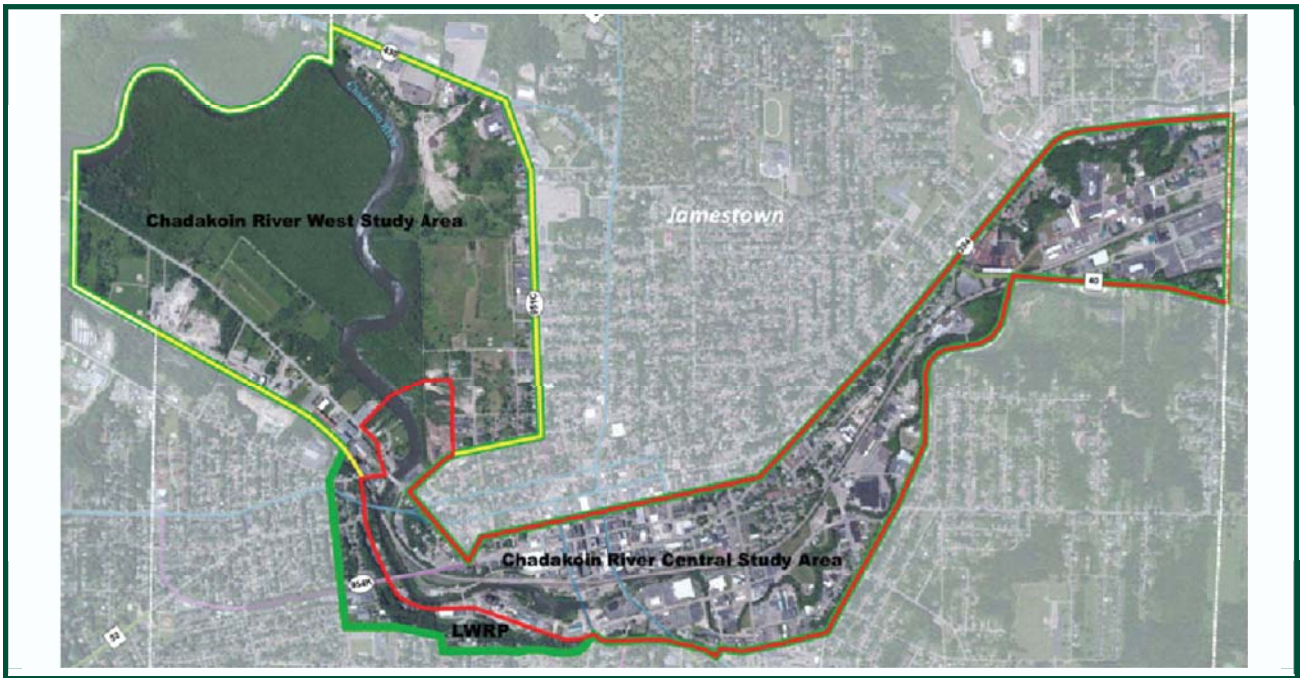
Please refer to Diagram 4: East End Industrial Area for more information.



The relatively large, high-visibility Dahlstrom site, where demolition and remediation efforts are now underway, could be a focus of industrial redevelopment efforts.



Together, the CCIDA Development Site and the United Lumber Site (shown in yellow shading above, at Harrison and Winsor Streets) represent a relatively large, high-visibility development area close to downtown, the medical area, and the industrial corridor that extends to the east. Aerial photo from Bing.



City of Jamestown NYS Brownfield Opportunity Area and Local Waterfront Revitalization Program

Inventory & Analysis of Transportation and Municipal Infrastructure Systems

Submitted to:
Labella Associates, P.C.

Prepared by:
GPI
Greenman-Pedersen, Inc.
Engineering and Construction Services

4950 Genesee Street
Buffalo, NY 14225
Telephone No. 716-633-4844

May 2013





City of Jamestown NYS Brownfield Opportunity Area and Local Waterfront Revitalization Program

Inventory & Analysis of Transportation and Municipal Infrastructure Systems

TABLE OF CONTENTS

1.0 TRANSPORTATION SYSTEMS 1

1.1 Vehicular Transportation 1
1.1.1 Tiffany Avenue 3
1.1.2 Hopkins Avenue 3
1.1.3 Buffalo Street 4
1.1.4 Chandler Street 5
1.1.5 Winsor Street 5
1.1.6 Foote Avenue 6
1.1.7 Institute Street 6
1.1.8 North and South Main Street 7
1.1.9 Sprague Street 8
1.2 Bridges and Bridge Abutments 8
1.2.1 Fairmount Avenue Bridge 8
1.2.2 West 6th Street (NYS Route 394) and WNY&PA Railroad Bridge 9
1.2.3 West 3rd Street Bridge 9
1.2.4 Sprague Street Bridge 10
1.2.5 Sprague Street Railroad Bridge and BPU Pipe Bridges 10
1.2.6 Panzarella Park Bridge 11
1.2.7 Washington Street Bridge 11
1.2.8 South Main Street Bridge 12
1.2.9 Harrison Street Bridge near Institute Street 12
1.2.10 Institute Street Bridge 13
1.2.11 Foote Avenue Bridge 13
1.2.12 Harrison Street Bridge near Winsor Street 14
1.2.13 Winsor Street Bridge 14
1.2.14 Chandler Street Bridge and Webber Knapp Pedestrian Bridge 15
1.2.15 Dawson Metals Bridge 15
1.2.16 WNY&PA Railroad Bridge Near Buffalo Street 16
1.2.17 Buffalo Street Bridge and Dahlstrom Complex 16
1.2.18 Hopkins Avenue Bridge 17
1.2.19 Tiffany Avenue Bridge 17
1.3 Railroad Transportation 18
1.4 Navigation Channels 19
1.4.1 Above McCrea Point 19
1.4.2 McCrea Point to the Warner Dam 19
1.4.3 Below the Warner Dam 20
1.5 Pedestrian/Bicycle Transportation 21
1.6 Public Transportation 25

2.0 INFRASTRUCTURE SYSTEMS 27

2.1 Water Supply 27
2.2 Stormwater Runoff and Storm Drainage 27
2.3 Wastewater Disposal 29

2.4 Electricity 29
2.5 Dams 30
2.5.1 Warner Dam 30
2.5.2 Former United Lumber Low Head Dam (Winsor Street) 31
2.5.3 Utility Crossing Low Head Dam (Buffalo Street) 31
2.6 Docks 32
2.6.1 Private Docks along Clifton Avenue and Sprague Street 32
2.6.2 Docks at McCrea Point 32
2.6.3 Docks at Panzarella Park 33
2.7 Bulkheads 33
2.8 Solid Waste Disposal 35
2.9 District Heat 35
2.10 District Cooling 36
2.11 Underwater Cables And Pipelines 36
2.12 Parking 37
2.12.1 Cherry Street Ramp 38
2.12.2 Main Street Ramp 38
2.12.3 Spring Street Ramp 38
2.12.4 West 3rd and Clinton Streets 39
2.12.5 West 4th and Lafayette Streets 39
2.12.6 East 3rd near East 2nd Street 40
2.12.7 East 4th Street near Pendergast Avenue 40
2.12.8 East 2nd and Pine Streets 41

LIST OF FIGURES

Vehicle Circulation Systems Map
Trail System Map
Water Mains Map
Sewer Lines Map
Dams Docks and Bank Amor Map
District Heat Map
Pipelines and Cable River Crossing Map

Inventory & Analysis of
Transportation and Municipal Infrastructure Systems

Greenman-Pedersen, Inc. (GPI) was retained to characterize and analyze the City of Jamestown's transportation and infrastructure networks located within the LWRP study area. The LWRP study area is served by multiple transportation and public infrastructure systems. Transportation systems include vehicular, rail, water and public transportation. The public infrastructure systems include water, stormwater, sanitary sewer, electric, dams, docks, solid waste disposal, district heating/cooling and public parking.

1.0 TRANSPORTATION SYSTEMS

Transportation systems evaluated as part of this study included vehicular, rail, water and public transportation. These systems are described below and depicted on maps where applicable.

1.1 Vehicular Transportation

Early in the history of the City of Jamestown, industries were strategically located along the Chadakoin River where dams, sluices and races could be easily constructed to power their operations. As a result of the geography of the waterfront in which the LWRP is located, the study area is much longer than it is wide. In fact, the corridor is quite narrow from McCrea Point to the eastern terminus of the study area largely due to the steep valley walls, which in turn promoted compact industrial development along the River and on its floodplain.

Single purpose access roads were originally constructed to provide these water powered industries with a means to transport raw materials and finished products. It was inevitable the roadways would become shared facilities as related industrial clusters developed (i.e. sawmills, kilns, milling and planning, furniture manufacturing) both locally and regionally. Logically, the roadways were constructed along the valley walls, where they would be safe from flooding and where road building materials with superior engineering characteristics were readily available. In turn, the roadways provided a means to access the hillsides of the Jamestown area where people built their homes, businesses, churches and schools – all of which were in close proximity to the City's manufacturing base along the River.

Today, the LWRP is served with a well developed network of roadways. There are two primary routes that traverse the LWRP and are generally parallel to Chadakoin River, one is located entirely on the north side of the River, and the other is located almost entirely on the south side of the River. Each of these routes consists of roadway segments with connections to local streets that provide access to the public spaces, residential, commercial and industrial properties that comprise the LWRP. The Vehicular Circulation Systems Map included at the end of this report illustrates the network of roadways within the LWRP.

On the north side of the Chadakoin River, the LWRP can be traversed in an East to West direction by traveling segments of NYS Route 394 (East 2nd Street), East and West 3rd Streets, Fairmount Avenue, West 8th Street, Washington Street and NYS Route 430 (Fluvanna Avenue). Each roadway segment and its NYSDOT functional Classification is identified below.

Street Name	NYSDOT Functional Classification
NYS Route 394 (West 2nd Street)	Principal Arterial
East 3rd Street	Local Street
West 3rd Street	Minor Arterial
Fairmount Avenue	Local Street and Minor Arterial
West 8th Street	Local Street

Washington Street	Minor Arterial
NYS Route 430 (Fluvanna Avenue)	Minor Arterial

On the south side of the Chadakoin River, the LWRP can be traversed by traveling in a West to East direction on Jones and Gifford Avenue, Fairmount Avenue, West 6th Street, Steel Street, Harrison Street and Allen Street. The narrow valley immediately south of McCrea Point is a nexus with respect to both history and the local vehicular transportation network, where the local geography has resulted in the clustering of infrastructure and land development. This southern route through the LWRP briefly crosses the Chadakoin River via the Fairmount Avenue Bridge and back again via the West 3rd Street Bridge to continue back along the south side of the LWRP. The route again crosses the Chadakoin River twice via two bridges on Harrison Street.

Street Name	NYSDOT Functional Classification
Jones and Gifford Avenue	Urban Minor Arterial
Fairmount Avenue	Urban Principal Arterial
West 6th Street	Urban Minor Arterial
Steele Street	Urban Collector
Harrison Street	Urban Minor Arterial and Urban Collector
Allen Street	Urban Collector

There are twelve routes that traverse the LWRP that are generally oriented in a perpendicular manner to the Chadakoin River. By their perpendicular nature, these routes have bridges, both large and small scale that cross the Chadakoin River, railroad and in some cases other roads.

Of these twelve perpendicular routes that traverse the LWRP, three are Urban Principal Arterials or Urban Minor Arterials that carry through traffic over the LWRP.

- Washington Street – The busiest transportation corridor in Chautauqua County that provides linkages to I-86 and I-90 to the north and Pennsylvania to the south, provides an important connection between the northern and southern portions of the City. This highway has the NYSDOT functional classification of Urban Principal Arterial.
- West 6th Street (NYS Route 394) – An important east – west transportation corridor in Jamestown that provides linkages to commercial developments in the Village of Lakewood and the western portion of the City. This highway has the NYSDOT functional classification of Urban Principal Arterial.
- West 3rd Street Bridge. – An important east - west transportation corridor that links the eastern and western portions of the City together. This highway has the NYSDOT functional classification of Urban Minor Arterial.

The bridges and approaches that carry these three routes are large scale, multi span structures that carries through traffic traveling on urban principal and minor arterials over the LWRP, spanning the Chadakoin River, the Railroad and local streets. All three bridges have pedestrian walkways and provide excellent vantage points for viewing the LWRP but offer little in terms of real connectivity with the waterfront. The term "Flyover" is frequently used to describe structures of this nature. The recently reconstructed Washington Street Bridge features a well executed public space and trail connector between Steele Street and the Chadakoin Riverwalk Trail within its footprint; however, the West 3rd Street and West 6th Street Bridges offer little in terms of formal public access or amenities to the LWRP.





A comparison of the footprints of the West 6th Street Bridge (left), West 3rd Street Bridge (center) and the Washington Street Bridge (right).

The remaining nine perpendicular secondary routes provide real access and connectivity between the east/west primary routes that run parallel to the River and the public spaces, residential, commercial and industrial properties that comprise the LWRP. These routes are a mixture of Urban Minor Arterials, Urban Major Collectors and Urban local Streets. The bridges and approaches associated with these routes are smaller in scale and they offer opportunities for pedestrian circulation and formal and informal public waterfront access.

1.1.1 Tiffany Avenue

This route is located on the eastern LWRP Boundary in an area that is zoned M-Manufacturing by the City. This route is classified by the NYSDOT as an Urban Local Street. A large part of this corridor is occupied by important area employer TitanX; however, there is ample parking and room for additional development. The facility where TitanX is located actually spans Tiffany Avenue with an enclosed bridge that connects with the Bush Industries building on the east side of the roadway. There are signalized intersections at East 2nd Street and at Allen Street. Tiffany Avenue is a two lane street with sidewalks along both sides of the street. The roadway features a right hand turn lane at the signalized intersection with Allen Street. Sidewalk ramps for pedestrian crossings are located at West 2nd, Hopkins Avenue, Blackstone Avenue and Allen Street; however, only the West Second Street pedestrian crossing is striped. There is a signalized at grade crossing for the WNY&PA Railroad. Tiffany Avenue crosses the Chadakoin River via a single span, concrete boxbeam structure with concrete abutments. Pavement and sidewalk conditions are generally good and the geometry of the roadway is complementary to the land use along the route.





(Left) Right turn lane at the intersection of Tiffany Avenue and Allen Street. (Center) Tiffany Avenue Bridge. (Right) TitanX facility bridge and at grade WNY&PA crossing.

1.1.2 Hopkins Avenue

This route provides access to areas zoned LM-Light Manufacturing from East 2nd Street to the Chadakoin River and M-Manufacturing from the River to Tiffany Avenue. The western part of the corridor is residential, while the eastern portion is occupied by the Hopes Windows complex and

other manufacturing facilities. It is a two lane roadway with sidewalks along both sides of the roadway, which is classified by the NYSDOT as an Urban Local Street. Nonsignalized intersections are located at East 2nd Street, Flagg Avenue, Bigelow Street, Minske Street and Tiffany Avenue. Although sidewalk ramps are located at the intersections, only the pedestrian crossing at East 2nd Street is striped. Hopkins Avenue is a brick street with an overlay of asphalt applied to the segment between East 2nd Street and the Hopkins Avenue Bridge. Hopkins Avenue crosses the Chadakoin River via a two-span, concrete encased I-beam structure with concrete abutments. The geometry of the roadway is complementary to the land use along the route. Pavement and sidewalk conditions are fair, with some sections of sidewalk in poor condition.



(Left) The Hope's Windows Complex. (Center) Hopkins Avenue north of the River. (Right) Utilities are attached to the Hopkins Avenue Bridge.

1.1.3 Buffalo Street

Buffalo Street is classified as an Urban Collector by the NYSDOT. This route provides access to an area zoned M-Manufacturing, which is largely occupied by the large Dahlstrom Complex. The portion of the complex that fronts on East 2nd Street has been redeveloped; however the complex along east side of Buffalo Street is undergoing demolition. The complex also has a large, unused parking lot on the west side of Buffalo Street. The five-way intersection of Buffalo, East 2nd and Crescent Street is signalized to provide through, left and right turn movements. The skewed intersection of Buffalo and Allen Streets is also signalized and includes right lane slip ramp from Buffalo to Allen. The intersection of Buffalo Street with Blackstone Avenue is nonsignalized. With exception of the channelization at the signalized intersections, the roadway configuration is two-lane with sidewalks along both sides. Pavement and sidewalk conditions are generally good. Buffalo Street crosses the Chadakoin River via a single span, concrete boxbeam structure with concrete abutments. The elevated WNY&PA Railroad corridor transects Buffalo Street, where an overpass structure has been constructed with a vertical limit of 12 feet, which is 1.5 feet less than the NYSDOT limit for legal loads of 13.5 feet; however, trucks taller than the 12 foot vertical limit can access the route from Allen Street or East 2nd Street. With exception of the vertical clearance associated with the overpass which restricts the passage of large trucks, the geometry of the roadway is complementary to the land use along the route.



(Left) Intersection of Buffalo, West 2nd and Crescent Streets. (Center) Buffalo Street Bridge. (Right) WNY&PA overpass.

1.1.4 Chandler Street

Chandler Street provides access to an area that is zoned M-Manufacturing and is classified by the NYSDOT as an Urban Local Street. A large part of this corridor is occupied by important area employers, Webber Knapp and MRC. The single non-industrial structure on this street is the 5th Wheel Bar, directly across from Webber Knapp. There are nonsignalized intersections at Winsor and Allen Streets. Chandler Street is a brick street with an asphalt overlay configured for two lanes with sidewalks along both sides of the street. The intersection with Winsor Street is channelized for a right hand turn lane. Sidewalk ramps for pedestrian crossings are located at Allen, River and Winsor Streets; however, none are striped. The Chandler Street Bridge crosses the Chadakoin River with a two-span, concrete boxbeam bridge. With the exception of its intersection with Winsor, Chandler Street is not striped. Sidewalk and pavement conditions along Chandler Street are generally good and the roadway geometry is complementary to the land use along the route.



(Left) The intersection of Chandler Street and Allen Street. (Center) Chandler Street Bridge and 5th Wheel Bar. (Right) Left turn lane at the nonsignalized intersection of Chandler and Winsor Streets.

1.1.5 Winsor Street

Winsor Street is classified by the NYSDOT as an Urban Minor Arterial and provides access to an area that is zoned C2-Community Shopping and CM-Service and Highway Commercial at East 2nd Street, R2 Double Family Residential north of the railroad overpass, and M-Manufacturing, south of the railroad underpass. The recently Constructed Appleyard Terraces at the intersection of Winsor and East 2nd Streets has improved the residential housing stock of this area. Winsor Street crosses the Chadakoin River with a single span concrete boxbeam bridge. There are signalized intersections at East 2nd, Crescent, and Harrison Streets, while nonsignalized intersections are located at Scott and Chandler Streets. Winsor Street is a two lane street and is channelized to create a left hand turn lanes at the intersections with East 2nd Street and Harrison Street. Sidewalks are constructed along both sides of Winsor Street with sidewalk ramps for pedestrian crossings at all intersections; however, only the West 2nd Street pedestrian crossing is striped. The elevated WNY&PA Railroad corridor has an overpass near the Chandler Street intersection with a 12 foot vertical clearance limit. Pavement and sidewalk conditions are very good along this route, with exception to the limited vertical clearance associated with the Railroad overpass, the roadway geometry is generally complementary to the land use in the area. A foot path has been developed across the vacant properties that link Winsor and Harrison Streets by savvy pedestrians.





(Left) Left turn lane at the intersection of Winsor and East 2nd Streets. (Center) Winsor Street Bridge. (Right) Left turn lane at the Intersection of Winsor and Harrison Streets.

1.1.6 Foote Avenue

This route provides access to areas zoned C2-Community Shopping, R2- Double Family Residential and M-Manufacturing. A single span rolled steel bridge carries Foote Avenue over the Chadakoin River, south of Harrison Street. This corridor is identified by the NYSDOT as an Urban Minor Arterial and is developed with a Church, the High School, The Riverside Industrial Center, and medical facilities. One of which is the Western New York Urology Associates facility that is a redeveloped former brownfield site. Foote Avenue is a two lane street with sidewalks along both sides of the street that descends a steep grade between East 2nd and Harrison Streets. Although the pavement and sidewalks are in good condition, the steep grade is a challenge for senior and handicapped pedestrians. Nonsignalized intersections are located at Chandler, Crane, Briggs and Water Streets and Victoria Avenue and Yorkshire Alley. There are signalized intersections at West 2nd, Harrison and Allen Streets. The roadway is channelized to include right hand turn lanes at the intersections with East 2nd and Harrison Streets, while left hand turn lanes are located at the intersection with Allen Street. Sidewalk ramps for pedestrian crossings are located at all intersections; however, none are striped, with the exception of East 2nd Street intersection. The elevated WNY&PA Railroad corridor crosses over Foote Avenue and the overpass structure has a vertical limit of 11 feet. With the exception of the limited vertical clearance at the Railroad overpass and the steep grade, the roadway configuration as it exists today is generally complementary to the land use in the area. However, if the medical corridor continues to develop in the future, the steep grade could pose accessibility problems for increased pedestrian traffic, especially senior or handicapped pedestrians.






(Left) The intersection of Winsor and East 2nd Streets. (Center) Intersection of Winsor and Harrison Streets. (Right) Intersection of Foote Avenue and Allen Street.

1.1.7 Institute Street

Institute Street is designated as a Urban Local Street by the NYSDOT and it serves areas that are zoned M-Manufacturing on the east side of the street and C4-Central Retail on the west side of the street. The corridor is occupied by a furniture manufacturing facility and the St. James Church and

thrift store and several other commercial buildings. Institute Street crosses the Chadakioin River via a precast concrete boxbeam bridge. Institute Street is a brick street with an asphalt pavement overlay and has intersections with the NYS Route 60 Arterial, Victoria Avenue, Briggs Street, Yorkshire Alley and Harrison Street, none of which are signalized. The roadway is two lane with sidewalks along both sides, with the exception of the segment north of Harrison Street that only has a sidewalk on the west side of the street. An abandoned/closed pedestrian tunnel exists where Institute Street intersects the elevated WNY&PA Railroad corridor. The pavement and sidewalks are in fair condition and the roadway geometry is generally complementary to the land use in the area.



(Left) Intersection of Institute and Victoria Streets. (Center) Institute Street Bridge. (Right) Intersection of Institute and Harrison Streets.

1.1.8 North and South Main Street

This corridor designated by the NYSDOT as an Urban Minor Arterial and is zoned C3-Central Business and C4-Central Retail with a Historic Preservation overlay north of the overpass for the elevated WNY&PA Railroad corridor. The streetscape north of the railroad is dominated by century-old multistory masonry buildings with storefronts at street level. North and South Main Street have perpendicular signalized intersections at Harrison, East/West 2nd, East/West 3rd, and East/West 4th Streets, while the intersection with East/West 1st Streets is offset and nonsignalized. Sidewalk ramps for pedestrian crossings are located at all intersections, and with the exception of the 1st Street intersection, all of the crossings are striped. Main Street is wide enough to accommodate three lanes, parallel parking and sidewalks on each side of the street. From 4th Street to 1st Street, North Main Street is configured with two northbound lanes and one southbound lane. From 1st Street to the skewed intersection with Harrison and Steele Streets, South Main Street is two-lane with left turn, straight and right turn channelization in the southbound lane at the Harrison and Steele Street intersection. Left turn or right turn channelization of the northbound lane occurs at the 2nd, 3rd and 4th Street intersections. North Main Street descends a steep grade between East/West 4th and the railroad. Although the pavement and sidewalks are in good condition, the steep grade can be a challenge for senior and handicapped pedestrians. The elevated WNY&PA Railroad corridor transects Main Street with an overpass structure that has a 12 foot vertical clearance limit. This vertical clearance limit is the primary reason that Main Street has been supplanted by Washington Street, which has no vertical clearance limitations, as the Urban Principal Arterial though the City. Immediately south of the Railroad overpass, the attractive South Main Street Bridge carries the roadway over the Chadakoin River. The South Main Street Bridge is a dual arch structure with cut stone facing that is in character with the Main Street corridor.





(Left) Left/straight/right turn channelization at the intersection of Harrison and Steele Streets. (Center) WNY&PA underpass. (Right) Right turn lane at the Intersection of Main and East 2nd Street.

1.1.9 Sprague Street

Sprague Street has been designated by the NYSDOT as a Urban Minor Arterial, which serves an area that is zoned LM-Light Manufacturing. Sprague Street is an important connector with the Samuel A. Carlson Electrical Generation Plant, the waterfront, and strategically important to the redevelopment of the vacant railroad properties that are located along the north side of the River. Sprague Street is also an important utility corridor and the location of the unused, but historic Sprague Street truss railroad bridge. Sprague Street has a signalized intersection at Steele Street and a nonsignalized intersection with Jefferson Street. Sprague Street is a two-lane street with a sidewalk along the south side. Sidewalk ramps are located at the intersections but are not striped. The Sprague Street Bridge is currently being replaced with a new structure and the road is temporarily closed to traffic. There are twin WNY&PA Railroad overpasses that have an 11 foot vertical clearance.






(Left) Two-lane configuration of Sprague Street. (Center) WNY&PA twin underpasses. (Right) Intersection of Sprague and Steele Streets.

1.2 Bridges and Bridge Abutments

1.2.1 Fairmount Avenue Bridge

The Fairmount Avenue Bridge is a dual arch filled concrete spandrel structure. This attractive gateway feature marks the southern limit at which power boats are practical on the Chadakoin River. McCrea Point adjoins the north side of the Fairmount Avenue Bridge. With this type of bridge, the arches are also the abutments and are in direct contact with the River. The riverbanks in the vicinity of the Fairmount Avenue Bridge and McCrea Point are armored with a variety of materials including sheet pile walls and riprap.





(Left) A view of McCrea Point from the Fairmount Avenue Bridge. (Center) Fairmount Avenue Bridge. (Right) Sheet pile wall south of the Fairmount Avenue Bridge.

1.2.2 West 6th Street (NYS Route 394) and WNY&PA Railroad Bridge

NYS Route 394 is an important east – west transportation corridor in City that provides linkages to commercial developments in the Village of Lakewood. This Bridge also carries NYS Bicycle Route 17 over the Chadakoin River. This multi-span steel girder bridge has concrete abutments and piers, none of which are in contact with the River. This Bridge is essentially a "flyover" with little to offer in terms of formal access with the waterfront, with exception of a good view of the River from the walkway that runs along the eastbound lane. Within the footprint of the West 6th Street Bridge is the WNY&P Railroad Bridge. This structure is a two-span plate girder bridge that formerly carried two sets of tracks, but now carries only one active track. The structure has concrete abutments and one pier that is located in the Chadakoin River. Together, these two structures create an informal sheltered area along the waterfront that is a popular fishing spot. There are three informal footpaths that provide access to this location; from Fairmount Avenue along the east side of the River and Old Trolley Building (a Vacant and Underutilized Site), from Fairmount Avenue along the west side of the River, and from Steele Street along a footpath that begins at a small parking area near the southwestern bridge abutment.





Looking west under the West 6th Street Bridge. (left), WNY&PA Railroad Bridge pier and fishing spot. (center) Aerial view of the West 6th Street and WYN&PA Railroad Bridges. (right).

1.2.3 West 3rd Street Bridge

An important east - west transportation corridor that links the eastern and western portions of the City together. It spans the Chadakoin River, the WYN&P Railroad and Sprague Street. The West 3rd Street Bridge is a multi-span steel girder structure that has concrete abutments and piers, none of which are in contact with the River. Like the West 6th Street Bridge, this structure is a "flyover" with without formal access with the waterfront, with exception of a good view of the River from the walkway that runs along the eastbound lane. There is a small gravel parking area and green area located along Sprague Street that offers shade and a nice view of the River.





A view of the River from under the West 3rd Street Bridge (left), Footprint of the West 3rd Street Bridge (center) Aerial view of the West 3rd Street Bridge (right).

1.2.4 Sprague Street Bridge

The former two span Sprague Street Bridge has been demolished and the replacement is a single span, concrete boxbeam bridge with concrete abutments. Construction is scheduled for completion in the fall of 2012. West of the Sprague Street Bridge, the Chadakoin River banks are unarmored, with exception of riprap installed in connection with a sewer line that is installed under the River. East of the Bridge, the river banks are armored with concrete and sheet pile retaining walls and riprap. Several stormwater discharges are located along this reach of the River. A historical marker placed at this location commemorates James Pendergast and his construction of the first dam and sawmill on the Chadakoin River in 1811.





(Left) The former Sprague Street Bridge. (Center) Construction of the abutments for new Sprague Street Bridge (Right) Historic through truss railroad bridge and pipe bridge structures associated with the BPU Electrical Generating Plant.

1.2.5 Sprague Street Railroad Bridge and BPU Pipe Bridges

There are several structures that span the Chadakoin River in the vicinity of Sprague Street. Each is somewhat unusual and industrial in nature. The Sprague Street Railroad Bridge is an unused through truss bridge with a pronounced skew. The iron bridge once provided rail service to a cluster of industries along the south side of the River between Sprague and South Main Streets, but has been abandoned for over 50 years. There has been discussion regarding demolishing the structure and even repurposing the structure as a pedestrian bridge; however, it is of interest to the New York State Historic Preservation Office and would be very costly to move and rehabilitate. Its very existence is problematic to the BPU as a security concern and to the City as a public safety concern. There are also two pipe bridges that carry utilities from the BPU Electrical Generation facility to the north side of the River in this area. The first carries a 6-inch high pressure natural gas line, which supplies the BPU's 43 megawatt natural gas fired cogeneration facility that was constructed in 2012. The second pipe bridge carries superheated hot water feed and return lines across the river to serve the BPU's district heat network. This bridge also carries unused cement-asbestos (Transite) conduits that formerly housed electrical primaries. These unused conduits are also hung along the concrete wall that armors the north side of the River in this location.



(Left) Sprague Street Railroad Bridge. (Center) Pipe Bridge carrying natural gas line. (Right) Pipe bridge carrying district heat and unused electrical conduits.

1.2.6 Panzarella Park Bridge

The City of Jamestown owns and maintains Panzarella Park, a small island park that is located in the Chadakoin River just to the north of the BPU Electrical Generating Station. Panzarella Park is connected to the south shore of the Chadakoin River and the Chadakoin Riverwalk Trail by a single span wood deck pedestrian bridge.



A view of the pedestrian bridge that links Panzarella Park to the Chadakoin Riverwalk Trail.

1.2.7 Washington Street Bridge

The recently replaced Washington Street Bridge carries NYS Route 60 over the Chadakoin River, WNY&PA Railroad and Steele Street. NYS Route 60 is the busiest transportation corridor in Chautauqua County and it provides important linkages to I-86 and I-90 to the north and Pennsylvania to the south, as wells as an important connection between the northern and southern portions of the City. The Washington Street Bridge is an attractive multi-span steel girder structure with concrete abutments and piers, none of which are in contact with the River. Like the West 6th and West 3rd Street Bridges, this structure is essentially a flyover; however, there is a right turn slip ramp that provide a connection with Steel Street, and most importantly, the new Bridge features a

well executed pedestrian walkway that links Steel Street with the Chadakoin Riverwalk Trail. The Bridge also provides a excellent view of the River corridor for pedestrians traveling on the walkway that runs along the southbound lane.





Footprint of the Washington Street Bridge (Left), View of the Washington Street Bridge from the Warner Dam. (Center) Aerial view of the Washington Street Bridge (Right).

1.2.8 South Main Street Bridge

The South Main Street Bridge is a dual stone arch structure. This attractive bridge provides significant aesthetic value to the historic Brooklyn Square area and the Chadakoin Riverwalk Trail. West of the North Main Street Bridge, the Chadakoin River is obstructed by the Warner Dam. The Dam represents the practical limit for recreational (non-powered) watercraft on the reach of the River between the Dam and McCrea Point. Downstream of the Dam, shallow water and low head dams present challenges to the safety of recreational watercraft and their occupants. The plunge pool below the dam is a popular fishing spot, but access is prohibited on the north side of the River by the property owner. Access to the waterfront will be facilitated in this location when the Chadakoin River Trail is extended. This reach of the River is armored with armor consisting of sheet pile and concrete walls and riprap. Several stormwater discharges are located along this reach of the River.





(Left) Warner Dam gates. (Center) North Main Street Bridge (Right) River bank channelization east of North Main Street Bridge.

1.2.9 Harrison Street Bridge near Institute Street

Institute Street and the Chadakoin River trail borders the west and east riverbanks of the Chadakoin River to the north of the Harrison Street Bridge. There are large concrete blocks that partially armor the banks along both sides of the River in this location. The Harrison Street Bridge near Institute Street is a single span, precast concrete box structure with concrete abutments that are in direct contact with the River. On the southern side of the Harrison Street Bridge, concrete retaining walls and building foundations armor the east side of the River, while the western riverbank is unarmored until it reached the concrete retaining wall along Victoria Avenue. There are two insulated pipes hung from the north side of the Bridge that are a part of the BPU District Heating system. A stormwater discharge from the north side Harrison Street is located off of the

northwest and northeast bridge abutments. Public access to the waterfront on the north side of the Bridge is very good at this location due to the Chadakoin Riverwalk Trail; however, the trail ends at Harrison Street.





(Left) North of the Harrison Street Bridge. (Center) BPU District Heat piping hung on the north side of the Harrison Street Bridge. (Right) Concrete retaining walls and building foundations armor the riverbanks south of the Harrison Street Bridge.

1.2.10 Institute Street Bridge

The Institute Street Bridge is a single-span precast concrete boxbeam structure that is located at the apex of a near 180 degree bend in the Chadakoin River. The southern bank (outside of the bend) of the River is armored with concrete walls, riprap and sheet piling in this location. Victoria Avenue also follows this bend, where a small mowed greenspace is located along the sheet pile wall. Although this greenspace is not a designated public space, it could certainly benefit from the installation of a railing along the sheet pile wall. A large stormwater outlet is also located near the southern bridge abutment.





(Left) Concrete retaining wall west of the Institute Street Bridge. (Center) Sheet pile retaining wall and stormwater discharge east of the Institute Bridge. (Right) A view of the Institute Street Bridge from above Victoria Avenue.

1.2.11 Foote Avenue Bridge

The Foote Avenue Bridge is a single span rolled steel structure that carries Foote Avenue over the Chadakoin River. The Bridge sits on concrete abutments, both of which are in direct contact with the River. A wastewater pumpstation is located just south of the Bridge and water, wastewater and district heat utility lines are hung on the side of the Bridge. To the west of the Bridge, the Chadakoin River banks are armored with sheet pile and concrete walls. Concrete foundation walls for the Riverside Industrial Center and old piers related to the redeveloped Urology Center armor the riverbanks to the east of the Bridge. Nonetheless, people working in the Riverside Industrial Center can enjoy the waterfront from a small ornamental garden that is located along the building. A large stormwater discharge is located at the northwest abutment of the Bridge.





(Left) Sheet pile armor on the south river bank. (Center) Ornamental garden at the Foote Avenue Bridge. (Right) Concrete foundation wall on the north river bank.

1.2.12 Harrison Street Bridge near Winsor Street

The Harrison Street Bridge near Winsor Street is a single span, precast concrete box structure with concrete abutments. The Chadakoin River banks are unarmored north of the Harrison Street Bridge; however, a concrete foundation wall associated with the dilapidated building armors the southern bank of the River for a short distance. Informal access to the waterfront for fishing is gained by a footpath that runs between Harrison and Winsor Streets and the dam/plunge pool located downstream of this location. A stormwater outlet was visible off of the southwest Bridge abutment.





(Left) Unarmored river bank north of the Harrison Street Bridge. (Center) Harrison Street Bridge. (Right) Concrete foundation walls and riprap south of the Harrison Street Bridge.

1.2.13 Winsor Street Bridge

The Winsor Street Bridge is a single span concrete boxbeam structure with concrete abutments. West of the Bridge, the Chadakoin River passes through a dam and tailrace structure that once provided hydropower for a manufacturing facility located along Winsor Street. A historical marker at this site notes that the presence of the former facility dated back to 1835. Since the facility has been demolished, a foot path has developed that links Winsor Street, Harrison Street and the dam, which is a popular fishing spot. Informal access to the waterfront already exists via the foot path; logically, formal public access could be facilitated in this location relatively easily. With the exception of the dam, bridge abutments and adjoining sheet pile walls immediately downstream of the Bridge, the riverbanks are unarmored along this reach of the River. A large stormwater discharge is located at the bridge.





(Left) Stormwater discharge at Winsor Street Bridge. (Center) Dam and tailrace structure (Right) Winsor Street Bridge.

1.2.14 Chandler Street Bridge and Webber Knapp Pedestrian Bridge

The Chandler Street Bridge spans the Chadakoin River via a two-span, concrete boxbeam structure with concrete abutments. Both abutments are in direct contact with the River. Water and wastewater utility lines are hung on the sides of the Bridge. Upstream of the Bridge the south bank of Chadakoin River is armored by a hand laid stone wall, while the north bank is unarmored. Downstream of the Chandler Street Bridge, both riverbanks are armored by the concrete foundations and retaining walls of the Webber Knapp facility. The south riverbank is also armored with riprap as it passes the Heavy Press facility along Allen Street. The Webber Knap facility has an enclosed pedestrian bridge between its facility buildings that spans the River in this location. Public access to the waterfront is generally limited in this location by chain link fences that surround the Webber Knapp facility buildings and parking areas; however, access to the south side of waterfront is provided for Webber Knap employees by a shaded picnic area located along a parking lot.





(Left) Aerial view of the Chandler Street Bridge and Webber Knap pedestrian bridge. (Center) Utility line hung in the north side of the Chandler Street Bridge. (Right) Enclosed pedestrian bridge and channelization of the River at the Webber Knap facility.

1.2.15 Dawson Metals Bridge

There is a privately owned bridge off of Allen Street that provides access to the Dawson Metals manufacturing facility. This bridge provides vehicular access to one of Jamestown's larger employers; however, fire and emergency services providers are restricted from crossing the structure due to load bearing capacity. Emergency access is through a gated access road off of River Street.



The privately owned bridge from Allen Street to the Dawson Metals facility.

1.2.16 WNY&PA Railroad Bridge Near Buffalo Street

The WNY&PA Railroad Bridge near Buffalo Street is a single span, steel plate girder structure with cut stone abutments. Both of the abutments are in direct contact with the River. The bridge formerly carried two separate sets of tracks; however, today only one track is used. South of the Buffalo Street Railroad Bridge, the Chadakoin River passes over a wastewater utility crossing that forms a low-head dam. The plunge pool/riffle below this structure is a popular fishing spot that is accessed by footpaths from Buffalo and Allen Streets.



(Left) Stormwater discharge at low-head dam and plunge pool. (Center) Buffalo Street Railroad Bridge. (Right). Inactive track on the Buffalo Street Railroad Bridge.

1.2.17 Buffalo Street Bridge and Dahlstrom Complex

The Buffalo Street Bridge is a single span, concrete boxbeam structure with concrete abutments. Both of the abutments are in direct contact with the River. South of the Buffalo Street Bridge, the Chadakoin River passes over a wastewater utility crossing that forms a low-head dam before flowing under the WNY&PA Railroad Bridge and the Buffalo Street Bridge. The plunge pool/riffle below this structure is a popular fishing spot that is accessed by footpaths from Buffalo and Allen Streets. North of Buffalo Street, the River is completely channelized as it passes through the dilapidated Dahlstrom complex. This complex spans the River and in danger of collapsing into it. The Dahlstrom complex also has an enclosed pedestrian walkway and a privately owned single

span steel bridge that also spans the River. Utility lines are hung from the Buffalo Street Bridge. Two large stormwater outlets are located in this area.





(Left) Privately owned bridge at the Dahlstrom complex. (Center) Buffalo Street Bridge. (Right) Channelization of the River as it passes under the deteriorated Dahlstrom complex.

1.2.18 Hopkins Avenue Bridge

The Hopkins Avenue Bridge spans the Chadakoin River via a two-span, concrete encased I-beam structure with a concrete pier and abutments. The abutments and the pier are in direct contact with the River. The Chadakoin River banks are unarmored east of the Hopkins Avenue Bridge; however, a concrete foundation wall associated with the Hope's Windows complex armors the southern bank of the River, west of the Bridge. Informal access to the waterfront for fishing is gained by a footpath located behind the Hope's Windows Complex. There is a wastewater pumpstation located along the west side of Hopkins Avenue, north of the Bridge. Water and sewer forcemain lines are hung from the Bridge. A stormwater outlet was visible off of the southeast Bridge abutment.





(Left) Concrete foundation wall on southern river bank. (Center) Utilities hung on the Hopkins Avenue Bridge. (Right) Stormwater discharge at southeast abutment of the Hopkins Avenue Bridge.

1.2.19 Tiffany Avenue Bridge

The Tiffany Avenue Bridge is a single span, concrete boxbeam structure with concrete abutments. The Chadakoin River banks are unarmored east and west of the Tiffany Avenue Bridge. Access to the waterfront could be facilitated in this location by clearing the brush around an existing set of concrete steps located at the northeast abutment of the Bridge. People have a tendency to gravitate towards water, and this is evidenced by the residents of the Bullfrog Hotel, who have created a patio out of repurposed materials on the north bank of the River.





(Left) Unarmored river banks west of Tiffany Avenue. (Center) Aerial view of the Tiffany Avenue Bridge. (Right) Concrete Steps to the river at the north-east abutment of the Tiffany Avenue Bridge.

1.3 Railroad Transportation

Traversing through the City of Jamestown in an east – west direction is what is historically known as the Erie Railroad. Jamestown railroad's earliest beginnings go back to the mid-1800's and for the next 100 years, railroads served as a main transportation provider for both the public and for goods and services. As a result, the regional economy was centered on the railroads.

Records and maps show numerous areas within the City where single or multiple sidings were constructed to serve business. One particular area where numerous track sidings were found, and in some instances still are, is within the East End Industrial Area along River Street. Several of the buildings that still remain along River Street were constructed with loading docks or such that railroad cars could be brought inside for loading and unloading. The River Street area still offers the potential of rail service. Within the McCrea Point Opportunity Zone, rail sidings were also found along the rear of business fronting Jones and Gifford Avenue. This area also offers the potential for rail service.

Other areas that railroad sidings or rail yards were found were in the Downtown Riverfront Opportunity Zone, immediately west of Brooklyn Square, located at the ends of Cherry Street, Washington Street and Lafayette Street just north of the Chadakoin River; however these areas have been redeveloped for other purposes. Another former rail yard was located immediately west of Sprague Street along the north side of the Chadakoin River. Although this general area remains largely undeveloped, it is underutilized and is over grown with brush.

Other key railroad infrastructure of interest is associated with the former Jamestown, Westfield & Northwestern R.R. Co. Railroad sidings and property for this privately owned company could be found as far east as the Harrison Street, Barrett Avenue, and Steele Street intersection. An iron through-truss railroad bridge which still exists today near Sprague Street spanned the Chadakoin River to allow for access to many of the business that once fronted Steele Street. The J.W. & N.W. Railroad also served many businesses within the McCrea Point Opportunity Zone along West Eight Street and Outlet Street. Today the bed for this former railroad is the location for the proposed Chadakoin Park Bike Path.

In the late 1920's the Erie Railroad Company elevated the railroad through the City to eliminate several at grade crossings within the City's core. From east to west Buffalo Street, Winsor Street, Foote Avenue, Main Street and Second Street were the street intersections altered by this very large improvement project. One can just imagine the higher level of safety and convenience it brought to the City's core not waiting for a train to clear a street's path. One result of the elevation of the main railroad line was that the rail yard at the ends of Cherry, Washington and Lafayette Streets were eliminated. The Erie Railroad was a major player across the southern half of New York State and into Pennsylvania, bringing the travelling public and bulk materials to

Jamestown. Another benefit related to the new elevated railroad was the 1931 construction of the present and recently rehabilitated Jamestown Railroad Station located on West Second Street.

Today the railroad property through the City of Jamestown is owned by the Norfolk Southern Railroad Company, its current leaseholder is the Western New York & Pennsylvania Railroad, LLC. The WNY&P main line extends from Hornell, New York westerly and southerly to Meadville, Pennsylvania. The WNY&P is always looking for new customers and is willing to work with business along the present route to expand their involvement in the community. Presently the current system is limited to freight with no immediate plans for passenger service. The WNY&P typically moves between one and sometimes two trains per day through the City.

1.4 Navigation Channels

1.4.1 Above McCrea Point

The Chadakoin River channel or Chautauqua Lake Outlet between Chautauqua Lake and McCrea Point is navigable for most of the watercraft used in Chautauqua Lake today. Although aquatic vegetation can snarl propellers and plug cooling water intakes, all but the largest powerboats and deep keeled sailboats on the Lake can navigate this reach of the River. From a historical perspective, this reach of River was heavily traveled by the steamboats that once carried tourists and goods from McCrea Point to the numerous destinations along the Lake. Although the steamboats were commonly shallow draft vessels, they were driven by sternwheels and sidewheels that kicked up sediments and chopped aquatic vegetation as the steamboats churned their way up and down the River. Turbidity and downstream migration of fine and suspended sediments was probably a very common condition along this reach of the River. Development is sparse in this portion of the study area, with a only a few residential structures along Clifton Avenue. Today a 5 mile per hour no wake zone is enforced along this reach of the River in an effort to preserve the sensitive riverine wetland environment. It is an outstanding natural resource that is enjoyed by thousands of people annually.





(Left) The Chadakoin River Channel as it enters the LWRP at Clifton Avenue. (Center) The sidewheel driven Colonel. Phillips on Chautauqua Lake, circa 1875. (Right) The River channel at McCrea Point.

1.4.2 McCrea Point to the Warner Dam

The Chadakoin River channel between McCrea Point and the Warner Dam is generally navigable for small powerboats and manpowered recreational watercraft such as canoes and kayaks. The dual arch filled concrete spandrel Fairmount Avenue Bridge is the gateway to this reach of the River. During the Stakeholder interviews it was noted that boating conditions on this reach of the River are strongly influenced by the operation of the Warner Dam. When the Dam is closed or releasing the NYSDEC required minimum 60 cubic feet per minute of water downstream, the current is slow and the water elevation is stable; however, when the Dam gates are open and releasing greater quantities of water, the current is swift and the elevation of the water quickly

falls. This condition has the potential to strand boaters and create unforeseen hazards. Because this relatively narrow waterway is the sole conduit for the runoff from the 160 square mile Chautauqua Lake Watershed, flow can increase significantly during prolonged periods of wet weather. The Warner Dam is a barrier that prohibits any watercraft from passing beyond this reach of the River. Development is sparse along this reach of the River. The Trolley Building from the list of Vacant and Underutilized Sites is located on the north side of the River just below McCrea Point and several commercial and residential structures along the south bank of the River that front on Steele Street. The BPU Electrical Generation is also located along this reach of the River.





(Left) The Chadakoin River Channel south of McCrea Point. (Center) The River channel south of the West 3rd Street Bridge. (Right) The River channel above the Warner Dam.

1.4.3 Below the Warner Dam

Below the Warner Dam, the Chadakoin River channel meanders through reticulated bends, under bridges and factories and over low head dams. Some sections of the River are completely channelized, while other sections, primarily along the outside of the river bends are armored with concrete walls, sheet pile walls and riprap. Many sections of the River have lost connection with the floodplain, nonetheless, there are numerous series of pools and riffles and plunge pools where the river passes over low head dams that make good aquatic habitat. There are numerous opportunities for informal access to the waterfront via footpaths that have been developed by urban anglers seeking bass, pickerel, carp and other common species. Much of the River corridor has a well-developed tree canopy that helps to moderate water temperatures. This reach of the River is heavily developed with industrial, commercial and residential structures. Most of this development occurred well before the Clean Water Act and the structures that are located in, on and over the River were built before current environmental and historic preservation regulations were enacted.





(Left) Plunge pool below the Warner Dam. (Center) The River channel above the South Main Street Bridge. (Right) The River channel along the Chadakoin River Trail at Brooklyn Square, where it once passed under the former Art Metal furniture manufacturing complex.

1.5 Pedestrian/Bicycle Transportation

The *Jamestown Riverfront Reclamation and Development Study, Addendum #1, 1991* promoted the concept of a continuous Riverwalk and bicycle trail from Falconer to Celoron as a key component of the strategy to revitalize Jamestown's waterfront. This Study encompasses the study area of the LWRP and beyond to the Village of Falconer. The development of a continuous trail was identified as a long-term goal, but the Study recognized that such a trail cannot, nor should be located on the riverbank in all areas. The Study divided the waterfront area in to five discrete areas, each of which had proposed walking and bicycling trail alignments identified. The only trail segment that had been completed within the LWRP at the time the Study was published, was a section of the Chadakoin Riverwalk Trail that ran along the south bank of the Chadakoin River from North Main Street to the front side of the then Hills Department Store, which now the Riverside Medical Center.

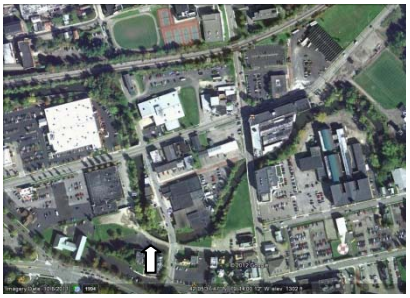
That portion of the trail was constructed in the late 1970's and was then reconstructed, improved and extended to Harrison Street in 2006. This paved trail follows the waterfront in the Brooklyn Square area, what was once a heavily industrialized area of the City of Jamestown. For nearly 100 years, the River was channelized and ran underneath a sprawling manufacturing complex in this location. The old factory buildings were demolished in connection with the Urban Renewal program in the 1970s. Today, this pleasant meandering trail is adjacent to the Riverside Medical Center and is lined with trees, has access locations to the River to toss a fishing line and several picnic areas. It provides an interesting and in places nostalgic view of concrete and brick walls built to support former factory buildings and the elevated railroad corridor. In and along these walls are openings for the mill races of yesteryear. Also visible from this trail are the chimney stack and remaining buildings of the Brodhead Worsted Mills wool mill that in the early 1900's, encompassed most of all the property located between North Main Street, East First Street, Institute Street and the Railroad Property. At the Main Street end of the trail you will find the Keelboat statute and historical marker, which is a tribute to those earliest travelers and traders who used the River for transportation and commerce. At this location you will find a quaint shaded pocket park paved with brick street pavers and lined trees, shrubs and sitting areas. You will also find the North Main Street Bridge a stone faced duel arched structure straddling the River. And providing a bit of ambience to this area is the rippling of the water and the waterfowl that can be found there year round.



(Left) Keelboat statue in pocket park off of Main Street. (Center) Looking east along Trail. (Right) Looking west along the Trail toward Main Street Bridge.

A possible extension of the Riverwalk from Harrison Street would be along an undeveloped section of Institute Street, a portion of Victoria Street, and through privately owned property. It is here where continuing the trail would be very difficult for numerous reasons, some being building walls actually being the edge of the river channel, challenging and obstructive terrain and the difficulty to maintain a safe environment. The *Jamestown Riverfront Reclamation and Development Study, Addendum #1, 1991* discusses the potential development of a "Riverpark" along the west side of Institute Street as a potential extension of the trail system as it progressed eastward. This Addendum also discusses extending the trail north of Harrison Street, along the

west side of Institute Street through a reconstructed viaduct under the railroad to provide a linkage with the Jamestown High school.


(Left) Looking south across Harrison Street toward Victoria Avenue. (Center) Aerial view of the Victoria Avenue area. (Right) Looking east along Victoria Avenue near intersection with Institute Street.

The Chadakoin Riverwalk Trail continues along the south bank of the River from South Main Street to Panzarella Park, a distance of about 1,300 feet. A segment of this section was constructed up to the Washington Street Bridge in 2007. The remainder of the trail was completed in 2011. It is well illuminated and has benches, tables and trash receptacles. Below the Warner Dam, the Trail passes behind Friendly's Restaurant, the Jamestown Cycle Shop and other businesses.






(Left) Environmental Protection Fund marker. (Center) Looking east at Friendly's Restaurant. (Right) Looking west along the Trail toward the Washington Street Bridge.

Above the Warner Dam, the trail provides important linkages to the public space or promenade located below the Washington Street Bridge and the park at Panzarella Point. Further amenities include a small amphitheater lighting, benches and tables. This portion of the Trail was funded with money from the New York State Environmental Protection Fund and with matching funds from the City of Jamestown. The *Jamestown Riverfront Reclamation and Development Study, Addendum #1, 1991* identified the need for a trail segment in the vicinity of Washington Street that would connect with Barrett Avenue, thereby providing neighborhoods located in the southern part of the City with access to the trail system. The promenade at the Washington Street Bridge is a key component for providing this linkage.





(Left) Looking west along the Trail. (Center) Looking south at the Promenade under the Washington Street Bridge toward Barrett Avenue. (Right) A sign commemorates Marion A. Panzarella and the Park in his honor.

Presently Panzarella Park is the terminus of the Riverwalk trail along the south bank of the River. Challenges and obstacles do exist in attempting to extend the trail further west along the south banks of the River to McCrea Point. The Jamestown Electric Generating Station and, a storage building owned by the City's Department of Public Works at the Sprague Street intersection are two of these obstacles. Also residences and business fronting Steele Street and also abutting the River from Sprague Street to West Sixth Street add to the challenge of extending this trail. Further complicating an extension of the trail is an extensive amount of traffic and above ground and below ground infrastructure, which supports the Generating Station, the Railroad and the Department of Public Works facilities fronting Steele Street.

A truncated portion of the trail also runs along the north side of the River, beginning at North Main Street and running a short distance to the west, almost to the Warner Dam where the trail ends. This section of the Trail was discussed in the *Jamestown Riverfront Reclamation and Development Study, Addendum #1, 1991* as the Keelboat Landing Extension and was constructed in 2007. It is well illuminated and has amenities such as benches, trash receptacles and picnic tables. Along this section of the trail you will again find several historical markers commemorating the first grist mill in the Village and Jamestown's industrial heritage and association with the Blackstone Corporation.



(Left) Historical marker. (Center) Looking west along the Trail. (Right) Looking east along the Trail toward Main Street Bridge.

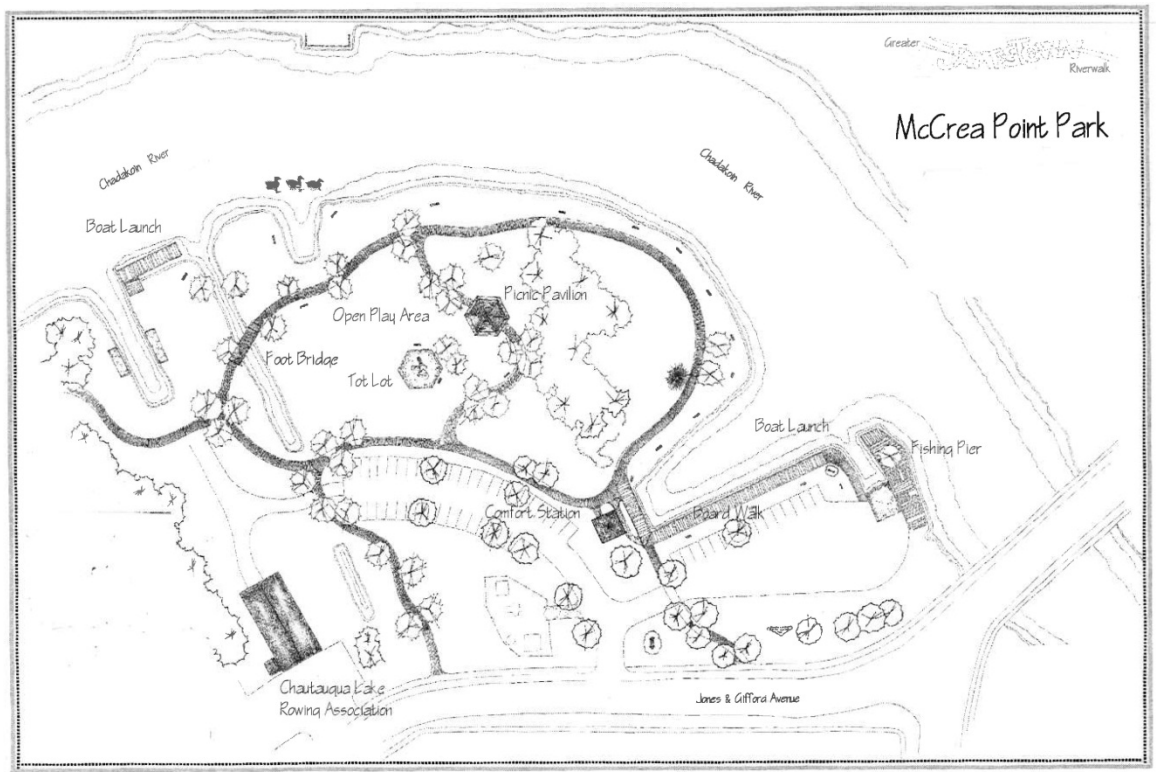
The next expansion of the trail on the north bank of the River will extend about another 420 feet to the west side of the Washington Street Bridge. It is in this general area where a pedestrian bridge has been proposed to connect the two banks of the River. Plans have been completed for this extension; however the City is now waiting for approval and a permit from the NYSDEC to complete this section of the north bank trail. It is also here where the City has looked into extending the trail along the Railroad property, which also adjoins the north and east banks of the river, to McCrea Point. City officials have indicated that they have had several discussions with the Railroad, all being non-productive in the sense the Railroad is not interested in leasing or selling any portion of their property for pedestrian use that would allow for connectivity to Fairmount Avenue and McCrea Point.

It is important the City be able to extend the north side of the trail to the Washington Street Bridge and eventually construct a pedestrian bridge to cross to the south side of the River. The *City of Jamestown Traffic and Streetscape Enhancement Plan, September 2008* focuses largely on the downtown pedestrian core, but also places a great deal of importance on connectivity with the waterfront. The Plan contains a Pedestrian Connectivity Plan that depicts four bridge elements, three of which cross the Chadakoin River (1) at Panzarella Park, (2) at Washington Street and (3) near the Riverwalk Medical Center. Today, pedestrian crossings of the River are limited to the Main, Harrison and Washington Street Bridges. The Harrison Street Bridge to the east and the Washington Street Bridge to the west are not nearly as convenient for Trail users as the Main Street Bridge. A pedestrian bridge(s) that conveniently links Jamestown's Downtown with the Riverwalk Trails should provide improved access to a wider group of potential users and new opportunities for waterfront recreation.

The *City of Jamestown Traffic and Streetscape Enhancement Plan, September 2008* notes that 3rd Street and Main Street should be promoted as the primary pedestrian corridors in the downtown to provide direct pedestrian connections to outlying neighborhoods, as well as the Riverwalk off of South Main Street. The Plan discusses the need for enhancements and signage that is consistent with the design and theme used throughout the downtown core. The Plan also recommends an enhanced crosswalk on South Main Street, possibly including traffic calming devices such as a median or island that would improve the connectivity of the Riverwalk Trail on the east and west sides of South Main Street. As currently configured, there is no defined crosswalk connecting the east and west segments of the Trail and pedestrians who wish to use a crosswalk must either cross Main Street at the intersection with Harrison Street or at an even less convenient crosswalk north of the Railroad viaduct at East/West 1st Streets.

Phase III of the Chadakoin Riverwalk Trail System is currently being readied for construction. Funded by a $263,000 grant from the New York State Environmental Protection Fund, the Chautauqua Park Trail, aka the Jamestown Riverwalk Extension will connect Clifton Avenue to 8th Street near the Fairmount Avenue Bridge along the former Jamestown, Westfield and Northwestern Railroad right of way. The main portion of this segment will be 1.3 miles long, consisting of 10-foot-wide asphalt pavement. At points along the trail, there will be 8-foot-wide stone nature trails that will provide walkable access to the riverbank. Another feature is an observation tower that will be constructed atop an old building foundation. Both ends of the trail will be illuminated; however, the rest of trail will not be lit. The recently completed *Chautauqua County Greenway Plan, January 2012* identifies the Chautauqua Park Trail as one of ten potential demonstration projects intended to further the County's goals of promoting active living and alternative transportation. The Plan identifies a potential route that links the existing trail segment located on the north bank of the Chadakoin River with the Chautauqua Park Trail, but notes the need to acquire easements from the railroad.

Part of this project also includes construction of a trail system through McCrea Point Park that will connect with the Chautauqua County Bicycle trail that runs along Jones and Gifford Avenue. The McCrea Point trail system will consist of about 1,800 feet of paved pedestrian/bicycle trail, the same style lighting as used on the downtown portions of the Riverwalk Trail, a 30 foot pedestrian bridge, repairs and upgrades to the existing boat launch and pavilion.



Proposed Trail through McCrea Point Park

Possible other considerations for pedestrian access to the River would be areas to allow for fishing or to launch a canoe or kayak, or to just sit to enjoy the esthetics of the surrounding area. Some areas of consideration would be at the Harrison and Winsor Street Bridges, or near the Railroad crossing at Buffalo Street. Other locations would be near the Hopkins Avenue Bridge and at the northerly terminus of Bigelow Street.

The Trail Systems Map included at the end of this report illustrates the pedestrian and bicycle paths within the LWRP.

1.6 Public Transportation

The Chautauqua Area Regional Transit System (CARTS) is the sole provider of low cost public transportation for any person living, working or visiting Chautauqua County. The system originated in the late 1970's as mostly a rural service. In 1997 CARTS took over the City of Jamestown's public (busing) transportation system and now maintains daily weekday service in Jamestown, Falconer, Celoron, Lakewood other surrounding communities, including rural service into the Towns. CARTS is managed from their Jamestown offices and maintenance facility located on Hopkins Avenue. In total there are 26 routes throughout the county of which 7 originate in downtown Jamestown and not only serve the immediate downtown area but the populated areas along its perimeter. Route runs being at 6:00 a.m. and end by 4:30 p.m. There is no weekend service.

Funding for this service is primarily from two sources: 1) the New York State of Transportation, which distributes about $3.0 billion annually in Statewide Mass Transportation Operating Assistance (STOA), and 2) the Federal Transit Administration (FTA). Other lesser sources of revenue are from rider fares, local agencies and county funds.

CARTS historically has mostly served low income and disabled individuals, seniors, Jamestown Community College and Jamestown Business College students and others who have limited means of transportation to get them to and from work, shopping trips, and non-emergency medical appointments. CARTS also coordinates, schedules, supplies drivers and provides bus maintenance for the County's Veterans Bus Service. CARTS also coordinates their services county wide with the Department of the Ageing.

2011 records indicate a ridership total of 195,000 one way trips county wide of which about 55,400 or 28 percent are attributed to trips made within Jamestown and the immediate surrounding area. While CARTS does mostly serve disabled individuals and seniors yearly statistics show as fuel prices fluctuate so does ridership. During calendar year 2011 CARTS experienced a county wide jump of approximately 11,000 riders, of which approximately 20 percent are within the immediate Jamestown service area. This increase in ridership has continued into through the first 6 months of 2012.

Within the core of the Jamestown Brownfield Opportunity Area (BOA) and the Local Waterfront Revitalization Program (LWRP) CARTS offers numerous routes throughout the City with some extending into Celoron and Falconer. All of these routes traverse into and beyond the perimeter boundaries of the BOA. The following categorizes the CARTS routes in and around the City of Jamestown.

Routes that access parts of the Chadakoin River West Study Area:

- *Lakewood Route via Jones & Gifford Avenue Route:* originating in downtown Jamestown this route traverses city streets primarily in a counterclockwise direction. Some of the streets along this route are Washington Street, West Eighth Street and Jones & Gifford Avenue. After leaving Jones and Gifford Avenue the route continues into the Village of Celoron, the eastern half of the Village of Lakewood returning along Fairmount Avenue with stops at several shopping complexes.
- *Lakewood Route via Fairmount Route:* this route is similar to the previously mentioned route only it runs in a clockwise direction and at a different time intervals. Again originating in downtown Jamestown this route traverses along several city streets within the BOA area and eventually spilling onto Fairmount Avenue. this route also serves the eastern half of the Village of Lakewood and runs through the Village of Celoron and onto the City of Jamestown along Jones & Gifford Avenue, then connecting into West Eighth Street, Washington Street and back to its origin.
- *North Main Route Route:* this route through north Jamestown traverses along a section of Washington Street between 10th Street and Fluvanna Avenue, which does provides access to the West Study Area.

Routes that access parts of the Chadakoin River Central Study Area:

- *Falconer Route:* this route begins in central Jamestown and proceeds easterly through the core of the Central Study Area along Second Street into Falconer. This route returns along Falconer Street making stops at the Lutheran Home and Jamestown Community College. It then returns to Second Street, then Third Street both being in the core of the Central Study Area.
- *Willard and Baker Routes:* these two routes in a limited sense serve portions of the Central Study Area. Both originate in downtown Jamestown and do traverse along a few of the streets located in the Study Area, but mostly provide access to the southwestern, southern and southeastern parts of the City.

- *City of Jamestown Route:* this route also serves the immediate downtown Jamestown area and provides access to WCA hospital and to shopping opportunities along Foote Avenue near the City line.

Each of the above discussed routes provides boarding or drop-off at designated locations; however buses will stop when flagged or stop at requested locations.

2.0 INFRASTRUCTURE SYSTEMS

The public infrastructure systems include water, stormwater, sanitary sewer, electric, dams, docks, bulkheads, solid waste disposal, district heating/cooling and public parking. These systems are described below and depicted on maps where applicable.

2.1 Water Supply

The Board of Public Utilities (BPU) was created in 1923 to own and operate the City's potable water infrastructure. Currently, the BPU provides potable water to approximately 48,000 people in the City of Jamestown and the Villages of Falconer, Lakewood and Celeron, along with parts of the Towns of Ellicott, Busti and North Harmony. The potable water system is supplied from raw water pumped from aquifers in Cassadaga and Levant. There are two water storage reservoirs in the City; the 10 million gallon capacity English Hill Reservoir and the 1.5 million gallon Buffalo Street Reservoir. Water is provided throughout the LWRP by an extensive water distribution network. The system is old, but it has been well maintained. Waterline breaks occur occasionally, but not at an alarming rate or at a higher frequency than expected for a system of its age and type of construction. Because the water system was built to serve a larger population that what exists today in the City, there is additional capacity for new development in the LWRP; however, proposed developments that may require unusually high volumes of potable water should be evaluated on a case by case basis. The potable water distribution system is depicted on the Water Mains Map included at the end of this report.

2.2 Stormwater Runoff and Storm Drainage

The City of Jamestown and the nearby populated areas in the Town of Ellicott all fall under the threshold of being a MS4 area and almost all of the existing development predates current stormwater regulations. Current NYSDEC and USEPA stormwater regulations and design criteria are incorporated into the City's site plan review process; however, there is very little new development in Jamestown. As a result, the vast majority of stormwater is discharged to the LWRP with little or no treatment. Jamestown is largely "built-out" with a high percentage of impervious surfaces. When rain is not allowed to infiltrate into the ground it creates two problems. The first is a high flow of stormwater runoff into street storm sewers and ultimately nearby streams which can overwhelm collection facilities and result in accelerated erosion and flooding. The second is a phenomenon called first flush, where sand and gravel from roadways, oil from leaking automobiles, fertilizers, animal waste, litter and vegetative debris are washed into the stormwater conveyances and ultimately the streams. First flush pollutants also include high concentrations of dissolved organic and inorganic contaminants. Both of which result in diminished water quality within the LWRP

Stormwater was once combined with wastewater, but today is separate. Stormwater is collected from the streets, basement drains and roof gutters by laterals and trunk lines, which in turn discharge into the Chadakoin River or associated wetlands. In some cases, open channels have been excavated in the wetland areas beyond the outfalls to facilitate drainage. The City's stormwater collection system is old and not completely mapped, but it is fairly well understood.

The City uses a variety of stormwater inlets, depending on the application. Round and square drop inlets of various sizes and cubside inlets of various configurations. The City standard is a cast in place design with a large sump for collecting gravel, silt and debris. The design features a cast iron cover that provides for easy access for cleaning by City DPW crews.

Below are photographs of some of the different stormwater inlets that are observed in the study area.





(Left) Stormwater inlet in the Dahlstrom parking lot. (Center) City of Jamestown standard stormwater inlet at parking lot along Harrison Street. (Right) Cast iron stormwater inlet on Institute Street.

The stormwater collection and piping system is constructed from a variety of materials, including brick, vitrified tile pipe (VTP), reinforced concrete pipe (RCP), corrugated steel and aluminum pipe, cast iron (CI) and ductile iron pipe (DIP), polyvinyl chloride pipe (PVC) and high density polyethylene pipe (HDPE). The materials and applications vary greatly, depending upon the age of the piping and repairs, if necessary. Stormwater outlets are also constructed from a variety of materials. Below are photographs of some of the different stormwater outlets that are observed in the study area.





(Left) Stormwater discharge near Allen Street. (Center) Stormwater discharge from Steele Street. (Right) Stormwater discharge above Foote Avenue Bridge.





(Left) Stormwater outlet at Foote Avenue Bridge. (Center) Stormwater outlet at Institute Street Bridge. (Right) Dual stormwater outlets near the Washington Street Bridge.

2.3 Wastewater Disposal

Like many communities that were had a busy waterfront in the 1800's, wastewater and stormwater simply flowed back to the waterfront. The earliest reference to a sanitary sewer system within the City indicates that the system was begun at the corner of Sprague and West Second Streets in April, 1893.

The original system discharged into the Chadakoin River approximately three miles east of the City line. By the 1920's Jamestown had its first wastewater treatment plant. The original plant was replaced by a more advanced facility in 1956. The plant was expanded in 1966 to provide secondary treatment, and again in 1983 when tertiary treatment capabilities were constructed. The plant is currently permitted to discharge 12,000,000 gallons per day. As with the potable water system, the wastewater collection and treatment system is old, but it has been well maintained. Because the wastewater collection and treatment facilities was built to serve a larger population that what exists today in the City, there is additional capacity for new development in the LWRP; however, as is the case with potable water use, proposed developments that may require pretreatment or unusually large loadings at the wastewater treatment plant should be evaluated on a case by case basis. The wastewater collection system in the LWRP is shown on the Sewer Lines Map included at the end of this report.

2.4 Electricity

The City of Jamestown Board of Public Utilities (BPU) currently owns and operates the Samuel A. Carlson Electric Generating Station which consists of both coal-fired and gas-fired units that produce electrical energy for the City, the Villages of Falconer and Celoron and portions of West Ellicott. The facility is located between the Chadakoin River and Steele Street near the intersection of Sprague Street and is one of the oldest municipally-owned power plants in the country and is the largest in New York State.

The City first began generating electricity in the 1890's to provide lighting for downtown streets. Finding the ownership of this facility to be of interest to the community and at the same time profitable, the city fathers decided to expand the facility to serve all Jamestown residences. In 1923 the BPU facilities was created to improve upon and manage the community's electric and water resources, with the District Heat Division added in 1985 and the solid waste and wastewater added in 1994.

Presently the Generating Station operates four coal fired boilers which produce steam to drive two turbine generators capable of producing approximately 50 megawatts of electrical energy. The facility also operates a gas turbine generator capable of producing approximately 43 megawatts of electrical energy. The ability of using either coal or gas gives the BPU fuel flexibility related to market purchase price of material and the ability to produce more electric energy during peak periods. The BPU also has the added benefit of being able to purchase low cost hydropower from the New York Power Authority, thus during peak periods, primarily during winter months, the BPU is able to sell electricity to their residential and commercial customers a lesser per kilowatt hour cost then marketplace owned corporations. In the mid 1980's the Generating Station was modified to co-generate hot water heat, which supplies Jamestown's central business district with thermally heated water. This upgrade in a sense maximizes the use of the facility and shows the importance of the Generating Station as both a producer of electricity and heat for its present customers.

The existing facility has and still does provide excellent service to the City of Jamestown and its surrounding communities; however this facility is approaching the end of its useful life. The coal-fired units are not currently economical compared to market energy costs. Additionally, the costs of maintaining these units as well as the costs for complying with new and pending environmental

regulations also make their continued operation economically unviable. Therefore, as part of their evaluation of future energy supply options the BPU examined the potential decommissioning of these units. Also, as part of this evaluation the BPU examined new power generation alternatives that could be installed on BPU's system to provide reliable and economical capacity and electrical energy. One of these options proposed by the BPU is to construct a new fuel efficient, environmental friendly, state of the art coal fired facility, which is a costly endeavor.

The City's least favorable option would be to discontinue the operation of the Generating Station, which of course would eliminate the City's ability to provide low-cost electric energy to its customers; result in a loss of good paying jobs; and result in a loss of both City and School district tax revenue. This option would have an overall detrimental effect on the City in general and in particular to its manufacturing and industrial base.

As the community looks to the future it is important to note in time the Generating Station will need to be replaced or require costly upgrades if the City is to continue supplying low-cost power to its customer base. This ability to supply low-cost that is viewed as a key element in the plans for revitalizing the Jamestown economy.

2.5 Dams

2.5.1 Warner Dam

There have been a number of dams on the River corridor from McCrea Point to the east side of the study area. The first water powered grist mills and sawmills were built near this location. The first Warner Dam was built to replace an older structure at this location in 1915. The river channel between McCrea Point and Chandler Street was also realigned as a part of this project. Historic engineering drawings archived at the offices of Greenman-Pederson, Inc. in Jamestown depict the design elements of the dam, the alignment and profile of the new channel. The drawings indicated that sediments excavated from the new channel were deposited in spoil areas along the River and in the floodplain, which was developed with channels and races from the early mills. The map also depicted the channelization of the River under the former Art Metal facility and armor on the outside of the river bend at Institute Street. Interestingly, the drawings indicated that the dam increased the upstream elevation of the River by approximately two feet. This change would have had significant impacts on the wetlands located along the Chautauqua Lake Outlet and the navigability of the channel above the dam. A new dam at this location was constructed in 1978 as a NYSDEC Flood Control Project. The stated purpose of the dam is to maintain the level of Chautauqua Lake during the summer months; however, the Dam is ineffective at mitigating flooding around the Lake during periods of high rainfall and runoff due to the restricted River channel below McCrea Point. When wet weather is anticipated, the Dam gates are opened to drop the Lake level 1-2 inches per day to increase stormwater storage.

One of the outcomes of the Stakeholder interviews and public participation process was that floating trash and debris collects above the Warner Dam. The amount of trash can be significant, and when one considers the size of the 187 square mile watershed above the Dam that receives and transports the trash, the volume of trash is not at all surprising. What was surprising is that this trash is flushed downstream as a result of normal operation of the Dam. It's therefore reasonable to assume that a significant portion of the floating trash and debris observed within the LWRP is a result of this practice.

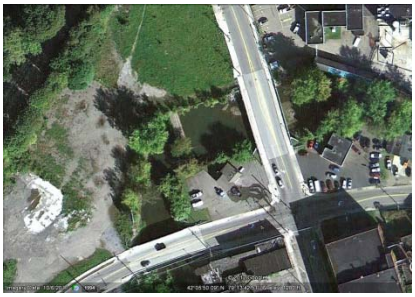




(Left) Immediately upstream of the Warner Dam. (Center) Floating trash accumulation at the center gate. (Right) Floating trash accumulation off of Allen Street.

2.5.2 Former United Lumber Low Head Dam (Winsor Street)

This low head dam is located upstream of the Winsor Street Bridge and is a remnant of a former water powered manufacturing facility that has been demolished. The Dam's gate forms a plunge pool that is a popular fishing spot, easily accessible by a trail that runs between Winsor and Harrison Streets. The Dam is located on a tight bend on the Chadakoin River, between the Harrison and Winsor Street Bridges and poses a hazard to the navigation of the River by small watercraft.


(Left) Plunge pool below the Former United Lumber Dam . (Center) Aerial view of the Dam. (Right) Spillway of the former United Lumber Dam.

2.5.3 Utility Crossing Low Head Dam (Buffalo Street)

This low head dam is located upstream of the Buffalo Street Bridge and is the result of a wastewater utility line crossing that is owned and maintained by the BPU. The Dam forms a plunge pool that is a popular fishing spot, accessible by trails that lead from Buffalo and Allen Streets. The Dam poses a hazard to the navigation of the River by small watercraft.





(Left) Plunge pool below the Utility Crossing Dam . (Center) View of the Dam from Buffalo Street. (Right) North riverbank at the plunge pool.

The location of dams within the study area is depicted Dams, Docks and Bank Amor Map included at the end of this report.

2.6 Docks

2.6.1 Private Docks along Clifton Avenue and Sprague Street

There are a number of private docks on the River above the Warner Dam. Six residences located along Clifton Avenue have installed docks along the northern riverbank. There are also several powerboats that were tied to the docks or moored along this reach of the River. There is one additional private dock for one of the few residential properties located along Sprague Street, which is located along the south bank of the Chadakoin River.



(Left) Water patio at Clifton Avenue public access. (Center) Other docks along Clifton Avenue. (Right) Dock for residence along Sprague Street.

2.6.2 Docks at McCrea Point

McCrea Point is the City's best developed public waterfront access. Although the Chadakoin Riverwalk Trail affords walking and bicycling along the River, and has amenities such as benches, tables and lighting, McCrea Point provides opportunities for contact recreation such as boating and fishing. There are docks, slips and a boat launch available for public use. The facility also has parking, playground equipment, a gazebo and restroom facilities. The Chautauqua Lake Rowing Association maintains a boathouse at this location that continues to keep the sport of rowing alive, a sport that has been alive in the area since the 1870s. McCrea point also has historical significance which is commemorated with historical markers:

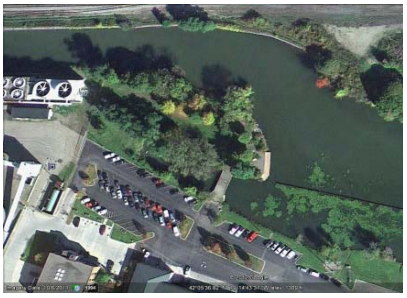
- De Longueuil Expedition, circa 1739;
- Celoron Expedition, circa 1749;
- American revolution, circa 1782;
- First home built in Jamestown, circa 1810; and
- Steamboat Landing, circa 1828.



(Left) A view of the dock at McCrea Point from the Fairmount Avenue Bridge. (Center) Aerial view of McCrea Point. (Right) Boat launch at McCrea Point.

2.6.3 Docks at Panzarella Park

Panzarella Park is an important node on the Chadakoin Riverwalk Trail. The Park is located directly behind the BPU Electrical Generation facility, and while the Park appears to be an island, it is actually an isthmus and is accessed by a single span bridge. The Park is named after a former community leader Marion Panzarella. The dock at Panzarella Park serves primarily as a platform from which to fish and enjoy the beauty of the Chadakoin River, but could also serve as a place to tie off small watercraft.


(Left) A view of the dock at Panzarella Park. (Center) Aerial view of Panzarella Park. (Right) Commemorative plaque celebrating the contributions of Marion Panzarella.

The location of docks within the study area is depicted Dams, Docks and Bank Amor Map included at the end of this report.

2.7 Bulkheads

Erosion is a natural process and without it, rivers and streams would not meander and change course. A cut bank is a very common feature of streams. Cut banks are found in abundance along mature or meandering streams, they are located on the outside of a stream bend. They are shaped much like a small cliff, and are formed by the erosion of soil as the stream collides with the river bank. Not only are cut banks steep and unstable, they are also the area of a stream where the water is flowing the fastest and the deepest, making them rather dangerous.

Urban development typically decreases the amount pervious surfaces, and increases the amount of impervious surfaces, which can result in increased bank erosion and channel migration rates. Bank erosion and channel migration rates are also increased when development occurs in the floodplain. The buildings and other structures that have been built in and along the river have cause bank erosion and scour, which has happened extensively in the study area.

Scour is the removal of sediment such as sand and rocks from around bridge abutments, piers or dams. Scour, caused by swiftly moving water, can scour holes that will compromise the integrity of a structure. Scour is the main cause of bridge failure. It has been estimated that 60% of all bridge failures result from scour and other erosion related causes. Water normally flows faster around piers and abutments making them susceptible to scour. At bridge openings, scour can occur when water accelerates as it flows through an opening that is narrower than the channel upstream from the bridge. Scour occurs both upstream and downstream from a bridge over large areas. Over long periods of time, this can result in lowering of the stream bed.

Armor is used try to keep a river from moving. This can be done for habitat restoration or to prevent a river from changing course into land or a building that is being used by people. One

way that this is done is by placing some type of armor along the river bank. Armor is used extensively in the study area. The location and extent of the armored riverbanks within the study area is depicted Dams, Docks and Bank Amor Map included at the end of this report.

Armor can be the result of natural processes. Tree roots and other roots, stumps, fallen trees, brush and large stones can work together to slow erosion and scour. All types of armor work by absorbing and deflecting the energy of the current. With respect to riprap, the size and mass of the riprap material absorbs the impact energy of current, while the gaps between the rocks trap and slow the flow of water, lessening its ability to erode soil or structures on the river bank. The mass of riprap also provides protection against impact damage by ice or debris, which is particularly desirable for bridge supports and pilings.

Below are photographs of some of the different armor that is observed in the study area.



(Left) Concrete retaining wall below the Warner Dam. (Center) Sheet pile wall below the Institute Street Bridge. (Right) Riprap under the 6th Street Bridge.



(Left) Stone riprap at Clifton Avenue. (Center) Concrete rubble at Buffalo Street. (Right) Stone riprap at the Sprague Street Bridge.



(Left) Riverside Industrial Center below the Foote Avenue Bridge. (Center) Steel pile and railroad tie armor off Allen Street and near River Street. (Right) Natural armor of roots below Hopkins Avenue Bridge.

2.8 Solid Waste Disposal

The BPUs Solid Waste Division collects solid waste throughout the LWRP. The City is divided into five zones, all of which are partially located within the LWRP. The customers in each zone have a specific day of the week to set out their waste and recyclables. The sanitation crews rotate to a different zone each day of the week. Each residential unit is charged a flat fee of just over $12 per month. Items over 40 lbs are assessed a $10 pickup fee and landfill charges. Commercial and industrial customers have larger containers and dumpsters available for their use.

The BPU has an established recycling program for glass, metals, plastic, paper and cardboard. There is also a household hazardous waste disposal program offered to BPU customers sponsored by Chautauqua County twice per year.

The solid waste is in turn taken to the Ellery Landfill, located at 3889 Towerville Road in Ellery NY, approximately 12 miles from the study area. Chautauqua County owns and operates this solid waste disposal facility, which also accepts solid waste from other municipalities outside of the County at a higher rate. This preferential rate structure provides an economic advantage to businesses that are located within Chautauqua County and the City of Jamestown.

2.9 District Heat

The City of Jamestown owns and operates its own gas and coal fired electric generating plant. This facility is known as the Samuel A. Carlson Electric Generating Station and is located between the Chadakoin River and Steele Street near the intersection of Sprague Street. The Jamestown Board of Public Utilities (BPU) is the manager of the Generating Station, which not only generates and distributes electrical energy throughout the City but also converts unused thermal energy for customer use throughout a small portion of the City, but most of the downtown business core.

Steam is the energy source used for turbine generators to make electricity, however thermal energy is wasted during this process. Capturing this unused energy, passing it through a heat exchanger and into a closed network of looped piping is the model of the City of Jamestown's District Heating System. Jamestown operated a steam district heating system from approximately 1948 to 1969. The system was eventually abandoned because the high costs of maintaining the system out-paced the prices for oil and natural gas and users of the steam system began to install gas-fired furnaces and boilers to supply their heat requirements.

As the costs of natural gas began to rise in the early 1980's and as new technologies and methods were being developed to allow for the transmission of thermal energy, in this case super-heated hot water instead of steam, the City went to work on developing a new system. In 1981 the City began preliminary engineering review of utilizing waste heat energy from the Electric Generating Station to be the source for a hot water distribution system. This source energy was to become an alternative to gas fired furnaces for commercial users. With the assistance of grants and additional monies from the City's general fund the City moved ahead with its final engineering design. In 1984 the City approved a bond to begin construction on its present District Heating System. The "initial" or "pilot" program that was constructed to serve some of the then larger commercial and municipal facilities within the immediate area of the Generating Station, such as the City's Department of Public Works and Board of Public Utilities building facilities. The system proved to be financially successful for the "pilot" system users and for the City.

In early 1985 as gas prices continued to rise and with the success of the "pilot" system the City of Jamestown decided to continue expanding the system and approved an additional four million dollar bond to facilitate with the expansion and construction of the hot water co-generation district heating system into the central business district. The downtown project consisted of about 4 miles of transmission piping and was an immediate success to businesses that were able to access

the transmission lines. Not only were businesses able to save on heating cost they were also able to free up floor space not occupied by large furnaces and boilers. The number of customers throughout the community that use the City's district heat system has recently fallen to approximately 30 from more than 70. These customers include the hospital, schools, churches, private office buildings, community buildings and large residential housing facilities. The system is presently working at about one half of its capacity and now consists of approximately 11 miles of twin polyethylene coated piping externally insulated with polyurethane foam.

The closed loop system simply consists of a supply line and a return line and isolation valves along its route. Thermally heated water is supplied to the customer at a peak temperature of about 250 degrees Fahrenheit. It is then the customer's responsibility to make arrangements with a private contractor to retrofit the supplied water to their system. With the benefit of heat exchangers customers draw energy from the water and begin the process heating their facility. Circulated water is then returned to the system and piped back to the Generating Station where the cycle then commences again. The District Heat Map included at the end of this report illustrates this system.

District Heat has saved users costs for furnace and boiler maintenance, chemical treatments, stack emissions assessments and has reduced pollution caused by the operation of many smaller and less efficient boiler systems as well as freeing up space occupied by on-site boiler systems. The attached map shows the network of piping throughout the downtown area north of the Railroad and along Steele and Harrison Streets south of the Railroad. The system reaches to the north as far as the Holy Family School on North Main Street and the Euclid Gardens Apartments on Euclid Avenue, to the east up to Winsor Street, and to the south as far as the Heritage Park nursing facility on Prather Street and the WCA hospital on Foote Avenue.

2.10 District Cooling

This system primarily servers business and housing locations along Third Street, and the City of Jamestown's municipal building located on the east side of the business district. The cooling systems origin is the Jamestown Savings Bank Ice Arena located at the intersection of Third and Lafayette Streets. At this facility, a specially designed chilled water plant was incorporated into the design of the Arena, which is to not only serve the Arena and auxiliary spaces but to serve additional development in the downtown area. Water is chilled utilizing ice storage tanks and a plate frame heat exchanger. An ice melting process then cools water that is then piped to buildings along Third Street.

The District Cooling System is also managed and operated by the Board of Public Utilities. Cooled water is distributed much the same way as the District Heat System in a closed loop system using the same piping materials. Cooled water is pumped within a closed loop system with laterals to buildings. Each user of the system must have its own heat exchanger to with draw energy from the chilled water to cool its own building. The resultant of this system is lesser electricity cost and maintenance costs to outdated air conditioning systems found on roof tops, in basements, and along the exterior perimeters of buildings.

2.11 Underwater Cables And Pipelines

A number of underwater utility crossings are located within the LWRP. These include:

- Electric
- Fiber Optic Cables
- Sanitary Force Mains
- Gravity Sanitary Sewers

- Water Lines
- District Heat

The Pipelines and Cable River Crossings Map included at the end of this report shows the approximate locations of these underwater utility crossings.

2.12 Parking

Business and community leaders and members of the public in the City of Jamestown have had long standing issues and concerns about parking. The City's geography and compact land development combine to make convenient parking a challenge in some areas of the City. As a result, the City has created focus groups, commissioned parking studies and made substantial investments in parking infrastructure, all of which have focused on the Central Business District and the West End developments.

- *Center City Project Parking Study by Saratoga Associates, July 31, 2000.* This study examined the City's parking needs in response to a proposed development in the west side of the central business district. The project was to include an ice arena, cinema, hotel, medical offices and a parking garage to be located in an area bounded by West 4th Street, Washington Street, West 2nd Street and Jefferson Street. Although some, but not all of the development scenarios envisioned were constructed, the study concluded that approximately 1,400 to 1,816 parking spaces would be required to serve the project area and an additional one-half block surrounding the project area.
- *Downtown parking Discussion Group, February 12, 2002.* This focus group was composed of City and community leaders, economic development officials and members of the business community. The outcome of their discussions included the following recommendations:

    - Replacement of the then closed Cherry Street Parking Ramp at an estimated cost of $4,290,000, which would create an additional 280 parking spaces and satisfy commitments to local businesses.
    - Redevelop the Main Street Ramp at an estimated cost of $1,650,000, for a net gain of 149 metered and leased spaces that would help to reduce increasing parking pressure associated with West End developments and North Main Street parking needs.
    - Additional Surface Lots and On-Street Spaces would create an additional 322 spaces in the West End.
    - Additional surface lots parking in the vicinity of Baker Park will create 68 new long-term metered spaces, for an overall increase of 839 new parking spaces that were not previously available.
    -
- *Comprehensive Parking Plan, Phase III by ALLPRO, January, 2007*. This study noted that Phase I of the City's Parking Plan had been completed by the construction of the 296 space Cherry Street Ramp in 2006, which was a response to additional parking needs associated with the new ice arena and hotel projects. Between the North Main Street Ramp and the Cherry Street Ramp, a total of 416 off-street parking spaces and 254 metered spaces, for a total of 670 new spaces were added in connection with Phase I. ALLPRO's study noted that Jamestown now had a total of 1,957 municipal parking spaces, of which 892 were metered. Phase II of the Parking Plan centered on enforcement, where ALLPRO became responsible for collecting meter money and collecting fines for violations. Hand held computerized ticket issuing equipment provided greater efficiency for enforcement personnel and better tracking of vehicles and scofflaws. Phase III of the Plan

involved standardizing meters, restructuring parking rates and meter timing periods to best suit the available parking infrastructure and demand.

GPI's reconnaissance of the LWRP study area on July 23, 2012 indicated the presence of numerous public parking locations scattered throughout the downtown business area. The parking ramps and surface lots are attractive, well illuminated and generally well maintained. There were three parking ramp structures, they are described in the sections below:

2.12.1 Cherry Street Ramp

Reconstructed in 2006 this reinforced concrete structure provides 280 parking spaces. This structure provides parking for the Jamestown Ramada Inn and for the long-term parking needs of the Jamestown Housing Authority as well as other nearby buildings.





(Left) East side of the Cherry Street Ramp. (Center) Cherry Street Ramp along West 4th Street. (Right) Entrance/exit to Cherry Street Ramp along West 5th Street.

2.12.2 Main Street Ramp

Constructed so as to take advantage of the steep natural slope of North Main Street, the two-level structure is attractively landscaped. This reinforced concrete structure was built in 2004 presently provides 20 metered parking spaces and 51 leased space on level with West 2nd Street. The ramp also provides 65 parking spaces in the ground (1st Street) level for Jamestown's local newspaper, the "Post Journal".





(Left) East side of the North Main Street Ramp. (Center) North Main Street Ramp. (Right) West 2nd Street Entrance.

2.12.3 Spring Street Ramp

Rehabilitated in 2009, this reinforced concrete structure contains about 340 leased and metered parking spaces on 5 levels between East 3rd and 4th Streets. The attractive structure has two murals commemorating Jamestown's association with Lucy and Desi Arnaz.






(Left) Spring Street Ramp with Luci & Desi murals. (Center) Entrance/exit off of Spring Street. (Right) East side of the Spring Street Ramp.

Metered parking is mostly found along the public streets within the core downtown area of the Central Study Area. There are however many non-metered locations along Third Street from the Federal Building westerly to Washington Street. These parking spaces are mostly designated 15 minute to 2 hour locations and are for the convenience of patrons and customers to business and public buildings fronting Third Street. Metered off street parking facilities and designated leased spaces can also be found at the following surface lots:

2.12.4 West 3rd and Clinton Streets

This paved surface lot has 24 parking spaces and is intended to provide long term off-street parking for West End businesses and attractions, such as the ice arena. The lot is conveniently accessed from Clinton Street and West 3rd Streets. It is landscaped and well illuminated.




Looking southwest at the surface lot at West 3rd and Clinton Streets (Left) Aerial view of the surface lot at West 3rd and Clinton Streets (Right)

2.12.5 West 4th and Lafayette Streets

This paved surface lot has 34 parking spaces and is also intended to provide long term off-street parking for West End businesses and attractions. The lot is accessed from West 4th and is landscaped and well illuminated.



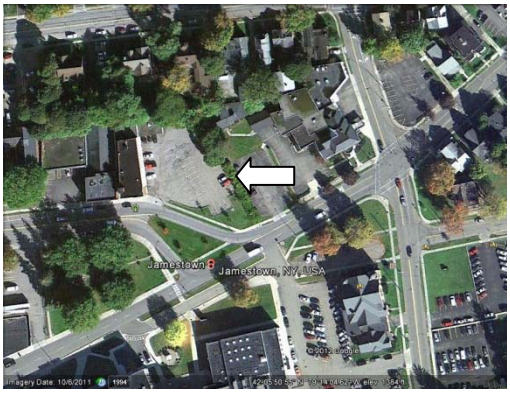


Looking southwest at the surface lot at West 4th and Lafayette Streets (Left) Aerial view of the surface lot at West 4th and Lafayette Streets (Right)

2.12.6 East 3rd near East 2nd Street

This surface lot has 37 parking spaces and is intended to provide long term off-street parking for the central business district and the high school. The irregularly shaped lot is accessed from East 3rd Street. ALLPRO has placed a sign that advertises the availability of leased spaces at this location. The pavement is in fair condition, and with exception of the street lights along East 3rd Street, the lot is not illuminated.





Looking northeast at the surface lot at East 3rd near East 2nd Streets (Left) Aerial view of the surface lot at West 4th and Lafayette Streets (Right)

2.12.7 East 4th Street near Pendergast Avenue

This surface lot has approximately 30 leased parking spaces and is intended to provide long term off-street parking for the central business district. The gravel lot is accessed from East 4th Street and Pendergast Avenue. ALLPRO has placed a sign that notes all of the spaces at this location are leased. The pavement is in fair condition, and with exception of the street lights along East 4th Street and Pendergast Avenue, the lot is not illuminated.





Looking northeast at the surface lot at East 4th Street and Pendergast Avenue. (Left) Aerial view of the surface lot at East 4th Street and Pendergast Avenue. (Right)

2.12.8 East 2nd and Pine Streets

This surface lot has 28 parking spaces and is intended to provide convenient off-street parking for the central business district. The paved lot is accessed from East 2nd Street and is landscaped with trees and brick pavers. The pavement is in good condition and the lot is illuminated from lights along East Second and Pine Streets.





Looking northeast at the surface lot at East 2nd and Pine Streets. (Left) Aerial view of the surface lot at East 2nd and Pine Streets. (Right)

Unfortunately all of these locations are north of the elevated Railroad, which symmetrically splits the Central Study Area. Other than the Main Street Parking Ramp not one of the mentioned locations is convenient for immediate access to the downtown section of the Chadakoin Riverwalk Trail or the waterfront without an extended walk or when returning from the River having to walk the steep street slopes of North Main Street, Foote Avenue or Jefferson Street, via Sprague Street and West Second Street.

South of the Railroad, of course lies the Chadakoin River and a much flatter terrain. A public parking area exists in the westerly end of the LWRP at McCrea Point Park, which is discussed below and a public parking lot also exists behind the Board of Public Utilities Offices on Steele Street. This parking area provides access to the westerly terminus of the Chadakoin Riverwalk and to Panzarella Park. Within the immediate proximity of North Main Street, Harrison Street and the River is a historic section of the City known as "Brooklyn Square", which today is comprised of several drug stores, several restaurants, the Riverside Medical Center, a bank, and a moving and storage business. Adjacent to these businesses along Harrison Street are a small plaza, and a retail sporting business. Each of these locations particularly the Riverside Medical Center, the adjoining

CVS drug store, Friendly's Restaurant and the Plaza on the south side of Harrison Street have large parking areas that were probably built because of zoning requirements. In most instances these private parking lots are underutilized and overly constructed.

Besides the locations identified, one moderately sized parking lot located at the southwest corner of Harrison Street and Foote Avenue and a much larger parking lot located at the northeast corner of Harrison Street and Foote Avenue also are located within the proximity of "Brooklyn Square" and near the Chadakoin River. These lots however are both owned by Chautauqua County and are designated for use by their tenants in the Riverside Industrial Center. Other privately owned parking locations found along and near the River as it traverses through the City include: a large unused parking lot on Blackstone Avenue opposite the Blackstone Business Company, just east of the Dalhstrom Complex, and underutilized parking lots located at the intersection of Chandler Street and River Street and near the intersection of Tiffany Avenue and Hopkins Avenue.

In all instances these privately owned lots could provide pedestrian and vehicular access to the River for recreational opportunities. Of course the City would need to enter into ingress, egress and parking agreements with the owners of these properties and they would need to enter into agreements with these private land owners for the right to occupy their property for River access. Because of the geography of the City, parking north of the River provides many challenges. The steep gradient away from the River heading north and the fact the only access to the River from the north is to cross under the elevated Railroad at limited locations particularly throughout business core of the City. Other than the designated public parking area located near Panzarella Park and a small pull off parking area owned by the City along Allen Street west of the Dawson Metal Property public parking locations to access the River are limited. It is clear private land owners will need to be cooperative and equally involved in creating pockets for public use or the status quo will continue into the future.

As mentioned located in the westerly end of the LWRP is McCrea Point Park or what is many times referred to as the "Boatlanding". This area is improved with a boat launch, boardwalk, a small children's playground, restroom facilities, a small pavilion, sitting benches along the perimeter of the banks of the River, plaques and signs containing brief descriptions of this area's historic past, and a large gravel unlined parking area. This parking lot serves those who trailer boats, fisherman who fish from the surrounding banks or people visiting the park to enjoy the Park's amenities and ambience. As discussed in the Trails section of this publication a plan has been put in place to improve the Park with trails and paths that will border along the River and also connect to with the Chautauqua County Bike Trail that extends along the shoulder of Jones and Gifford Avenue leading to Celoron and points beyond. Also discussed in "Trails" is the soon to be constructed Chadakoin River Trail, which is a 1.3 mile bike path connection between Clifton Avenue located on the east side of the Chadakoin River near the north City line and West Eight Street near its intersection with Fairmount Avenue. Both the McCrea Point Park Trail and the Chadakoin River Trail will benefit by the large parking area now located at McCrea Point Park. This will allow people who carry their bikes on the back of their vehicles to drive to this location and park to pick up either or both of these trails because of their proximity to the Park itself. Many opportunities now exist at this location with more amenities still being planned; this location and its parking advantages is one of the few throughout the City that allows unobstructed access to the River.



Parking area at McCrea Point

FIGURES

GPI Greenman - Pedersen, Inc.
GPI Engineering and Surveying, LLP
200 Harrison Street, Jamestown, NY 14701
Phone: 716-488-2803 Fax: 716-488-2802

CITY OF JAMESTOWN

CHADAKOIN RIVER REVITALIZATION STUDY

VEHICLE CIRCULATION SYSTEM WITHIN LWRP STUDY AREA

Legend

- CONNECTORS & FLY OVERS
- NORTH SIDE VEHICULAR CORRIDOR
- SOUTH SIDE VEHICULAR CORRIDOR

0 1,400 Feet

1:18,000

Sources:
1. Original BOA Shapefiles provided by the City of Jamestown
- Edited by LaBella to reflect steering committee revisions.
2. City of Jamestown Local Waterfront Revitalization Program Work Plan Maps
- Edited by LaBella to reflect steering committee revisions
3. Original BOA Shapefiles provided by the City of Jamestown
- Edited by LaBella to reflect steering committee revisions

This map was prepared for the City of Jamestown, the Jamestown Urban Renewal Agency, and the New York State Department of State with funds provided through the Brownfield Opportunity Areas Program and under Title II of the Environmental Protection Fund.

GPI Greenman - Pedersen, Inc.
GPI Engineering and Surveying, LLP
200 Harrison Street, Jamestown, NY 14701
Phone: 716-488-2803 Fax: 716-488-2802

CITY OF JAMESTOWN

CHADAKOIN RIVER REVITALIZATION STUDY

TRAIL SYSTEM WITHIN LWRP STUDY AREA

Legend

- Informal Footpath or Trail
- Proposed Chadakoin River Extension
- Chadakoin Riverwalk Trail
- Proposed_Chadakoin_BikePath

0 1,500 Feet

1:18,000

Sources:
1. Original BOA Shapefiles provided by the City of Jamestown - Edited by LaBella to reflect steering committee revisions.
2. City of Jamestown Local Waterfront Revitalization Program Work Plan Maps - Edited by LaBella to reflect steering committee revisions
3. Original BOA Shapefiles provided by the City of Jamestown - Edited by LaBella to reflect steering committee revisions

This map was prepared for the City of Jamestown, the Jamestown Urban Renewal Agency, and the New York State Department of State with funds provided through the Brownfield Opportunity Areas Program and under Title II of the Environmental Protection Fund.

GPI Greenman - Pedersen, Inc.
GPI Engineering and Surveying, LLP
200 Harrison Street, Jamestown, NY 14701
Phone: 716-488-2803 Fax: 716-488-2802

CITY OF JAMESTOWN

CHADAKOIN RIVER REVITALIZATION STUDY

WATER MAINS WITHIN LWRP STUDY AREA

Legend

PIPEDIAMET, Material

- 1, Copper
- 1, Iron
- 1, Galvanized
- 1.25, Copper
- 1.5, Copper
- 1.5, Unknown
- 1.5, Iron
- 2, Galvanized
- 2, Cast
- 2, Copper
- 2, Unknown
- 2, Iron
- 3, Cast
- 3, Iron
- 4, Plastic
- 4, Cast
- 4, Ductile
- 4, Unknown
- 6, Ductile
- 6, Cast
- 6, Unknown
- 6, Iron
- 8, Unkown
- 8, Cast
- 8, Ductile
- 8, Iron
- 10, Ductile
- 10, Cast
- 12, Cast
- 12, Ductile
- 14, Cast
- 16, Ductile
- 16, Iron
- 16, Cast
- 24, Cast

0 1,000 Feet

1:15,000

Sources:
1. Original BOA Shapefiles provided by the City of Jamestown - Edited by LaBella to reflect steering committee revisions.
2. City of Jamestown Local Waterfront Revitalization Program Work Plan Maps - Edited by LaBella to reflect steering committee revisions
3. Original BOA Shapefiles provided by the City of Jamestown - Edited by LaBella to reflect steering committee revisions
4. Water Main layer provided by the BPU

This map was prepared for the City of Jamestown, the Jamestown Urban Renewal Agency, and the New York State Department of State with funds provided through the Brownfield Opportunity Areas Program and under Title II of the Environmental Protection Fund.

GPI Greenman - Pedersen, Inc.
GPI Engineering and Surveying, LLP
200 Harrison Street, Jamestown, NY 14701
Phone: 716-488-2803 Fax: 716-488-2802

CITY OF JAMESTOWN

CHADAKOIN RIVER REVITALIZATION STUDY

SEWER LINES WITHIN LWRP STUDY AREA

Legend

Gravity Main	ForceMain
6	Unknown
8	1.5
9	1.75
10	2
12	3
18	4
24	6
30	8
36	10
42	12
	14
	18

0 1,500 Feet

1:18,000

Sources:
1. Original BOA Shapefiles provided by the City of Jamestown - Edited by LaBella to reflect steering committee revisions.
2. City of Jamestown Local Waterfront Revitalization Program Work Plan Maps - Edited by LaBella to reflect steering committee revisions
3. Original BOA Shapefiles provided by the City of Jamestown - Edited by LaBella to reflect steering committee revisions
4. Gravity Main and Force Main sewer layers provided by the BPU

This map was prepared for the City of Jamestown, the Jamestown Urban Renewal Agency, and the New York State Department of State with funds provided through the Brownfield Opportunity Areas Program and under Title II of the Environmental Protection Fund.

GPI Greenman - Pedersen, Inc.
GPI Engineering and Surveying, LLP
200 Harrison Street, Jamestown, NY 14701
Phone: 716-488-2803 Fax: 716-488-2802

CITY OF JAMESTOWN

CHADAKOIN RIVER REVITALIZATION STUDY

DAMS, DOCKS AND BANK ARMOR WITHIN LWRP STUDY AREA

Legend

- Dams
- Docks
- Walkway or Pipe Bridge
- Public & Private Bridge
- Rail Road Bridge
- Concrete, Sheet Pile or RipRap

0 1,500 Feet

1:18,000

Sources:
1. Original BOA Shapefiles provided by the City of Jamestown - Edited by LaBella to reflect steering committee revisions.
2. City of Jamestown Local Waterfront Revitalization Program Work Plan Maps - Edited by LaBella to reflect steering committee revisions
3. Original BOA Shapefiles provided by the City of Jamestown - Edited by LaBella to reflect steering committee revisions

This map was prepared for the City of Jamestown, the Jamestown Urban Renewal Agency, and the New York State Department of State with funds provided through the Brownfield Opportunity Areas Program and under Title II of the Environmental Protection Fund.

GPI Greenman - Pedersen, Inc.
GPI Engineering and Surveying, LLP
200 Harrison Street, Jamestown, NY 14701
Phone: 716-488-2803 Fax: 716-488-2802

CITY OF JAMESTOWN

CHADAKOIN RIVER REVITALIZATION STUDY

DISTRICT HEAT WITHIN BOA NOMINATION STUDY AREA

Legend

HeatDistributionLine

Diameter, Type

- UNKNOWN, SUPPLY
- UNKNOWN, RETURN
- 2, SUPPLY
- 2, RETURN
- 3, SUPPLY
- 3, UNKNOWN
- 3, RETURN
- 4, SUPPLY
- 4, RETURN
- 5, SUPPLY
- 5, RETURN
- 5, UNKNOWN
- 6, RETURN
- 6, SUPPLY
- 8, SUPPLY
- 8, RETURN
- 12, SUPPLY
- 12, RETURN

HeatServiceLine

Diameter, Material

- 1, Steel
- 2, Steel
- 3, Steel
- 5, Steel

0 1,000 Feet

1:18,000

Sources:
1. Original BOA Shapefiles provided by the City of Jamestown - Edited by LaBella to reflect steering committee revisions.
2. City of Jamestown Local Waterfront Revitalization Program Work Plan Maps - Edited by LaBella to reflect steering committee revisions
3. Original BOA Shapefiles provided by the City of Jamestown - Edited by LaBella to reflect steering committee revisions
4. District Heat and District Cooling layer provided by the BPU

This map was prepared for the City of Jamestown, the Jamestown Urban Renewal Agency, and the New York State Department of State with funds provided through the Brownfield Opportunity Areas Program and under Title II of the Environmental Protection Fund.

GPI Greenman - Pedersen, Inc.
GPI Engineering and Surveying, LLP
200 Harrison Street, Jamestown, NY 14701
Phone: 716-488-2803 Fax: 716-488-2802

CITY OF JAMESTOWN

CHADAKOIN RIVER REVITALIZATION STUDY

PIPELINES AND CABLE RIVER CROSSINGS

Legend

EL = ELECTRIC
FOC = FIBER OPTIC CABLE
FM = SANITARY FORCE MAIN
G SAN = GRAVITY SANITARY SEWER
WL = WATERLINE
DH = DISTRICT HEAT

1 FAIRMOUNT AVE.
EL, 12" G SAN, 16" WL
2 BETWEEN FAIRMOUNT & 6th STREET
18" FM
3 SPRAGUE STREET
EL, FOC, 18" G SAN, 10" WL
4 EAST OF SPRAGUE STREET
8" DH
5 SOUTH MAIN STREET
EL, 10" G SAN, 10" WL
6 HARRISON ST. @ INSTITUTE ST.
EL, 12" DH, 36" G SAN, 16" WATERLINE
7 INSTITUTE STREET
6" WL
8 FOOTE AVENUE
EL, FOC, 5" DH, 18" & 8" G SAN, 6" WL
9 EAST OF FOOTE AVENUE
EL
10 HARRISON ST NEAR WINSOR ST
EL, FOC, 5" DH, 16" WL
11 WINSOR STREET
16" WL
12 CHANDLER STREET
EL, FOC, 24" G SAN, 6" WL
13 RIVER STREET
32" G SAN
14 ALLEN ST @ DAWSON METAL
42" G SAN
15 ALLEN ST SOUTH OF RAILROAD
42" G SAN
16 BUFFALO STREET
EL, FOC, 8" G SAN, 2-16" WL
17 HOPKINS AVENUE
12" FM
18 TIFFANY AVENUE
FOC

0 1,500 Feet

1:18,000

Sources:
1. Original BOA Shapefiles provided by the City of Jamestown - Edited by LaBella to reflect steering committee revisions.
2. City of Jamestown Local Waterfront Revitalization Program Work Plan Maps - Edited by LaBella to reflect steering committee revisions
3. Original BOA Shapefiles provided by the City of Jamestown - Edited by LaBella to reflect steering committee revisions
4. Gravity Main and Force Main sewer layers provided by the BPU

This map was prepared for the City of Jamestown, the Jamestown Urban Renewal Agency, and the New York State Department of State with funds provided through the Brownfield Opportunity Areas Program and under Title II of the Environmental Protection Fund.