BUFFALO HARBOR

BROWNFIELD OPPORTUNITY AREA

NOMINATION DOCUMENT

JULY 2014

WORKING DRAFT

(MAPS/GRAPHICS INCOMPLETE)

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PROJECT DESCRIPTION

1.1 OVERVIEW

The City of Buffalo was awarded New York State Department of State funding to establish a Buffalo Harbor Brownfield Opportunity Area. This funding allows recipients to plan for the revitalization of underutilized, vacant, and brownfield sites by establishing a vision for their redevelopment, and strategies to return the sites to productive use.

The 1,045-acre Buffalo Harbor BOA includes the Inner and Outer Harbors and a portion of the city's Central Business District. It contains a large concentration of brownfields, vacant, and abandoned parcels; a legacy from the many industrial users that were formerly located on the waterfront.

Previous efforts to revitalize these areas have identified the need for a coordinated plan that addresses environmental conditions, incompatible land uses, productive re-use options, and community engagement at the earliest possible stage.

Recent planning and development activities have begun to show progress. The city is finalizing a new Land Use Plan, Zoning Code, and Local Waterfront Revitalization Program, all of which will impact the BOA. Canalside is taking shape, and the State Office of Parks, Recreation & Historic Preservation recently purchased 50 acres of lakefront for the development of an Outer Harbor State Park.

The continuing redevelopment of the BOA will provide opportunities for additional water-dependent and water-enhanced attractions, utilizing assets such as highway and rail access, a bi-national bridge, and an environmentally rich setting including Lake Erie and the Buffalo River.

The BOA is being evaluated as part of a Generic Environmental Impact Statement. The GEIS will review the impacts of adopting all four Brownfield Opportunity Areas in the city (Buffalo Harbor, Buffalo River Corridor, South Buffalo, and Tonawanda Street Corridor), the Local Waterfront Revitalization Program, changes to existing urban renewal plans, and the updated land use plan and zoning code.

The Common Council was declared lead agency, and a Positive Declaration and a draft scope of work were prepared. A public comment period will take place in 2014, and the draft GEIS will be submitted to the Common Council for review and approval. Once the GEIS is in place, the majority of development proposals will be able to proceed without additional environmental review.

1.2 COMMUNITY VISION, GOALS, AND OBJECTIVES

The BOA program is structured to create redevelopment strategies designed by stakeholders, including residents, property owners, businesses, developers, environmental advocates, and government. Consensus building begins at project inception, to ensure that all concerns are discussed early and in an open fashion. Community acceptance is vital to success.

The long-term goal is to encourage sustainable revitalization of the region's economy while enhancing the natural environment. The plan should support and attract new businesses, create employment

opportunities, increase the tax base, strengthen residential communities, enhance natural habitats, improve public access, and expand recreational opportunities.

This project will complement the work taking place in the South Buffalo and Buffalo River Corridor BOAs. It will initiate, prioritize, and guide the process of land remediation and redevelopment, and bring new economic, social, and cultural opportunities to strengthen Buffalo's position as the regional hub. It will establish a vision for the future with broad-based community, municipal, and state support; and solidly grounded in an understanding of current and emerging challenges, initiatives and opportunities within the national and local contexts, and near- and long-term market potential.

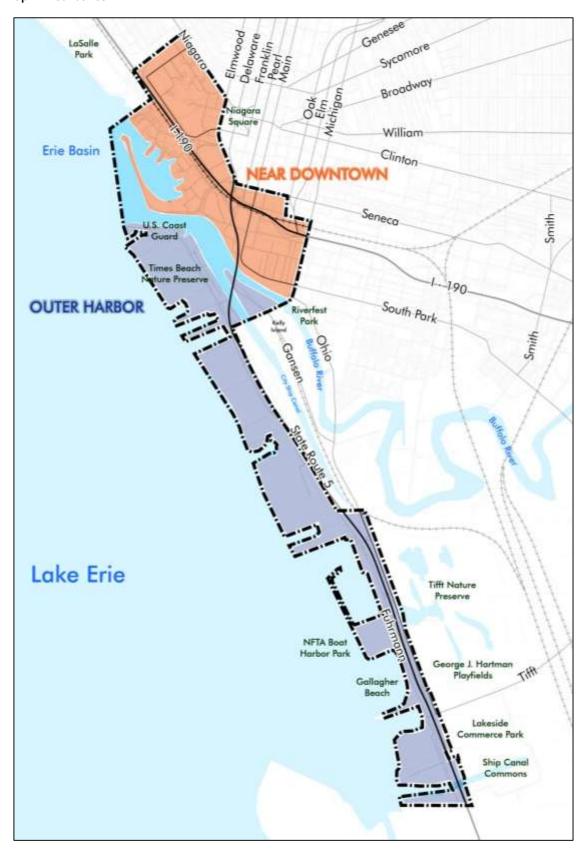
The BOA will also be coordinated with extensive public outreach occurring for the Local Waterfront Revitalization Program, Land Use Plan, Zoning Code, and the environmental review process that is wrapping all of these efforts together.

1.3 BOUNDARY DESCRIPTION AND JUSTIFICATION

The boundaries of the BOA were selected to include the major industrial areas located along the waterfront, as well as a portion of the city's Central Business District. They take into account quality-of-life enhancements such as shorelines, so that redevelopment can utilize these amenities and make connections with these resources.

The northern boundary abuts LaSalle Park and the Niagara Street interchange of the I-190; the eastern boundary abuts the city's CBD and the Buffalo River Corridor and South Buffalo BOAs; the southern boundary is the city line; and the western boundary the Lake Erie waterfront. [Map 1]

Map 1: Boundaries



COMMUNITY PARTICIPATION

2.1 COMMUNITY PARTICIPATION PLAN

The community participation plan was designed to enable input at a variety of levels and stages during the development of the Nomination Document. The plan was organized around project tasks to provide timely inputs into deliverables. A range of opportunities for community involvement were identified, from public open houses to small stakeholder sessions. The project website also provided opportunities for interested parties to submit comments.

The following methods for engaging the community were employed:

- Stakeholder sessions
- Steering committee meetings
- Public open houses

2.2 TECHNIQUES TO ENLIST PARTNERS

The consultation process employed numerous outreach methods to ensure robust public and private participation. The design and production of easily accessible materials and the provision of multiple opportunities for feedback were seen as essential to a successful communication strategy.

Several different audiences were engaged throughout the course of the planning process. In order to effectively communicate with each group, contact lists were developed and updated with names, addresses, phone numbers, and e-mail addresses. These lists included residents, block clubs, non-profits and community groups; advocacy organizations, educational institutions, businesses and developers; county, state, and federal agencies; city departments and boards; elected officials; and steering committee members.

The opportunities for community participation included:

Stakeholder Sessions

A series of stakeholder sessions were held in November 2011 and January 2012, to assist the project team in understanding the dynamics of the study area. These sessions included developers and investors, businesses and large landholders, non-profits and community-based organizations, regulatory agencies, and city departments that serve the community.

These early consultations were designed to:

- Inform stakeholders about the study process and objectives;
- Discuss issues and opportunities, along with policy and development concerns; and
- Identify potential projects and initiatives that would benefit the community.

A "Business Breakfast" was also held in June 2012, to provide business owners and developers with an opportunity to more openly discuss their objectives outside of a public forum.

Steering Committee Meetings

A 20-member steering committee was appointed to review material prepared by the consultant team, provide input regarding project direction, and serve as liaisons to the larger community. Members included representatives from local businesses, developers, community-based organizations and other non-profits, institutions, and the general public. Staff from agencies providing project support were also invited to attend steering committee meetings. A total of five meetings were held during the course of the Step 2 process:

- December 2011 the initial meeting introduced the project team; provided overviews of the BOA program and study process; and included breakout sessions to allow participants to brainstorm key issues, challenges, opportunities, and goals and aspirations.
- January 2012 the second meeting reviewed consultant analysis and findings to date; introduced the visioning process that would be employed at the first open house; and included breakout sessions to discuss types of desired uses and locations, infrastructure needs, and phasing of proposed improvements.
- June 2012 the third meeting reviewed and discussed three alternative scenarios for future development.
- February 2014 the fourth meeting will review the draft Nomination Document and initial strategic sites, discuss concerns, and propose changes.
- October 2014 the final meeting will review the revised Nomination Document and strategic sites, discuss concerns, and propose changes.

Public Open Houses

A total of four open houses were held over the course of the planning process to share information with the public and solicit comments and feedback:

- January 2012 the first open house introduced the project objectives, provided an overview of the analysis conducted to date, and then broke out into visioning sessions to allow participants to discuss emerging principles and their vision for the BOA over the next two decades.
- June 2012 the second open house started with a brief review of the community input from the prior meeting, discussed the economic analysis for the BOA, and laid out a set of emerging principles to guide redevelopment. The consultants provided workbooks outlining the three alternative development scenarios, and asked participants to mark these up with their thoughts and comments. The meeting concluded with a facilitated discussion on initial reactions to the alternative scenarios.

- April 2014 the third open house will provide the community with a brief recap of project status, and review the key findings of the Step 2 Nomination Document. The consultants will identify the strategic areas that are being proposed, and accept input on their redevelopment potential.
- November 2014 the final open house will review the final Step 3 Nomination Document and final strategic sites, and allow the community to comment on these materials before the report is submitted to DOS for approval and adoption of the BOA.

Related Forums

There have been many concurrent public meetings held on issues related to the BOA. The Erie Canal Harbor Development Corporation and New York State Department of Transportation are developing an Environmental Impact Statement for a bridge to connect the Inner and Outer Harbors, and have held numerous meetings to obtain public input over the course of this process.

Buffalo Mayor Byron Brown hosted two public meetings in December 2010 to encourage city residents to share their thoughts on the future development of Canalside, located within the BOA. These meetings were a follow-up to an online forum that generated over 1,750 ideas for Buffalo's waterfront.

The city has also been engaging its residents on the Green Code – an effort to develop both a new land use plan and zoning ordinance; and the Local Waterfront Revitalization Project, which was initiated in the 1980s but never completed. These meetings have drawn over 5,000 stakeholders, many of whom have shared ideas regarding the land within the BOA.

Finally, ECHDC recently initiated a master planning process for the Outer Harbor, which will include significant public engagement, and be incorporated into the final BOA report.

ANALYSIS

3.1 COMMUNITY AND REGIONAL SETTING

Regional Context

Buffalo is the largest city in Upstate New York; and is the heart of the Western New York region, which consists of Erie, Niagara, Orleans, Genesee, Wyoming, Allegany, Cattaraugus, and Chautauqua counties. Erie and Niagara are the most urbanized of the eight counties, and together form the Buffalo-Niagara Falls Metropolitan Statistical Area.

Buffalo's regional context reflects long-term trends in Erie and Niagara counties. The city's population peaked at 580,000 in 1950, and declined to 261,000 in 2010. In comparison, Erie County peaked at 1,113,000 in 1970, and fell to 919,000 in 2010; while Niagara County peaked at 242,000 in 1960, and was at 216,000 in 2010.

These population declines are largely the result of job losses, particularly in manufacturing, over the past 60 years. The region was historically dependent on manufacturing and shipping for its economic base. Post-WWII, manufacturing underwent a major restructuring, which led to the relocation of industrial facilities outside of the Midwest and Northeast, and later outside the country. In addition, as production techniques became more efficient, employment declined significantly even as the value of manufactured goods remained constant.

In addition to the regional impacts of manufacturing decline, the city was also beginning to experience the effects of wide-spread suburbanization, which affected almost every urban center beginning in the 1950s. The rise of "bedroom" communities outside the historic cores initiated a massive shift in population from cities to suburbs. Yet Buffalo remains the regional center in terms of government, finance, arts, education, and medicine; which provides the city with a strong platform for future growth.

Buffalo's transition from manufacturing to a service-based economy has been slow, but appears to be firmly underway. The University of Buffalo is a major research institution that advances the technological capabilities of the region. The training provided by UB and other higher education institutions represents a significant resource. The Buffalo Niagara Medical Campus and major financial institutions reinforce Buffalo's position as a center of technology to drive the region's growth in the service-based economy.

Western New York also benefits from its relationship with Toronto and Southern Ontario, which offers significant opportunities for growth and development on both sides of the border. Increasing international trade and cross-border relationships have been a long-term trend. Spurred by the North American Free Trade Agreement, the region has become a portal for Canadian businesses seeking to access US markets.

Increased economic activity resulting from bi-national trade is expected to become a future source of growth and development in the region. As Canadian firms seek greater operational efficiencies, it is anticipated that more facilities and jobs will be located on the US side of the border, with Buffalo positioned to capture a significant portion of this growth.

Opportunities and Challenges

The opportunity, as well as the challenge, is to turn Western New York into a "region of choice." In an interconnected world, decisions that affect economic growth are increasingly based on choice rather than necessity. In the industrial economy, decisions on where to locate facilities were based on tangible economic factors such as access to raw materials, proximity to markets, and the cost of transporting goods. Today, employment flows to places based on workforce synergies and quality of life factors. Where people want to live plays a growing role in the relative success of a region.

Quality of life is a broad, somewhat abstract concept encompassing factors such as economics, cost of living, education, public safety, housing, environmental conditions, arts and culture, and recreation. No single place can excel in all areas; yet the goal of all efforts should be to enhance the quality of life within the city and the region.

Opportunities

- Natural resources: The region should maximize its natural resources by making recreation and natural beauty part of the regional lifestyle, and by enhancing and restoring ecosystem function and resilience.
- History and heritage: The region should emphasize historic resources to enhance a sense of place and increase its appeal.
- Cultural diversity: The region's diversity is growing with the number of immigrants and refugees who are calling the city home.
- Urban form: The heritage of the region is manifested in its physical form. The confluence of Lake Erie with the Niagara and Buffalo Rivers dictated the unique development of the city's form; while Ellicott and Olmsted still resonate and represent an opportunity for enhancement.
- Tourism: While Niagara Falls is the region's dominant attraction, there are many other assets that could be leveraged to broaden the appeal of the region to tourists, such as industrial heritage, architecture, arts and music, food and beverage, fishing and hunting, recreation, and natural attractions.
- Transportation: The decline in population has reduced traffic, presenting an opportunity to restructure the system to become more multi-modal and responsive to urban form.
- Workforce: The region's industrial legacy has left a skilled workforce in place, which combined with higher educational opportunities, provides the capacity for renewed economic growth.

Challenges

• Economic diversification: This is well underway, but needs to be accelerated to achieve net economic growth.

- Attracting investment: In recent decades, disinvestment has outpaced new investment. Barriers to
 private-sector investment must be overcome to increase investment at all levels, including legacy
 industrial and commercial contamination.
- Image enhancement: The region suffers from both misconceptions and real concerns regarding quality of life. Positive demonstrations are needed to enhance the image of the city and region.
- Physical restructuring: The economic restructuring of the region will require new land use
 patterns, new neighborhoods, and new transportation systems, such as reconnecting the city to its
 waterfront.
- Addressing obsolescence: Without sacrificing its heritage, the region must upgrade its housing, transportation, and community facilities; and employ best practices and state of the art urban design for ensuring ecosystem prosperity.

3.2 COMMUNITY AND REGIONAL TRENDS

The purpose of this analysis is to identify potential development alternatives within the context of socioeconomic, employment, and real estate trends. Overall, the findings indicate that there are a number of options that could reasonably be considered for future development. However, most of the market and economic indicators are relatively weak at this time, both within the city and the region. Therefore, the rate of new development for any selected use should be expected to occur over many years, possibly decades. Low demand for both residential and nonresidential land uses also suggests that subsidies and incentives will be required to attract developers and investors, at least in the short term.

Demographic Trends

Population and household growth have been constrained by the economic transition from heavy industry to other types of activities. Population changes over the last two decades reflect an overall net loss at both the city and county levels. Although the city's rate of decline has been slowing, projections indicate that little or no growth is expected over the short-term.

The median age of city residents has remained consistently below that of the county. This is at least partially due to the college student population in the city. There are also a higher percentage of residents in the 25 to 34 age group, indicating attractiveness to young households. Where the city share dips is in the 35 to 54 age group, which encompasses the prime child-raising years. Short-term projections anticipate increases in the near-retirement (55 to 64) and retirement (65 and older) age groups.

As with population, the city has seen a loss of 23,500 households over the past two decades. Although the rate of decline is slowing, further losses are projected, with a net decrease of 3,600 households in the city and 6,300 in the county. There should be a small increase in households aged 25 to 34, but this modest demand can readily be accommodated within the existing housing supply.

Median incomes in the city, when adjusted for inflation, remained flat between 2000 and 2010. A similar scenario occurred for the county, indicating that many households are being challenged in meeting the rising costs of goods and services. Projections suggest that the stagnant income levels are beginning to change, with real growth of 13 percent estimated during the first half of the decade. Yet even at these projected levels, the city's median income will represent only 67 percent of the countywide figure.

With respect to housing supply, these trends suggest that demand for new construction will remain weak, although there are market sectors that may provide opportunities for new product. Affordability levels should rise with projected income growth, particularly among older age groups. The need for affordably priced workforce housing will continue to be prevalent in the marketplace.

Employment Trends

Between 1990 and 2013, total employment in Erie County declined from 453,200 to 427,700 jobs, representing a loss of five percent. However, the most recent figure represents a gain of 3,800 jobs from the historic low of the previous year. Private sector jobs represent about 83 percent of the total, and the region has experienced private sector job growth every month since April 2010. The largest employment sectors are health care, retail trade, manufacturing, and accommodations/food services; although other sectors such as administration, professional/technical services, and finance/insurance also account for a notable share of total jobs.

The most recent forecasts project a net gain of approximately 3,700 jobs in the region between 2008 and 2018. Private sector growth is expected to create 4,500 jobs, offsetting a loss within the public sector. All growth sectors combined are expected to add 34,000 jobs. Health care will be the primary employment driver, along wth professional/business services and leisure/hospitality. Educational services are also projected to continue growing through 2018, although at a reduced rate compared to the previous decade.

Like many regions across the country, the country's manufacturing sector recorded the greatest loss over the past decade, with a decline of 23,475 jobs (36 percent). These losses are projected to continue, although there have been some recent successes to point to, such as the auto industry adding 2,300 jobs in the last three years, after shedding more than 11,000 jobs between 2008 and 2010.

The lack of population growth and an aging workforce also represent an economic development challenge, since it will force businesses to be more aggressive in attracting workers. This suggests that efforts will need to focus on retraining the existing workforce to support shifts into new and emerging industry sectors as part of on-going economic diversification planning.

Sector Trends

Employment sectors that offer the best potential for growth include front office/producer services, information technology, biomedical, industrial machinery and services, food/materials processing and distribution, back office/outsourcing, and travel and tourism.

- Professional and technology establishments are potential users of business parks, particularly if expanded relationships can be established with area research facilities to help support growth in these sectors. These firms require both office space and specialized flex-building space for research and development activities. Firms that design software or manage internet services generally have few employees and are not location dependent. High-speed internet linkages are necessary, and demand for electrical supply may also be high for data hubs.
- Biomedical includes the manufacturing sector producing pharmaceutical, nutraceutical, and
 cosmeceutical products; research and development of physical, engineering, and life sciences; as
 well as medical equipment development and manufacturing. New or expanding firms in this
 cluster will most likely want to locate near research centers and existing campuses as a first
 choice.
- Industrial machinery has been a mainstay of the region's manufacturing base, but national trends suggest that this cluster is not expected to be a source of significant future employment growth. However, the labor force from this cluster provides an asset for diversifying the sector towards advanced manufacturing with industries that produce high technology goods or use advanced technologies to produce goods.
- Processing and distribution represent several industry sectors that combine to offer a dynamic relationship between the processing facilities and distribution network. These rank relatively low in terms of regional employment, but offer future growth potential based on national trends. Sustaining and growing these clusters will be dependent upon a number of factors, one of which is a strong and integrated distribution network. Buffalo is in a prime location to become more of a logistics hub due to its access to rail, water, road, and air transportation systems. Increases in energy costs are fostering a resurgence of freight rail as a means of moving goods over long distances. The region occupies a strategic position on an international border, with the potential for developing logistics facilities.
- Back office and outsourcing includes telephone answering centers, telemarketing, and credit bureau operations. These uses could be readily integrated into a professional office park or within renovated commercial or industrial buildings. These types of jobs do not generally require a high skill level, so could potentially draw from the large number of service sector employees in the area.
- *Travel and tourism* is the third largest source of employment in the region, totaling about 25,000 jobs in 2010. This cluster is one of the most diverse, encompassing accommodations; cultural, recreational, and amusement facilities; food service facilities; passenger transportation services; and travel-related retail sales.

Market Trends

Industrial

At the end of 2013, the industrial market in Erie and Niagara counties included an inventory of 64.6 million square feet. Manufacturing uses occupied half of this inventory, with warehouses accounting for another 36 percent and flex space the remaining 14 percent. For 2013, net absorption totalled 2.5 msf. This resulted in a decline in the overall vacancy rate from 9.2 to 5.7 percent. The current vacancy rate among industrial buildings is less than half the national rate of 11.7 percent.

Between 2000 and 2010, new industrial construction totaled approximately 3.4 msf, for an average annual absorption of 280,000 sf. New construction in 2013 totalled 241,000 sf, which represents a rise from the average of 100,000 sf per year added in recent years.

Only 14 percent of the region's industrial inventory consists of owner-occupied buildings, indicating that supply is primarily driven by developers. As a result, new construction will likely require pre-leasing or financial incentives, since speculative development will be limited due to the slow projected employment growth over the short-term.

The city submarket, which encompasses all areas south of the Scajaquada and Kensington Expressways, contains 12.1 msf of industrial space, and had a 2013 vacancy rate of 6.3 percent. Almost 1.5 msf was absorbed during that past year, leaving a total of 766,000 sf available. In addition, 100,000 sf of new manufacturing space was constructed during the year, representing over 40 percent of the regional total.

The land supply in Buffalo and the region is presumed to be adequate to support demand for new industrial construction. However, much of this land is not in premier locations, and will need upgraded infrastructure as well as financial incentives to compete with more marketable, shovel-ready locations such as Buffalo Lakeside Commerce Park.

Office

The regional office market has an inventory of approximately 33.4 million square feet, with roughly 39 percent in Class B, 23 percent in Class A, 21 percent in Class C, and 17 percent in flex office. Very little of the region's office inventory is owner-occupied, estimated at just over 50 buildings containing 850,000 sf.

Over the past several years the regional office market has been relatively stable from a vacancy perspective. Construction and absorption of new office space has recently become more sluggish, indicating that speculative development has slowed due to uncertainty within the economy and employment losses in sectors that typically drive office demand. The overall regional vacancy rate for all office classes (A, B, and C) rose from 10.4 percent in 2012 to 13.7 percent in 2013. The vacancy rate remains below the national level of 15.1 percent.

The city's office inventory includes approximately 16.9 msf, or just over half of the regional supply. Over three-quarters of the city's inventory is located in the Central Business District, with over 13 msf. The

CBD had a vacancy rate of 11.7 percent in 2013, which is an increase over prior years. Much of this can be attributed to the loss of tenants at One Seneca Tower, which placed 700,000 sf on the market.

While office completions nationally remain below historic averages, the city continues to post positive construction activity. New construction at One Canalside, Catholic Health, and Compass East indicate continued faith in this market.

Retail

The regional retail market had a 2013 inventory totaling approximately 26.2 million square feet. This includes freestanding stores, malls, and shopping centers. The overall vacancy across all these facilities was 11.6 percent, which represents the lowest rate in more than 10 years, and is below the national average of 12.3 percent. Across the region, net absorption over the past year increased in all submarkets, totalling 423,000 sf.

Throughout the nation, the amount of retail shopping development is at historically low levels. Construction in the region totalled just 217,000 sf, or less than one percent of the existing inventory. Even with this small amount of new retail added to the mix, the overall supply declined by 21,500 sf. Redevelopment and repurposing is a trend that continues to gain traction.

In contrast to industrial and office markets, the city contains less than 10 percent of the regional retail inventory. Retail in the city underperformed the rest of the region, with a vacancy rate of 16.2 percent. On the positive side, there was net absorption during 2013 of over 37,000 sf in the city, which brought the vacancy rate down by almost three points.

Residential

The median value for owner-occupied houses in Erie County rose from \$88,200 to \$123,400 between 2000 and 2012. Sales prices have risen steadily since 2000, with very little volatility. The average annual increase has been between 3 and 4 percent, with only a few years where growth exceeded or fell below this rate.

In the city, single-family home sales over the last four years totaled just over 2,800, representing a turnover rate of about 1.5 percent of the inventory. The median value of an owner-occupied home in the city is around \$66,700, which is considerably lower than the countywide figure. There have been about 40 annual sales in excess of \$300,000, but almost half of all home sales have been in the \$50,000 to \$100,000 range.

Duplexes comprise a significant portion of the city's for-sale market, which is not surprising given that this type of housing represents 40 percent of the total inventory. Over the four year period, duplex sales averaged 536 per year, for a turnover rate of about 1.9 percent. Duplexes represent about 28 percent of the city's owner-occupied units, offering a more affordable entry into the homeownership market.

Condominium sales ranged from under \$100,000 to over \$1.5 million, depending on location, type and size of unit, and amenities offered. Almost all were located in the CBD, and close to half of the listings were waterfront properties offered in excess of \$300,000. Away from the waterfront, properties were generally listed under \$250,000, although exceptions were found for luxury high-rise units or converted historic properties.

Rental housing represents about 60 percent of the city's stock, and units had a median contract rent of \$450 in 2010. The 10 percent vacancy rate is roughly twice that found under normal market conditions, indicating considerable weakness from a demand perspective. However, a report that examined the housing market in downtown Buffalo found low vacancy rates for apartments, many of which were fully occupied. These indicators suggest that demand is strong for better quality, appropriately positioned rental properties.

The city issued building permits for 1,560 new housing units between 2000 and 2013, with multi-family dwellings accounting for 875 and single-family 685. Buffao's building activity represented about 7 percent of the county's 22,740 permits. The limited amount of new construction indicates both a lack of demand as well as the inability of developers to build new units at a price that can be supported within the current market.

Census data indicates that the city experienced a net loss of 12,130 housing units between 2000 and 2010, a decrease of over 8 percent. The city's vacancy rate remained stable at just under 16 percent of all housing units. A more proactive effort will required to reduce the remaining vacant supply since the market will not be able to absorb the excess supply of 20,000 housing units through normal growth.

Market Opportunities

Industrial

Based on employment projections and targeted sectors for the region, flex/office buildings and other small-scale professional/general office space appear to offer reasonable development potential. These types of facilities can be planned and developed in an incremental manner that allows the building supply to grow as market demand dictates. Vacancy for flex buildings is relatively high at this time, which is likely to limit speculative development in the short-term.

However, industry growth projections and anticipated support from state and regional agencies to grow businesses in these clusters suggests that they could provide a viable component of future land use. Flex buildings are also more easily integrated into mixed-use business parks since they are less obtrusive than traditional manufacturing facilities.

The availability of rail access is also likely to be a positive attribute for supporting new construction, as well as the re-use of existing manufacturing/warehouse facilities, if regional economic plans to promote food/materials processing and multi-modal distribution facilities continue to receive support and incentives.

Office

The regional office market is relatively strong but demand for new construction will probably remain modest over the next few years. Based on recent absorption levels, the CBD has a 10 to 12 year supply of available space. However, continued renovation of the city's existing building inventory into higher quality space may lessen demand for new construction to some degree. Vacancy in the remainder of the city is less than 500,000 SF, but continued negative absorption would suggest that its predominantly Class B inventory will need to continue to offer competitive lease rates in order to sustain occupancy levels.

Given these market conditions, the demand for conventional office buildings is expected to be relatively modest. Competition for office development would come from existing and future development in the city's Larkin District which is successfully attracting office and mixed-use projects.

Retail

The demand for any sizeable square footage of additional retail is probably the most questionable of all the potential nonresidential market uses. The CBD is the city's strongest retail area and it appears as though demand there will remain moderate for the time being, with renovated space offering more potential than new construction. Some retail nodes could potentially be added at strategic locations that have the best highway access and as such, will not be totally dependent on local households to support sustainable sales levels. Any new retail facilities offering general merchandise would likely be created at the expense of existing businesses, since total retail demand is not expected to grow substantially given the low projected growth in regional population and employment levels.

Residential

The demand for new residential development in the city has been moderate, and low population growth is not expected to result in any marked changes to this trend over the short-term. Given the anticipated changes in the regional population over the next half decade – growth mainly concentrated in the near-retirement and retirement age groups and only modest increases in younger households – housing demand and development trends are not expected to change significantly.

Given these findings, potential demand for housing is likely to be focused within the following market niches:

- Senior/retirement housing this could include senior apartment complexes, retirement villages offering a variety of housing types, and assisted living facilities. Projected increases in income levels for these age groups suggest that they may be able to afford somewhat higher housing costs if they choose to downsize into a retirement-oriented dwelling. An estimated 7,000 households will be entering this market segment in Erie County over the next 10 years.
- Rental housing for younger households the county's population between 25 and 34 is projected to increase by about 2,000 households over the next five years. Although this does not represent a huge potential increase in demand, the city does have a relatively larger percentage of its

- population in younger age groups overall. Housing development targeting this market segment will most likely occur at the expense of the city's existing stock, which is presently capturing these households.
- Luxury condominium/rental housing although not a major component of the city's housing market, these types of units have met with success along the waterfront and downtown, although absorption has been relatively slow overall. Waterfront property is almost always a sought-after commodity in the housing market, so it is reasonable to conclude that some portion of future land use could capitalize on this fact, especially if suitable amenities are offered. Absorption is likely to remain slow, based on historical trends, and therefore, such housing may need to be part of a mixed use development in order to attract investment from the private sector.

3.3 BOA TRENDS

Demographics

The Buffalo Harbor BOA grew by about 550 people between 1990 and 2000, likely due to the development of residential units in Waterfront Village. The following decade witnessed a decline of about 40 people, bringing the population to 2,920 in 2010. The number of households has remained at 1,570 since 2000. For the purposes of this analysis, it is reasonable to describe the BOA as relatively stable in terms of population.

Median household incomes (measured in constant 2010 dollars) declined slightly between 1990 and 2010, going from \$23,500 to \$22,500. This was about \$9,000 lower than the citywide median, and \$20,000 lower than the countywide figure. Almost 80 percent of all households in the BOA make less than \$50,000 annually. Although the median income for the BOA lags behind that of the city, the percentage of households earning \$100,000 or more is twice that of the citywide average. This wide variation likely results from the presence of high-priced residential units on the waterfront and public housing inland, with little housing occupying a middle ground between the two.

Property values in the BOA tend to be high in comparison with other city properties located outside of downtown. Per square foot values are highest among single-family residences, averaging \$125 per square foot. This is almost three times higher than the citywide figure, and can be attributed to the presence of high end housing along the lakefront. Mixed-use properties also have significantly higher average values than the city as a whole. The lowest values were found in 2 to 3 family residential and industrial properties.

Vacant commercial land had the highest value at almost \$350,000 per acre, followed by undesignated vacant land at \$250,000 per acre, vacant residential land at \$180,000 per acre, and vacant industrial land at about \$22,000 per acre. With the exception of vacant industrial land, the assessed value per acre was many times higher in the BOA than the city as a whole. These high assessed values can be attributed to the proximity of the BOA to both the waterfront and downtown.

In terms of total square feet, more than half of the BOA consists of three uses – industrial, office, and retail. Apartments represent another 16 percent, while uses such as transportation, recreation and entertainment, and utilities add another 15 percent.

Residential Market

The BOA is a renter-oriented housing market, with 85 percent of units being rentals. This is not uncommon for areas close to downtowns. It also has almost twice as many rental units going for less than \$250 a month than the city. This share comprises almost 30 percent of all BOA units. An additional 35 percent of apartments in the BOA rent for \$250 to \$499, compared to about 50 percent citywide. The vacancy rate increased by two percent between 2000 and 2010, bringing it in line with the city's overall rate of 16 percent.

According to data provided by the Assessor's Office, there were no valid residential sales in the BOA between 2007 and 2010. New residential development since 2000 has been limited, and includes mainly condominium-style housing. According to assessment records, there were 60 condominium units built in Waterfront Village, with values ranging from \$230,000 to \$1.3 million. The average value was \$480,000, and with units ranging between 1,360 and 2,600 square feet, the per square foot value averaged \$183.

Nonresidential Market

There were 15 office properties listed during 2012, at an average of \$14 per square foot. This is about \$1.50 lower than the CBD average, but almost \$5 higher than the citywide average. Spaces ranged from 2,500 square feet to 20,000 square feet, and totaled just over 100,000 square feet. Retail rents averaged \$10 per square foot, which is roughly the same as in the CBD, and about \$3.50 higher than the citywide figure. The size of these spaces rangef from 8,400 square feet to 12,700 square feet. While there are other factors involved in demand beyond lease rates, this data suggests that the BOA falls somewhere between the CBD and the rest of the city as a preferred location for office-based businesses, and on the higher end of desirability for retail space.

According to the city's assessment database, there was one valid transaction of commercial property between 2007 amd 2010, a 7.4 acre vacant industrial site on the Outer Harbor. It was sold by Cargill to the BBRC Land Company in 2008 for \$423,500, or about \$57,500 per acre. This is about 75 percent lower than the citywide average sale price per acre for vacant industrial land. The lack of transactions during this period was likely influenced by recessionary forces, but still represents a relatively minimal level of demand.

There have been two projects developed within the BOA since 2000 – a major office complex occupied by Health Now on West Genesee; and the Templeton Landing restaurant on Templeton Terrace. The former is a 960,000 square foot office facility, while the latter is a 21,400 square foot restaurant. The building values of both of these properties are quite high, at \$72 to \$73 per square foot. The Health Now building is ideally located near the downtown, while the restaurant is located at the Erie Basin Marina.

One Canalside, located at 125 Main Street, recently underwent a \$30 million renovation by Benderson Development. The project involves the removal and replacement of the building's façade, and interior work to convert the structure into office space and a hotel. At the intersection of Main and Scott streets, surface parking at the Webster Block is being replaced by HARBORcenter. This \$170 million development includes two hockey rinks, a 200-room hotel, retail and restaurant space, and a 750-space parking deck. It is scheduled for completion in 2015.

4 INVENTORY

The purpose of this section is to provide a better understanding of existing conditions; clarify the regulatory framework; recognize opportunities and potential barriers to redevelopment; and identify assets and opportunities that can leverage investments.

4.1 NATURAL RESOURCES

The BOA is situated along nearly four miles of Lake Erie shoreline, and contains a number of natural resources associated with the waterfront. The northern section is primarily comprised of commercial uses, residential properties, and dedicated parkland. Areas along the Outer Harbor consist mostly of vacant former industrial parcels that presently serve as open space. Many of the former industrial sites, including several large parcels owned by NFTA and the Holcim Cement Plant Company, contain acres of previously disturbed but currently undeveloped scrub-shrub uplands and meadows.

Geology

The BOA is generally composed of laminated layers of silt and clay, deposited in lakes when glaciers covered Western New York. Lacustrine silt and clay contains calcareous soil with low permeability, resulting in the potential for land instability.

A small portion of the BOA, in the vicinity of Seventh Street and immediately west of City Hall, may also contain outwash sand and gravel deposits. These geological deposits are comprised of coarse-to-fine gravel and sand, resulting from fluvial deposition from glacial lakes. The surficial deposits likely have been disturbed by urban development activities and additional geological studies would be warranted for properties being considered for redevelopment.

The depth to bedrock in the BOA varies from 15 to 70 feet below grade. The majority of the BOA is underlain by Onondaga limestone bedrock. This consists of a 390 million year-old formation made up of hard and erosion resistant bedrock stretching from Buffalo to Albany. The bedrock in the remainder of the BOA, south of the Small Boat Harbor, is comprised of the Marcellus Formation, Oatka Creek Shale member.

Soils

According to the Soil Survey of Erie County, there are three prominent distinct soil types in the BOA. The majority of soil material is mapped as Commercial soil type. Most of these areas have been significantly disturbed through previous residential, commercial and industrial construction activities. In most cases, this soil type is completely covered with buildings, paved surfaces, demolition fill, capped remediation areas or other man-made materials. These areas include landfills, former marshes, and floodplains. Careful onsite investigation is essential to determine the suitability and limitations of any abandoned areas for any proposed use.

Large areas, generally located near industrial sites, urban developments or construction sites, are covered with Fill soil type. These soils consist of various kinds of excavated earthy material that has been stockpiled for use as fill for topdressing, soil and rock material that has been trucked from other areas and leveled, or soil deposits that are left in areas that have been excavated or deeply scalped. In some places the fill is mixed with slag or cinders, in other places the fill is mixed with concrete or asphalt and other trashy wastes. Onsite investigation is essential to determine the feasibility of using these areas for any purpose.

Small portions of the BOA are mapped as Haplaquolls, Ponded, and are associated with the Times Beach Nature Preserve and an area near the Bell Slip. Soils in this series are very poorly drained and associated generally with inundated marshlands. Slopes in this series are generally flat, and the soil is composed of black loamy silt with a high organic content. This soil is generally considered to be poor for building construction and site development and would require the installation of drainage measures to be usable.

[Map 2]

Topography

At 570 feet above mean sea level, the Lake Erie shoreline serves as the lowest elevation in the BOA. Since most of the land along the shoreline has been filled, graded and developed, the topography in the BOA is fairly level. The highest point is located near the intersection of Niagara and Carolina, at an elevation of 598 feet above mean sea level. Elevation drop-offs of 8 feet or more are evident along the waterfront due to the presence of concrete bulkheads. Nearly all of the Outer Harbor shoreline is reinforced in this manner, with the exception of the Outer Harbor Greenway, the Small Boat Harbor & Park, and Gallagher Beach. [Map 3]

Surface Water

Surface water is one of the most important assets of the BOA. Commerce, industry, and recreation have all centered on Lake Erie, the City Ship Canal, and the mouth of the Buffalo River. Use and development of surface waters have historically supported economic development in the immediate area and the region.

Prior to industrialization and commercialization, the BOA shoreline was dominated by wetland marsh, and the Buffalo River channel was less than 5 feet deep. To capitalize on lakefront access for shipping, marshlands were filled and riparian zones replaced by hard seawalls. Water transport for industrial uses was accommodated by dredging navigation channels and canals, allowing access for large lake freighters. Due to this past development, surface waterways have been impacted by shoreline degradation, combined sewer overflows, and industrial and surface discharges and spills.

Map 2: Soils



LEGEND

- BOA Boundary
- Hn Haplaquolls, Ponded
- Ud Urban Land

Map 3: Topography





Lake Erie

Lake Erie is the fourth largest Great Lake, encompassing nearly 9,940 square miles and bordering four states and one Canadian province. The BOA fronts on approximately four miles of Lake Erie shoreline. The Outer Harbor is separated from Lake Erie by a seawall that was constructed in 1867 to protect the city from violent storms. The BOA is located in the Buffalo River-Frontal Lake Erie sub-watershed, which covers 165 square miles of Erie County.

Lake Erie is a major navigable waterway, with large cargo ships traveling from the interior Great Lakes to Lake Ontario, the St. Lawrence Seaway, and the Atlantic Ocean. Jurisdiction over shipping, navigation and law enforcement is provided by the Army Corps of Engineers and the Coast Guard, that latter of which maintains a station located at the confluence of Lake Erie and the Buffalo River.

Buffalo River

The mouth of the Buffalo River is centrally-located within the BOA. The Buffalo River watershed begins in headwaters over 30 miles away in the Towns of Sardinia and Concord, slowly meandering north and west before emptying into Lake Erie between the Coast Guard Station and the Erie Basin Marina.

The Buffalo River is a navigable waterway from Lake Erie to the Exxon-Mobil site, located just west of the River's confluence with Cazenovia Creek. The Corps actively monitors conditions on the River and periodically undertakes dredging activities in order to maintain the navigation channel and ensure that it remains passable for water transport.

The Buffalo River is classified as a "Class C" water body, defined by NYSDEC as a water body most suitably used for fishing and fish, shellfish, and wildlife propagation and survival. The water quality is also suitable for primary and secondary contact recreation, although other factors may limit the use for these purposes. The portion of the Buffalo River located in the boundary of the BOA is designated a Great Lakes Area of Concern.

City Ship Canal

The City Ship Canal, also known as the Buffalo Ship Canal, is located between Kelly Island and the Outer Harbor. It was constructed in 1850 to provide additional mooring and dock space for the boats traveling between Lake Erie and the Buffalo River. The canal was also used by businesses to transport goods from the grain elevators to destinations across the country. The canal remains active, used by businesses such as First Buffalo River Marina, RCR Yachts Marina, China Light Yacht Club, and General Mills. The City Ship Canal is classified as a "Class C" water body, and is part of the Buffalo River AOC.

A portion of the City Ship Canal is a federal navigation channel. The authorized portion of the navigational channel is 125 feet wide and 5500 feet in length, with a depth of 23 feet. Minimum depths due to shoaling have been recorded at 18 feet. The City Ship Canal contains four docks: General Mills,

Toledo Dock Exchange, Buffalo Dock Forwarders, and ADM Milling Company. Several industries located on Kelly Island rely on lake freighters for the shipment of goods into and out of the canal.

Union Ship Canal

The Union Ship Canal is located between Holcim Cement and the Gateway Trade Center at the southern tip of the BOA. It was constructed to provide freighter access inland to the Susquehanna Iron Works and later, the Hanna Furnace Corporation. The Union Ship Canal is classified as a "Class C" water body.

Groundwater

No primary, principal, or sole source aquifers are located in the BOA. There are no known uses of groundwater in the city. Environmental assessments at a number of properties located in the BOA have indicated that the ground water has been impacted by industrialization, storm water runoff, and chemical/petroleum spills.

Wetlands

Thriving wetlands provide flood and stormwater control, wildlife habitat, and groundwater filtration. The Army Corps of Engineers is the federal agency entrusted with regulating all jurisdictional wetlands within the United States. The Department of Environmental Conservation also provides regulatory oversight of wetlands in the state that are 12.4 acres or larger, or those with special environmental characteristics. The BOA contains one wetland complex that falls under the jurisdiction of the Army Corps of Engineers and the NYSDEC, at Times Beach Nature Preserve.

The Times Beach Nature Preserve, a popular bird watching area, is a former dredge spoil containment area that has been remediated, opened to the public and reverted to a more naturalized state. Most of the preserve is comprised of marsh, wetlands, and upland areas through which trails and interpretive signs have been installed. [Map 4]

Floodplains

The BOA is primarily located within the 500-year flood inundation area, where chances of flooding are minimal. Several portions, fronting the Outer Harbor and along the Buffalo River, are located within the 100-year flood inundation area, and have a one percent annual chance of a flood occurring. Parcels within this area include the Erie Basin Marina, Coast Guard Station, Times Beach Nature Preserve, the NFTA property on the Outer Harbor, Small Boat Harbor, and Holcim Cement. Future development scenarios will be affected by the location of these 100-year floodplains, as building location, design, and stormwater retention will need to meet local, state and federal requirements. [Map 4]

Map 4: Wetlands and Flood Hazard Areas





Erosion Hazard Areas

There are no designated Coastal Erosion Hazard Areas along the Lake Erie or Buffalo River waterfronts within the BOA. Most properties along these water bodies are protected from erosion by the prior installation of concrete bulkheads, steel pilings, or riprap along the shore.

Fish and Wildlife Habitats

The BOA provides important habitat for many species of fish and wildlife. The close proximity of Lake Erie provides ample opportunity for fish habitat and waterfowl migration. Over 40 native species of fish have been observed. The BOA lies along the direct path of a "globally significant" Important Bird Area. The Niagara River corridor was the first globally significant IBA to be jointly identified by cooperating nations. Habitat areas along the water's edge are crucial for many bird species as they pass through on their northern migration pattern.

The State Department of Environmental Conservation has listed 15 endangered species that have historically inhabited the BOA. According to the US Fish & Wildlife Service Inventory of Threatened and Endangered Species, no federally-listed species are currently found in Erie County. Non-endangered wildlife typically found within the BOA includes amphibians, snakes, and mammals. Fish and wildlife habitat in the BOA is impacted due to development activities on waterfront lands and routine dredging of the harbors and navigation channels. Three habitat restoration projects have been completed, bringing an additional 2,165 linear feet of shoreline into productive habitat; and six more projects are in the restoration or design phase.

The Significant Coastal Fish and Wildlife Habitats program serves to protect important fish and wildlife habitats that contain a unique combination of environmental and biological conditions which fish and wildlife need for survival. The Times Beach Nature Preserve was designated a SCFWH in 1987 and is one of the few large, diverse coastal wetland areas on Lake Erie. It has four distinct habitat zones: silt flat, marsh, woodlands, and uplands. According to the Buffalo Audubon Society, 219 species of birds have been recorded at Times Beach. The Small Boat Harbor was also designated as a SCFWH in 1987. It is one of the few places on Lake Erie that provides protection for fish and wildlife from the harsh weather and waves of Lake Erie. Despite the boat traffic and hardened shoreline, several plant, fish, and wildlife communities are thriving in the harbor.

There are a number of other important fish and wildlife habitats in the BOA. The City Ship Canal and the shallows around Kelly Island and the Bell Slip all provide habitat for fish, amphibians, and invertebrates. The City Ship Canal also provides cover and as a nesting, spawning and resting place for waterfowl and fish. Native shoreline and aquatic vegetation have naturalized the western edge of the canal south of the active ADM industrial area.

Air Quality Maintenance Areas

Places that persistently violate national ambient air quality standards are designated as "non-attainment." With a concentration of 0.081 parts per million as of 2008, the City of Buffalo is a designated a "non-attainment area," with ground level ozone concentrations in excess of the 0.075 parts per million ambient air quality standard set by the EPA.

Visual Quality

Most of the properties in the BOA offer unobstructed views of Lake Erie. The elevated Route 5/Skyway complex is part of the Great Lakes Seaway Trail, one of the first roadways designated as a *National Scenic Byway*. The Skyway provides views of the lake and city skyline. The historic buildings, grain elevators, and bridges offer visitors a view into the past, when Buffalo was one of the largest industrial cities in the country. The configuration of industrial heritage complexes and the BOA's location on the waterfront presents a unique visual experience.

Upland Natural Resources and Open Space

While the northern section of the BOA is primarily comprised of existing commercial uses, residential properties, and dedicated urban parkland, areas to the south along the Outer Harbor consist largely of former industrial parcels that now serve as lakefront open space. For several decades the Times Beach Nature Preserve was a dump site for contaminated dredge spoils before being protected and allowed to revert to a more naturalized state. Although most of the preserve is comprised of marsh and wetland ecosystems, it also contains a significant amount of upland areas through which trails and interpretive signage have been installed. Additional upland open space opportunities exist within the BOA. Many former industrial sites, including several large parcels owned by New York State and Holcim Cement, contain acres of previously disturbed but currently undeveloped scrub-shrub uplands and meadows.

Agricultural Lands

No agricultural land uses are located within the BOA.

Local, State and Federally-Designated Resources

The Great Lakes Seaway Trail, a 518-mile long National Scenic Byway established in 1978, follows Routes 5 and 266 (Niagara Street) through the BOA.

4.2 INFRASTRUCTURE

Electric

Visual inspection utilizing aerial photography indicates that there is acceptable coverage via overhead electrical service for portions of the BOA south of downtown. Areas on the extreme southern end of the Outer Harbor appear to be underserviced, and new development may require that service be supplied from overhead lines located to the east. Capacity problems have also been reported on Kelly Island. The downtown area is serviced by underground distribution lines. The current density and intensity of development in the downtown core suggests sufficient access to electrical capacity for new development.

Natural Gas

Mapping and system information for the privately owned and managed natural gas network was not available for review. Correspondence with National Fuel did reveal that the industrial and extensive development present in the BOA would likely indicate an above-average capacity to support future development. The engineering department at National Fuel felt confident that the BOA was within sufficient distance of an existing supply main with available capacity to support future development.

Water

The water system in the BOA consists of public and private infrastructure, with pipe sizes ranging from six to 48 inches. All public water for the city is obtained from the Niagara River via the Colonel Francis Ward Pumping Station located on Porter Avenue. The BOA is well-serviced by potable water, with public water supplies available to all properties. The only private water service is a 16-inch line located along Ganson Street servicing the General Mills complex at the northern end of Kelly Island.

The BOA is supplied by a 48-inch water main that loops through the city, with two parallel branches that travel south from the pump station, converge at Canalside, and continue southeast along Perry Street. A large 36-inch main branches off to supply water to the Erie Basin Marina and Marine Drive Apartments. A 16-inch main along Chicago Street parallels a 10-inch line along Michigan Avenue; the two lines meet and cross onto Kelly Island and service the southern waterfront as a 16-inch main. [Map 5]

Sanitary Sewer

The sanitary sewer system includes separate sanitary sewers, combined storm and sanitary sewers, large interceptor sewers, and pump stations. Most sewer infrastructure in the BOA is located within public rights-of- way. Sanitary sewer service is provided by the Buffalo Sewer Authority via a waste water treatment plant located on Bird Island. [Map 6]

Map 5: Water Infrastructure



Map 6: Sewer Infrastructure



Separate Sanitary Sewers

Separate sanitary sewers service a significant portion of the BOA, including the Inner Harbor and adjacent areas south and west of I-190. The separate sanitary sewer system consists of 6.3 miles of pipe, ranging from six to 36 inches in diameter. The system conveys flows to large interceptor sewers that direct sewage north to the treatment plant. The Inner Harbor and Canalside are serviced by a separate 36-inch sanitary main, while service to the Erie Basin Marina is accomplished through a series of separate sewers along Lakefront Boulevard, Erie Street, Ojibwa Circle, and La Riviere Drive.

Another separate 10-inch sanitary sewer service terminates at the Small Boat Harbor. BSA does not have any sanitary sewers south of this location. There are sewers along the Ship Canal Parkway, adjacent to the unserved area, that are serviced by Erie County Sewer District #6 in Lackawanna. To support future development on the waterfront an extension of this service may be feasible. However, the present sewers ranging from eight to 12 inches in diameter, may not be sufficient to support significant additional growth beyond that anticipated at Lakeside Commerce Park.

Combined Sewers

The city also uses a combined sewer system that collectively conveys sanitary and storm sewage. The system receives sanitary sewage from building sewers and stormwater from street, parking lot, and roof drains. The local systems carry sewage to interceptor sewers that combine flows from large portions of the city, eventually conveying the combined sewage to the treatment plant on Squaw Island.

The BOA is serviced by five miles of combined sewer, ranging from ten to 60 inches in diameter. Combined sewer services the areas north of I-190, and most areas south of I-190 and east of the Buffalo Skyway (Route 5).

During dry periods, most of the flow in the combined sewer consists of sanitary sewage. However, when it rains the system also collects stormwater. During heavy rainfall or snowmelt, the combined sewer system may not have the capacity to convey these flows, and the treatment plant does not have the capacity to treat the excess volume. To mitigate the lack of capacity, Combined Sewer Overflows are used to prevent sewage from backing up into streets and buildings.

There are several areas where the combined sewer system is connected to a CSO, including South Park Avenue, Perry Street, Scott Street, Michigan Avenue, and areas adjacent to the Adam's Mark Hotel. Connection to the CSO indicates that the sewer service in this area is insufficient to meet peak demands during a rainfall event.

CSO outfalls are points where wastewater and storm water from a combined sewer system are discharged directly into a water body without treatment. CSO's are directly responsible for the degradation of water quality in many of Buffalo's water bodies. In periods of heavy precipitation or snowmelt, storm water carries pollutants from streets and properties and waste water carries human waste and bacteria directly into Lake Erie through the combined sewer system.

There are four CSOs in the BOA. No. 014, No. 015, and No. 016 discharge directly into the Erie Basin alongside Waterfront Village; while No. 017 discharges into the Commercial Slip at Canalside. The sewer shed for No.015 covers 339 acres and averages 15 overflows a year. No.016 covers 33 acres and averages 97 overflows a year. No.017 covers 1465 acres and averages 133 overflows a year. Compounding the pollution impacts of these four CSOs are the additional stormwater and sewer overflows that are generated upstream in the watershed.

Initiatives to reduce or eliminate these CSOs, including the Buffalo Sewer Authority's *Long Term Control Plan* and Buffalo Niagara Riverkeeper's *Green Infrastructure Solutions to Buffalo's Sewer Overflow Challenge Draft Feasibility Study*, have been undertaken over the past decade in an effort to improve water quality within the BOA. CSO abatement measures have been identified and will be implemented as part of the LTCP. In addition to traditional grey infrastructure stormwater-sewer pipe separations, proposed projects include a host of blue and green infrastructure proposals, including utilizing vacant lands for stormwater management.

Interceptor Sewers

An 11-foot diameter interceptor sewer travels along Exchange Street where it joins with a smaller branch from the Canalside area and continues northwest beneath I-190. This infrastructure is largely located within public rights-of-way controlled by the NYS Department of Transportation.

Pump Stations

The separate sanitary, combined and interceptor sewers all flow below grade via gravity. To overcome the depths required for gravity flow, pump stations are used to lift sewage. The Skyway Pump Station is located at the intersection of Main Street and South Park Avenue, and services the Lake Erie waterfront, the Outer Harbor, and Kelly Island. The Fuhrmann Pump Station is located on Fuhrmann Boulevard, just north of the new roundabout, and services development south along the waterfront.

Storm Sewer

Stormwater is water from rain or melting snow that does not soak into the ground. It flows from rooftops, over paved areas, bare soil, and sloped lawns. As it flows, stormwater runoff collects and transports soil, animal waste, salt, pesticides, fertilizers, oil and grease, debris and other potential pollutants. Rain and snowmelt wash pollutants from streets, construction sites, and land into storm sewers and ditches. Eventually, the storm sewers and ditches empty the polluted stormwater directly into streams and rivers with no treatment. This is known as stormwater pollution.

Polluted stormwater degrades our lakes, rivers, wetlands and other waterways. Nutrients such as phosphorus and nitrogen can cause the overgrowth of algae resulting in oxygen depletion in waterways. Toxic substances from motor vehicles and careless application of pesticides and fertilizers threaten water quality and can kill fish and other aquatic life. Bacteria from animal wastes and improper connections to

storm sewer systems can make lakes and waterways unsafe for wading, swimming, and fish consumption. Eroded soil is a pollutant as well. It clouds the waterway and interferes with the habitat of fish and plant life.

The storm sewer system is composed of separate storm sewers, combined sewers, storm overflow sewers, and storm sewer outfalls. Storm sewers are managed by the Buffalo Sewer Authority, which has adopted a storm water management plan pursuant to state and federal requirements. [Map 6]

Separate Storm Sewers

There are 4.6 miles of storm sewer located in the BOA. Generally, the areas of greatest need for storm sewers have the highest levels of impervious surface coverage. Impervious surfaces prevent rainfall from being absorbed into the ground, instead channeling it along the surface. The storm sewer system seeks to capture this flow and convey it directly into a separate storm or combined system, with an ultimate outfall to Lake Erie or the Buffalo River.

The storm water generated during heavy rainfall events requires significant storm water management capacity, beyond that currently supplied by combined sewers. To prevent the combined sewer system from being overwhelmed during rainfall events, the city has employed CSOs to capture flows beyond the system's capacity.

Storm Sewer Outfalls

The Buffalo River and Inner Harbor are the only outfall locations for the CBD and significant portions of the city south of Genesee Street. There are 10 storm sewer outfalls within the BOA; six of which carry combined sewer overflows. An \$18 million filtration system was recently installed at the outfall of the Hamburg Drain along Hanover Street, and is anticipated to significantly improve water quality within the Inner Harbor area.

4.3 TRANSPORTATION

The BOA is strategically located near several distinct yet interconnected transportation modes. The roadway system used for private and public transportation is augmented by a comprehensive off-road pedestrian and bicycle network that draws many to the waterfront. The BOA also includes a portion of the public passenger rail system, as well as portions of freight rail lines used by industrial sites.

Pedestrians and Bikes

The BOA contains a comprehensive network of off-road pedestrian and bicycle paths. The northern portion is served by the Niagara Riverwalk, which enters from La Salle Park, extends south around Waterfront Village and the Erie Basin Marina, crosses the Commercial Slip via a Whipple Truss Bridge, and continues east along south Park Avenue past the First Niagara Center.

The Fuhrmann Boulevard Parkway is an off-road path that links nearly all of the properties situated along the Outer Harbor, beginning at the Coast Guard Station in the north and continuing to the city line. The Outer Harbor Greenway is a pedestrian and bicycle path that runs along the shoreline. A parking area at the Bell Slip provides a connection between the Greenway and the Fuhrmann Boulevard Parkway.

The BOA also has a network of sidewalks that is concentrated in the northern portion, close to downtown and its many destinations and amenities. [Map 7]

Public Transportation

The Niagara Frontier Transportation Authority operates portions of 26 bus lines in the BOA. There are a total of 50 bus stops in the BOA, 45 of which are in the CBD. The northeastern portion of the BOA also contains the aboveground section of Metro Rail. There are three stops: Seneca Street, Erie Canal Harbor, and Special Events. The Seneca and Erie Canal Harbor stops are open continuously, while the Special Events stop is open only when events are occurring at First Niagara Center. [Map 8]

Roads

The road network is categorized into a hierarchy based on capacity and traffic volume. Small urban collectors, arterials, and local roads make up the majority of the infrastructure in the northern portion of the BOA, close to downtown. Large volume, limited-access expressways dominate the southern portion of the Inner Harbor and the Outer Harbor.

The State Department of Transportation recently reconfigured Route 5 to provide improved access to the Outer Harbor. To accomplish this, a new interchange was installed south of the Skyway and an underpass constructed beneath Route 5 to connect with Fuhrmann Boulevard. Improvements to the southern portion of Route 5 include a newly constructed interchange with Ohio Street.

NYSDOT has also undertaken improvements to Fuhrmann Boulevard, transforming the existing two-lane road into a two-lane, two-way, boulevard between Tifft Street and Michigan Avenue. The boulevard has on-street parking and a new roundabout interchange, connecting Route 5 with Fuhrmann Boulevard. Along most of the route the boulevard also includes a treed median with decorative light fixtures.

There are currently two proposals under study to connect the Inner and Outer Harbors. One would provide a set of two bridges at Main Street, to span both the Buffalo River and City Ship Canal; while the other would cross the Buffalo River alone at Erie Street. An alternative bridge location at Michigan Avenue has been studied and rejected. [Map 9]

Map 7: Pedestrian / Bicycle Infrastructure



Map 8: Public Transportation Infrstructure



Map 9: Road Infrastructure



Rail

The BOA contains both passenger and freight rail lines. A CSX freight line that parallels the I-190 carries both Amtrak and CSX trains. The Chicago Line is one of CSX's principal routes, connecting Buffalo with Boston, New York City, and Chicago. CSX also operates Seneca Yard, located immediately south of the BOA; two railroad bridges that cross the Buffalo River; and serves the General Mills property on Kelly Island.

The Gateway Trade Center to the south of the BOA has rail that is serviced by the Buffalo Southern Railroad. The Buffalo Southern Railroad operates a single track line from Tifft Street to the Village of Gowanda in southern Erie County. The track line, with a maximum operating speed of 30 mph, is owned by Erie County and interchanges traffic with CSX, Norfolk Southern, CN and Canadian Pacific railroads.

There are some sites in the Outer Harbor that have existing rail infrastructure which is currently out of service. These sites provide an opportunity for future rail service development. [Map 10]

Navigable Waterways

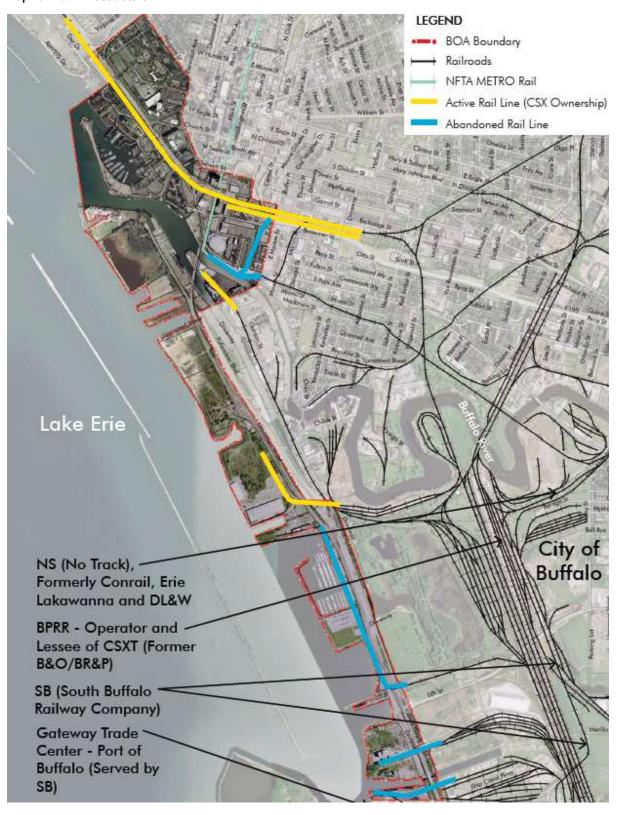
The BOA is part of the Great Lakes/St. Lawrence Seaway trade route that includes Lake Erie, the Buffalo River, City Ship Canal, and Black Rock Channel. There are a variety of shipping facilities and marinas located along these waterways. The Army Corps of Engineers maintains the navigable shipping channels. The Outer Harbor shipping channel is maintained at a minimum depth of 23 to 28 feet below low water datum; while minimum depths for the Buffalo River and the Buffalo Ship Canal vary between 22 and 23 feet. The USACE conducts regular maintenance dredging of these channels every two to three years to remove accumulated sediment. [Map 11]

Commercial Traffic

The navigation season generally runs from April 1 to December 30. During winter, the eastern end of Lake Erie often freezes, preventing ship traffic from entering or exiting the harbor. To prevent ice from flowing downstream and damaging the water intakes for the Niagara Power Project, a boom is installed outside of the breakwater area. The Buffalo River may also freeze, but a narrow navigation channel is maintained for small craft. During the spring thaw, the breakup of lake ice and its rapid movement toward the Niagara River closes the navigation channel to ship traffic.

Commercial shipping traffic, supporting industries along the Buffalo River, Ship Canal, and Outer Harbor, is generally concentrated near Terminals A and B, General Mills, and the Cargill Grain Elevator. The Edward M. Cotter Fireboat is also docked within the BOA, just downstream of the Michigan Avenue Bridge. The Cotter is utilized for firefighting and as an icebreaker on the Buffalo River.

Map 10: Rail Infrastructure



Map 11: Navigable Waterways



Recreational Traffic

The Inner and Outer Harbors are popular areas for use by recreational boaters, who often dock at the Erie Basin Marina and Small Boat Harbor. There are also active private marinas located along the Buffalo Ship Canal. Recreational touring vessels, such as the Moondance and Miss Buffalo, berth along the Buffalo River near the Erie Basin Marina. The Naval Park and Commercial Slip areas also attract recreational boaters to temporary berths. The Queen City Ferry is a privately-operated, 35-passenger water taxi that transports passengers between the Commercial Slip, Riverfest Park, and Wilkeson Pointe.

Bridges

There are two highway bridges and one operational drawbridge in the BOA. The two highway bridges are located along Route 5, and include the Skyway to the north and the Union Ship Canal Bridge to the south. The Skyway is elevated 100 feet above the Buffalo River and Buffalo Ship Canal. The Union Ship Canal bridge is fixed and spans 50 feet. There is a separate pedestrian bridge adjacent to this span, limiting vertical waterway clearance to approximately 9 feet. Due to this elevation, use of the western portion of the Union Ship Canal is limited to small craft.

The Michigan Avenue Bridge, spanning the Buffalo River and connecting Kelly Island to the mainland, is the BOA's sole drawbridge. It has a clearance of 20 feet when lowered and 100 feet when raised. In accordance with USACE regulations, the bridge must open on signal if notice is given at least four hours prior to a vessel's time of passage. City regulations stipulate that all vessels requiring the bridge to be opened must have the assistance of a tug boat when approaching and passing the bridge.

Headwalls

Nearly all of the shoreline along Lake Erie, the Buffalo River, the Buffalo Ship Canal, and the Union Ship Canal is reinforced by steel or concrete headwalls. The headwalls facilitate docking, temporary mooring, and loading and unloading of large lake-going vessels.

The majority of the perimeter of the Erie Basin Marina, the mouth of the Buffalo River, and the Coast Guard area are lined with steel sheet pile headwalls. Much of the Outer Harbor shoreline is lined with dikes or stone revetments, but where slips and piers are present, there are often transitions to concrete or steel headwalls.

Railroad Access

Much of the property abutting the Buffalo River, Buffalo Ship Canal, and Harbor is in close proximity to rail service. There are no railroad bridge crossings within the BOA, and several railroad lines near facilities are inactive or abandoned. However, there are active railroad lines near facilities at Terminals A and B and on Kelly Island.

4.4 PARKS AND OPEN SPACE

A number of parks, marinas, water access points, and open space are connected through a network of bicycle and pedestrian trails within the BOA. Urban pocket parks in the northern portion of the BOA are complemented by larger facilities along the shores of Lake Erie. [Maps 12, 13, and 14]

Emerson Young Park

This city park offers green space, a softball diamond, basketball court, a playground, and a small amphitheater. The park is primarily used as recreational fields for the Waterfront School, but is also utilized by neighborhood residents.

Erie Hills Park & Pedestrian Mall

This is a small pocket park with tree-lined sidewalks that navigate around several small mounds. A portion of the park located just outside of the BOA contains the Police Memorial Fountain, which honors officers who died in the line of duty.

Erie Basin Marina

This marina is owned by the City of Buffalo, which contracts out its operation. It provides slips for 400 boats, and includes the Hatch Restaurant and the Ice Cream Gazebo. There is an observation deck and lighthouse, and a lakeside promenade and boardwalk.

Buffalo and Erie County Naval & Military Park

This park is home to several decommissioned World War II Naval vessels, including the USS Little Rock, USS The Sullivans, and USS Croaker. The park also displays other military equipment. Entry onto the ships or into the museum requires an admission fee, but the promenade along the Buffalo River is open to the public at no cost.

Central Wharf

This park opened in 2008, and features exhibits and replica buildings that give visitors a sense of the historic Erie Canal terminus. The Central Wharf has become the location for many of the city's largest public gatherings, including concerts and fireworks displays. The park also contains interpretive signage and exhibits, passive green space, boat slips that can be used for temporary docking, and is the home of the Queen City Ferry water taxi service.

First Buffalo River Marina

This is a privately-operated marina, on land leased from the New York Power Authority. It is located at the confluence of the Buffalo River and City Ship Canal, and contains 152 slips as well as rest rooms, showers, and winter storage space.

Times Beach Nature Preserve

This park offers 56 acres of wetlands and forested uplands just across the Buffalo River from the Inner Harbor. Originally used as a beach in the early 1900s, the property was a spoils site for Buffalo River dredge sediments until the early 1970s. Times Beach has been transformed into a nature preserve, with trails, boardwalks, viewing stands, platforms, and signage. It is also located along the Greenway Nature Trail, which provides non-vehicular access to points of interest.

Wilkeson Pointe

ECHDC recently invested \$3.3 million to create public access and park space at Wilkeson Pointe, a 16-acre parcel directly south of Times Beach. The site provides access along the entire water's edge, and includes amenities such as pedestrian paths, volleyball courts, natural playgrounds, wind sculptures, public docking, and parking. Additional work included shoreline enhancements, removal and disposal of concrete slabs and foundations, installation of a soil cap over the entire site, site utilities and site lighting; and the rehabilitation of an existing building into a comfort station and garage. The site also includes six acres of land that will be ready for future mixed-use development.

Small Boat Harbor

This is largest marina in the state, and a regional destination for residents and tourists. It was recently transferred from the NFTA to New York State, and has nearly 1000 slips that can accommodate crafts over 50-feet in length. The marina offers a fueling station, showers, bait and tackle shop, fish cleaning station, ship store, pump out station, and boat/jet ski launch for day users. Patrons can also take advantage of boat chartering services and Dug's Dive, a restaurant. A small park is located adjacent to the marina, and is primarily a maintained lawn used for recreation and picnicking.

Gallagher Beach

This state park offers 1200 linear feet of frontage on the Outer Harbor, just south of the Small Boat Harbor Park. Originally developed in 1998, Gallagher Beach initially included a boardwalk fishing pier, a boat launch, and a small parking area. Recent improvements have added pavilion structures, new site lighting, and streetscape and landscape features. The beach is a regional destination for sail boarders, who use the site as a launching point.

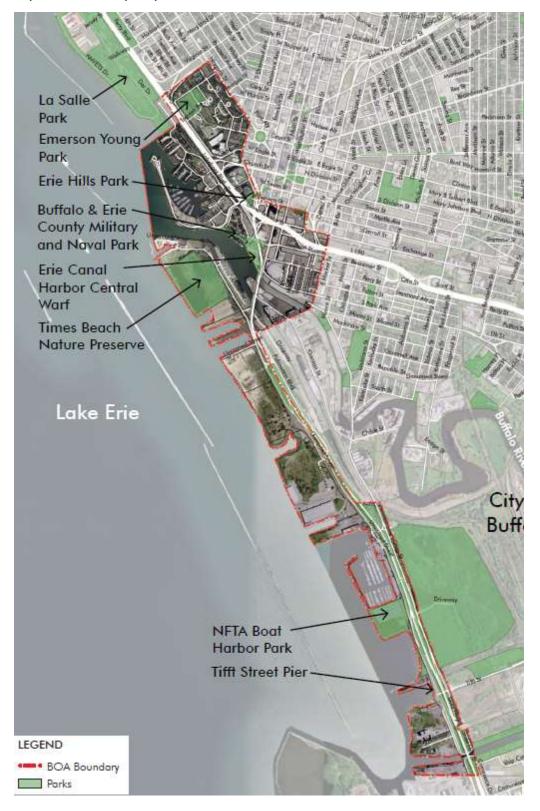
South Harbor Marina

This is privately-owned, located just south of Gallagher Beach. The marina has a boat launch, and offers moorings for small craft and boat storage during the winter.

Greenway Nature Trail, Industrial Heritage Trail & Tifft Street Pier

These two trails provide waterfront access for pedestrians and cyclists along the Outer Harbor. The Greenway Nature Trail is located on state-owned land, and runs from the Seaway Pier south along the Bell Slip to its terminus at the structures of the former Ford plant. The Industrial Heritage trail runs from Times Beach to the Union Ship Canal, and includes benches, period lighting, landscaping, and interpretive signage. The Tifft Street Pier includes a pier, covered pavilion, boardwalk, benches, and public art installations near the foot of Tifft Street.

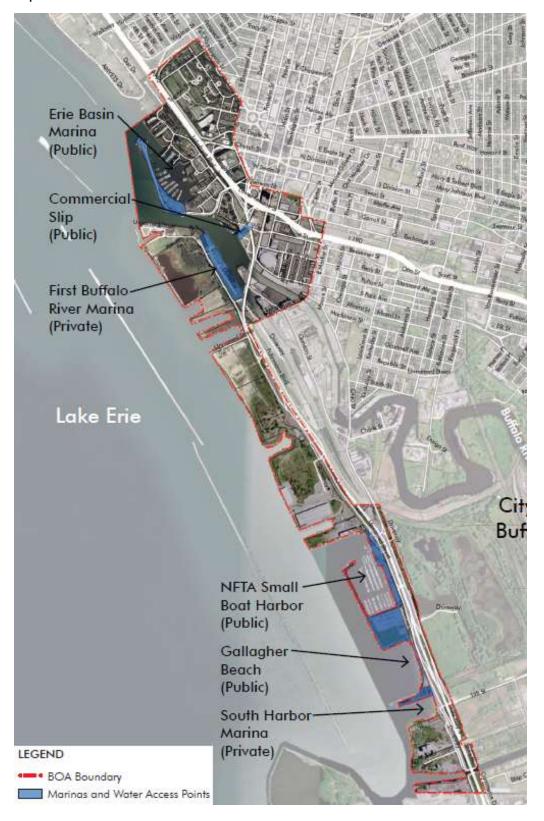
Map 12: Parks and Open Space



Map 13: Trails



Map 14: Water Access



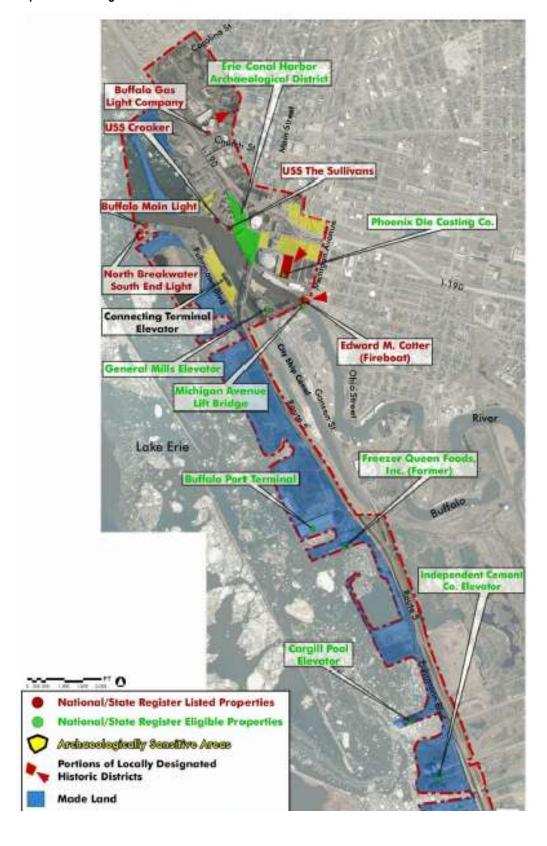
4.5 ARCHEOLOGICAL / HISTORICAL RESOURCES

The general vicinity within and around the BOA was occupied during prehistoric times, but given the two centuries of subsequent urban and industrial development, arriving at a model of archaeological sensitivity with any precision is difficult. The area between Erie Street and Michigan Avenue on the north side of the river, the core of the historic waterfront district, is archaeologically sensitive unless the area has been severely disturbed. The area west of Route 5, which comprises the majority of the BOA's area, is made land and generally not considered to be archaeologically sensitive.

There are 13 properties within the BOA that are either listed or eligible for the State and National Registers of Historic Places, including four grain elevators, three ships, a lift bridge, and five other structures. The locally-designated Cobblestone District is located entirely within the BOA; as is a single parcel from the Joseph Ellicott District. [Map 15]

	PROPERTY	LISTING	YEAR
1	Buffalo Gas Light Company	National/State Registers of Historic Places	1976
2	USS Croaker	National/State Registers of Historic Places	2008
3	USS The Sullivans	National Historic Landmark	1986
4	Buffalo Main Light	National/State Registers of Historic Places	1984
5	North Breakwater South End Light	National/State Registers of Historic Places	1983
6	Edward M Cotter Fireboat	National Historic Landmark	1996
7	Erie Canal Harbor Archaeological District	National/State eligible	
8	Phoenix Die Casting Company	National/State eligible	
9	General Mills Elevator	National/State eligible	
10	Michigan Avenue Lift Bridge	National/State eligible	
11	Buffalo Port Terminal	National/State eligible	
12	Freezer Queen Foods	National/State eligible	
13	Cargill Pool Elevator	National/State eligible	
14	Independent Cement Elevator	National/State eligible	
15	Cobblestone District	Local Preservation District	1994
16	Joseph Ellicott Historic District	Local Preservation District	2002
17	Connecting Terminal Elevator	National Register Multiple Property Submission	2003

Map 15: Archeological / Historical Resources



4.6 ZONING

Current zoning is consistent with existing land uses in parts of the BOA, but not in others. The reasons for these inconsistencies are rarely documented, but some rationale can be offered. First, zoning does not necessarily have to be consistent with existing land uses. Second, zoning is sometimes a reactive form of land use control. Where an original use has become obsolete and is awaiting redevelopment, the existing zoning often remains in place until a new use is proposed by the property owner. Finally, Buffalo's current zoning is cumulative, which means that as classifications change from residential to commercial to industrial, all uses from the previous classification are allowed in the subsequent one. As a result, housing can be developed in an industrial district; while a commercial property could not be built in a residential district.

The pattern of zoning districts in the BOA is dominated by industrial and manufacturing classifications. All of the land in the Outer Harbor has been designated as M1-Light Industrial, M2-General Industrial or M3-Heavy Industrial. Where new uses have been established, such as at Times Beach and Gallagher Beach, these districts allowed public parks and open space as permitted or conditional uses, so rezoning was not required.

Significant portions of the Inner Harbor area are also zoned industrial, while others are in a variety of classifications. Most of the area surrounding the Erie Basin Marina is zoned M1-Light Industrial, but the Marine Drive Apartments are zoned R5. Two areas in the DO-Downtown Opportunity District are located along the edge of the BOA adjacent to the downtown; and an I1-Institutional/Light Industrial District is located from the Buffalo River to the northern edge of the BOA, and from Route 5 to the western edge of the BOA. [Map 16]

Map 16: Existing Zoning



4.7 LAND USE

The existing land use in the Buffalo Harbor BOA reflects the nature of the two distinct parts of the BOA – the Inner Harbor and Outer Harbor. The inventory is based solely on land parcels, and excludes land in streets or under water. [Map 17]

The Inner Harbor exhibits a land use pattern that reflects a healthy mix of uses. Important characteristics include:

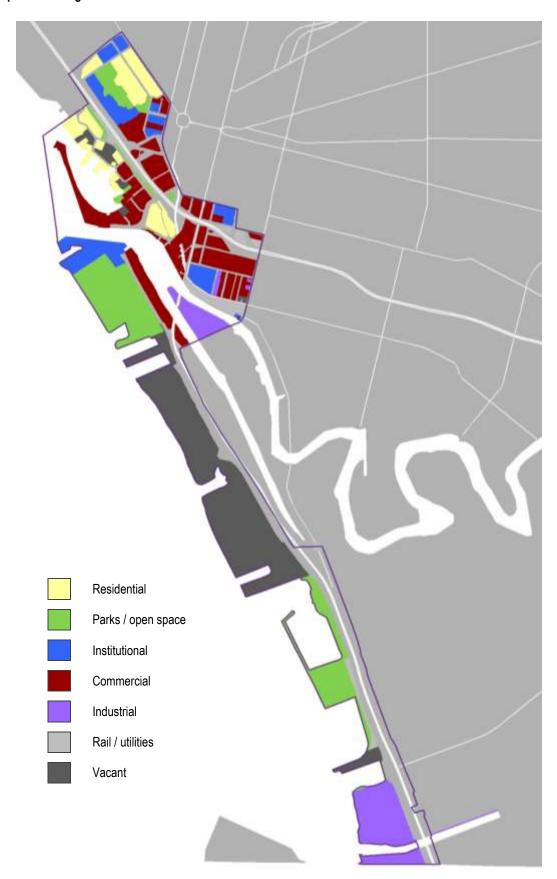
- Land adjacent to the CBD is predominantly commercial in use, consistent with the office and retail uses in the CBD.
- Land not directly adjacent to the CBD displays a greater mix of uses, generally consistent with the prominence of the general location.
- Residential uses are also located in areas not directly adjacent to the CBD. Waterfront Village, the Shoreline Apartments, Pine Harbor, and the Marine Drive Apartments represent key residential nodes.
- Complementary public uses and parks are distributed throughout the area. The Erie Basin Marina is a focal point for water-oriented recreation and passive enjoyment of the waterfront. Emerson Young Park, the Erie Pedestrian Mall, and the Central Wharf are park facilities that serve both local and regional users.
- Public off-street parking is scattered throughout the area, with a significant amount located under the I-190 elevated expressway.
- Vacant land, awaiting redevelopment, is dispersed throughout the Inner Harbor area.

The land use pattern in the Outer Harbor is quite different. Important characteristics include:

- Large tracts of vacant land concentrated in the Outer Harbor.
- Industrial uses remain significant, including the northern part of Kelly Island and the Holcim Cement facility.
- Park and open space represent prominent uses. Times Beach Nature Preserve, Wilkeson Pointe, the Small Boat Harbor, and Gallagher Beach are significant facilities.
- The U.S. Coast Guard station at the northern end of the Outer Harbor has been adapted to allow public access to the historic Buffalo Main Light.

	PARO	CELS	ACRE	ES .
Total			1,045	
Water			130	12%
Public right of way			242	23%
Land	250		673	65%
Residential	154	62%	57	8%
Parks / open space	9	4%	130	19%
Institutional	10	4%	62	9%
Commercial	42	17%	128	19%
Industrial	11	4%	78	12%
Rail / utilities	12	5%	24	4%
Vacant	12	5%	194	29%

Map 17: Existing Land Use



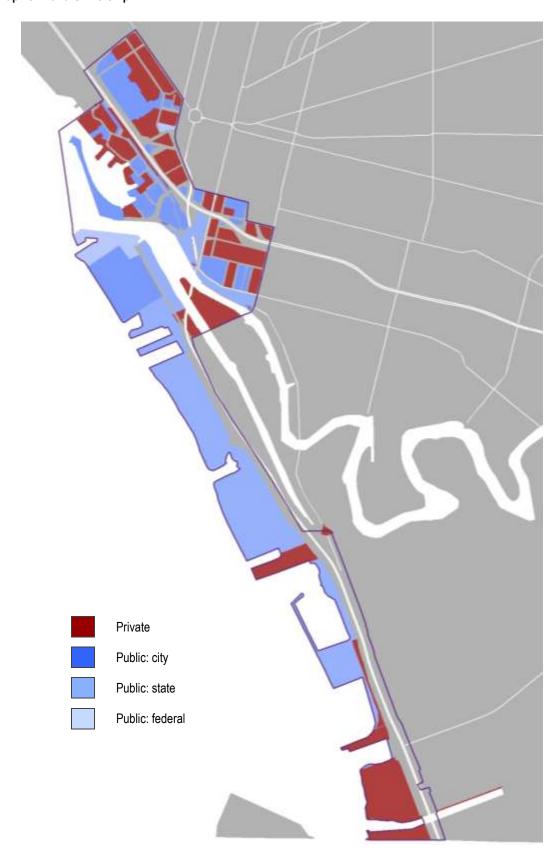
4.8 LAND OWNERSHIP

Understanding land ownership patterns within the BOA is essential to making sound redevelopment decisions. This analysis focuses on two perspectives: public versus private ownership; and large holdings (10 acres and more). The amount – and location – of publicly and privately held land is an important consideration, since each can present different redevelopment opportunities. Public entities can transfer land below market value to achieve public objectives, and are more likely to cooperate on matters of land assembly and disposition to achieve these objectives.

The majority of land within the BOA is publicly owned. The two largest owners are New York State (which controls about 256 total acres among ECHDC, NYPA, OPRHP, and the NFTA); and the City of Buffalo (which controls roughly 153 acres among the city, BURA, and the BMHA). This suggests that many redevelopment decisions will be based on a broad assessment of community benefit, and that the range of options will include significant public use. The Outer Harbor is predominantly under public ownership; while the Inner Harbor is equally balanced between public and private ownership. [Map 18]

	PAR	CELS	ACI	RES
Private	211	84%	238	35%
Holcim			47	
General Mills			18	
Queen City Landing			16	
Norstar			15	
Gateway Trade Center			11	
Public	39	16%	435	65%
Outer Harbor			114	
Times Beach			51	
Terminals A & B			47	
Boat Harbor / Gallagher Beach			42	
US Coast Guard			24	
Wilkeson Pointe			16	
Erie Basin Marina			15	
Emerson Young Park			14	
Waterfront School			14	
Canalside			13	
First Buffalo River Marina			13	

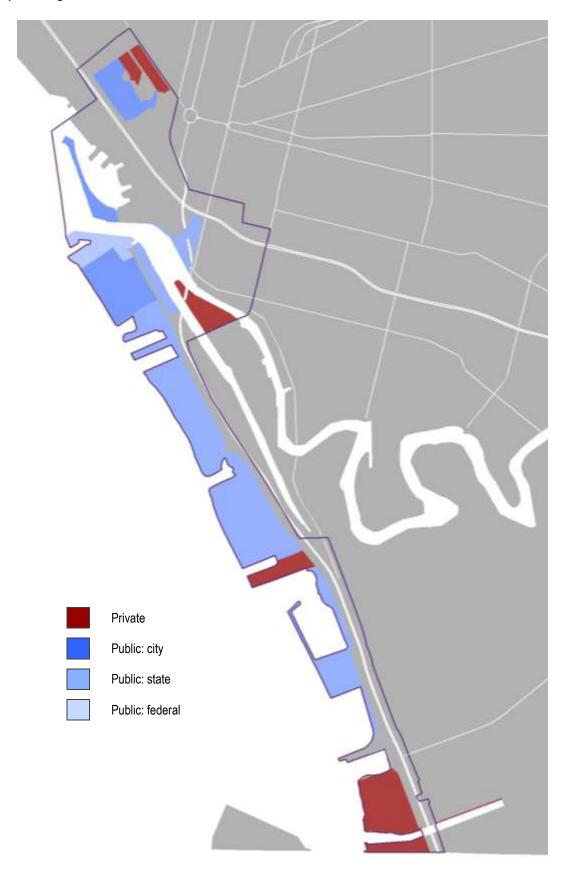
Map 18: Land Ownership



In addition, master planning and redevelopment is often more easily facilitated on large parcels, since it reduces or eliminates the need for land assembly. There are 16 sites that are 10 acres or larger; five sites with 107 acres are privately held, while 11 sites with 363 acres are publicly owned. These large parcels represent 70 percent of the total land area in the BOA.

Almost all of the small parcels are in the Inner Harbor and downtown areas; and very little of this land is vacant. Improving these areas can take time, since it relies on individual actions by many different property owners. The amount of land in small parcels represents just 30 percent of the total area in the BOA; with the size of these parcels ranging from less than a quarter-acre to 10 acres. [Map 19]

Map 19: Large Parcels



4.9 KEY BUILDINGS

Key buildings within the BOA were identified based on their location, anticipated reuse and redevelopment potential, the degree to which the structures contribute to the character of the neighborhood or corridor in which they are located, and the ability to generate additional economic development opportunities. Fourteen buildings were identified as being significant structures. [Map 20]

ADDI	RESS	USE
154	COURT	ST ANTHONYS CHURCH
100	ERIE	MARINE DRIVE APARTMENTS
901	FUHRMANN	TERMINALS A & B
975	FUHRMANN	FREEZER QUEEN
257	GENESEE WEST	BLUE CROSS / BLUE SHIELD
15	MAIN	DL&W TERMINAL
75	MAIN	HARBORCENTER
125	MAIN	ONE CANALSIDE
270	NIAGARA	SHORELINE APARTMENTS
1	SENECA	ONE SENECA TOWER
10	SEVENTH	PINE HARBOR APARTMENTS
1	SEYMOUR KNOX	FIRST NIAGARA CENTER
125	WASHINGTON	BUFFALO NEWS
263	WASHINGTON	COCA COLA FIELD

Map 20: Key Buildings



4.10 MAJOR COMMERCIAL AND INDUSTRIAL FACILITIES

Approximately 5,300 workers are employed in the BOA. The largest employers are almost exclusively concentrated around the CBD and employ almost 4,700 people. These businesses range in size from 50 to 2,200 employees. The mix of businesses is primarily office-oriented, with financial, technical, architectural, and health care firms represented. A total of 16 major commercial and industrial facilities – sited on 44 acres – were identified based on the number of employees or revenue they generate. [Map 21]

ADD	RESS	USE
257	GENESEE WEST	BLUE CROSS / BLUE SHIELD
40	LA RIVIERE	WATERFRONT VILLAGE
75	MAIN	HARBORCENTER
125	MAIN	ONE CANALSIDE
7	MICHIGAN SOUTH	GENERAL MILLS
95	PERRY	MIXED USE
1	SENECA	ONE SENECA TOWER
1	SEYMOUR KNOX	FIRST NIAGARA CENTER
220	TERRACE	ADAMS MARK HOTEL
95	WASHINGTON	HSBC
125	WASHINGTON	BUFFALO NEWS
263	WASHINGTON	COCA COLA FIELD

Map 21: Major Commercial and Industrial Facilities



4.11 VACANT, ABANDONED, AND UNDERUTILIZED SITES

The BOA has been the location of significant industrial and shipping activities, contributing to Buffalo's long history as a manufacturing center. Due to the loss of industry, 29 parcels with 320 acres – are categorized as vacant, abandoned, or underutilized. This includes vacant land such as ECHDC's holdings on the Outer Harbor; abandoned structures such as the former Freezer Queen and Terminals A & B; and underutilized sites such as the DL&W Terminal and numerous surface parking lots in the Cobblestone District and Waterfront Village. All of these offer opportunities for long-term reinvestment and redevelopment that capitalize on their location. [Map 22]

ADDRES	s	USE
130	MAIN	CANALSIDE
126	MICHIGAN	COBBLESTONE COMMERCIAL
114	MICHIGAN	COBBLESTONE INDUSTRIAL
118	MICHIGAN	COBBLESTONE INDUSTRIAL
161	PERRY	COBBLESTONE INDUSTRIAL
190	SOUTH PARK	COBBLESTONE RESIDENTIAL
25	MISSISSIPPI	COBBLESTONE SURFACE PARKING
142	PERRY	COBBLESTONE SURFACE PARKING
143	PERRY	COBBLESTONE SURFACE PARKING
125	SCOTT	COBBLESTONE SURFACE PARKING
95	WASHINGTON	COBBLESTONE SURFACE PARKING
41	COLUMBIA	COBBLESTONE VACANT
15	MAIN	FORMER DL&W TERMINAL
975	FUHRMANN	FORMER FREEZER QUEEN
1699	FUHRMANN	FORMER SOUTH SHORE MARINA
901	FUHRMANN	FORMER TERMINALS A & B
1751	FUHRMANN	HOLCIM CEMENT
43	CAROLINA	OPEN SPACE
275-575	FUHRMANN	OUTER HARBOR OPEN SPACE
1	SENECA	SENECA ONE TOWER

ADDRES	s	USE
15	LA RIVIERE	WATERFRONT VILLAGE LAND
240-260	LAKEFRONT	WATERFRONT VILLAGE LAND
21 - 55	OJIBWA CIR	WATERFRONT VILLAGE LAND
30	WATERFRONT CIR	WATERFRONT VILLAGE LAND
20	LAKEFRONT	WATERFRONT VILLAGE SURFACE PARKING
100	LAKEFRONT	WATERFRONT VILLAGE SURFACE PARKING
4	WATERFRONT CIR	WATERFRONT VILLAGE SURFACE PARKING
20	WILKESON	WATERFRONT VILLAGE SURFACE PARKING
175-225	FUHRMANN	WILKESON POINTE

Map 22: Vacant, Abandoned, and Underutilized Sites



4.12 POTENTIAL BROWNFIELDS

Brownfield properties may consist of underutilized and vacant sites, as well as active businesses with the potential to impact the site's environmental conditions. According to state law, a brownfield is defined as "any real property, the redevelopment or reuse of which may be complicated by the presence or potential presence of a contaminant." Each brownfield site is further characterized as one of the following:

- Remediated/Remediation Ongoing sites considered ready for future redevelopment because
 investigation and remedial activities have been satisfactorily completed; or where remediation is
 either ongoing or approved but not commenced.
- Known Contamination sites that are not currently being investigated or remediated, or that have residual contamination documented from past spills or remediation efforts.
- Brownfields sites that have been subject to Phase I Environmental Site Assessments that identified the likely presence of contamination; or have undergone past remedial activities that addressed some but not all possible contamination; or have a documented past history of operations or proximity to sites having operations that may have utilized or disposed of hazardous materials.
- No Known Contamination sites that have been investigated and have been found to have no site contamination.
- No Site Characterization underutilized or vacant sites for which no site characterization has been identified. Closed Landfill – former dumps or landfills that no longer accept solid waste, but may require long-term operation and maintenance.

A total of six sites – encompassing 249 acres – are characterized as potential brownfields. The individual site profiles in the appendix include information on size, use, ownership, brownfield status, known environmental history and observations recorded during field visits to the subject properties. Strategic brownfields that have had some level of remediation include the Greenway Nature Trail and Radio Tower Site on the Outer Harbor parcel at 275-575 Fuhrmann. [Map 23]

ADDRESS		USE	
32	FUHRMANN	FIRST BUFFALO RIVER MARINA	
275-575	FUHRMANN	OUTER HARBOR	
901	FUHRMANN	TERMINALS A & B	
975	FUHRMANN	FREEZER QUEEN	
1751	FUHRMANN	HOLCIM CEMENT	
1825	FUHRMANN	GATEWAY TRADE CENTER	

Map 23: Potential Brownfields



4.13 STRATEGIC SITES

Based on the inventory and analysis, five strategic sites have been identified, and are briefly summarized below. The final nomination document will examine potential redevelopment options for these strategic sites in greater detail. [Map 24]

Lower Niagara

This includes the Shoreline Apartments, along with vacant city-owned property to the west of these residences. The apartment owner has proposed demolishing and rebuilding the complex in phases, beginning at the north end by Carolina Street. Any redevelopment should examine re-establishing the historic street grid, which was destroyed by the creation of superblocks when the Shoreline and Pine Harbor Apartments were constructed. Providing better connections to both the waterfront and the neighborhoods to the north, both of which were severed by the I-190 and its access ramps, should also be considered.

Waterfront Village

Development of Waterfront Village and the Erie Basin Marina began in the late 1970s and early 1980s. Development since the initial burst of activity has proceeded slowly, with additional residential added in two condominium towers and additional low-rise units scattered along the I-190. There is still a considerable amount of vacant land waiting to be developed.

The city has designated Ellicott Development to construct a mixed-use facility with a hotel, office space, apartments, restaurants, and a parking ramp; and recently issued an RFP for another residential parcel adjacent to Portside. There is other privately-held residential land and awaiting development, along with a number of publicly-held surface parking lots serving commercial properties, which could be redeveloped given the right market conditions.

Canalside

This remains a strategic redevelopment site, as its build-out may take years to accomplish. The underlying canal system is scheduled for completion in late 2014, but uses for few development parcels have been secured. The successful redevelopment of One Canalside into a mixed use facility with offices, hotel, and a recently announced restaurant, couple with HARBORCENTER's project opening in 2015, provide a solid base on which to build. In addition, the nearly-vacant One Seneca Tower is adjacent to Canalside, and may offer redevelopment opportunities to complement the current activities.

Cobblestone District

The Cobblestone District consists of properties located along Illinois, Perry, Mississippi, Baltimore, Columbia, South Park, and Michigan. It is one of the city's historic preservation districts, which signifies that all exterior construction, reconstruction, demolition or redevelopment work performed on any structure or site must conform with preservation standards.

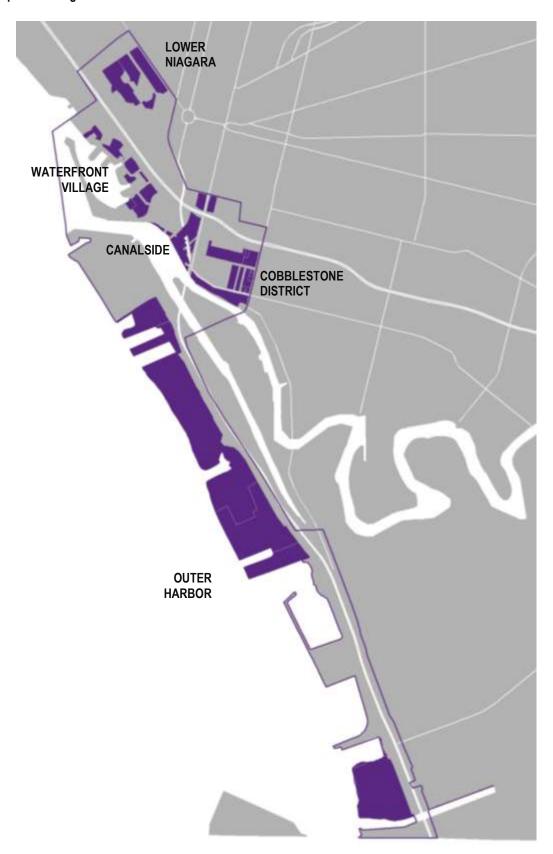
The district is bounded by First Niagara Center and HARBORCENTER on the west, and Seneca Buffalo Creek Casino on the east. Several restaurants and nightclubs have opened recently, but the primary land use within the district is surface parking. These underutilized parcels represent key infill opportunities to build off existing attractions and make the district a denser, more vibrant location.

Outer Harbor

The Outer Harbor runs the length of the city's Lake Erie shoreline, and is characterized by a combination of vacant land, abandoned buildings, and underutilized sites. Access has always been problematic, as the direct link via the Skyway is limited to cars and trucks. Work to improve Ohio Street as a connection for cars and cyclists is underway; a ferry connecting the Outer Harbor to Canalside should be operational in 2015; and a longer term vision to build a bridge between these two sides of the Buffalo River is being studied.

Opportunities consist of vacant and underutilized land, which is found across much of the Outer Harbor; as well as the potential redevelopment of existing structures such as the NFTA-owned Terminals A & B and the privately-held Freezer Queen complex; and complementary uses at the Holcim Cement site on the Union Ship Canal. ECHDC is currently preparing a master plan for much of the public land in the Outer Harbor, and this work will be incorporated into the final nomination document for the BOA.

Map 24: Strategic Sites



ALTERNATIVE SCENARIOS EXERCISE

The BOA process provides an opportunity for the community to develop a long-term vision that builds on the Harbor's unique assets. A return to productive use will take many years for much of the BOA, so there is a need to be strategic and prioritize. Renewal should be concentrated in targeted areas so a critical mass that will fuel long-term, self-sustaining redevelopment can be established.

Visioning Directions

- The water is an important community asset that should be public and accessible to all.
- Canalside is a key destination that should continue to be a focus for the city and region.
- Vacant sites along the Outer Harbor are expansive and will take longer to redevelop.
- Downtown, Canalside, and the Inner and Outer Harbors should be connected by a variety of transportation modes.
- On-going environmental remediation on the land and in the water will positively impact the perception of the area.

Emerging Principles

- Create a remarkable and regionally significantly waterfront.
- Design a destination accessible for everyone.
- Focus on the northern section of the BOA as a unique waterfront entertainment district and extension of Downtown.
- Knit the BOA into the wider community by creating a connected pedestrian, cycling, and open space network.
- Focus investment and development to optimize benefits. Plan for incremental growth over time, and don't allow short-term activities to preclude long-term goals.
- Create a clean and green waterfront.

The city examined three alternative development scenarios for both the northern and southern sections of the BOA. These scenarios were presented to the public, and their feedback was used to guide the selection of strategic sites and the determination of appropriate levels of development for the city's Land Use Plan and Zoning Ordinance.

5.1 NORTH HARBOR

Scenario 1: Integrated Canalside / Cobblestone Entertainment District

- A regionally significant, mixed-use waterside entertainment district.
- Complement and support efforts aimed at downtown renewal.
- New offices, hotels, mixed-use buildings, and attractions.
- New event space on Scott Street.
- New residential development along Erie Street.
- New park space on the northern end of the Outer Harbor, with the remainder left for environmental open space and marine use. [Map 25]

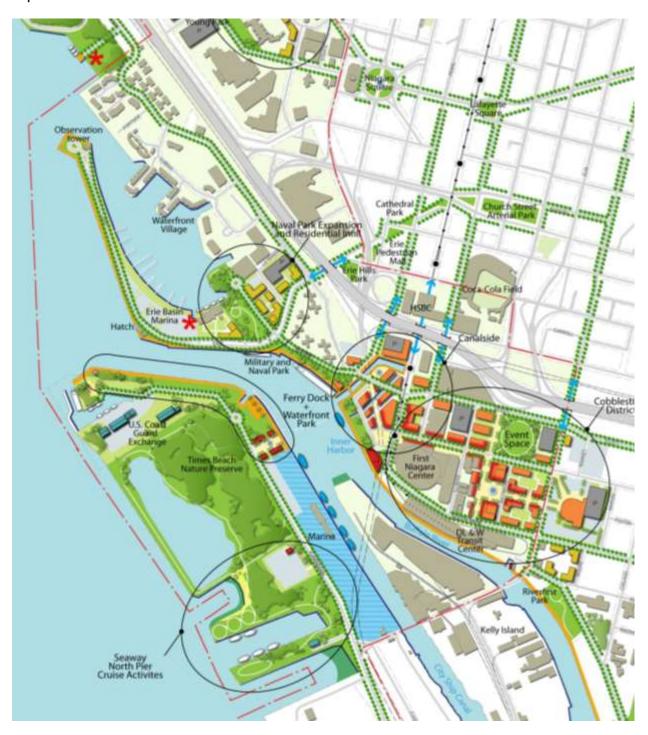
Scenario 2: Expanded Entertainment District

- Build-out Canalside and the Cobblestone District as in Scenario 1.
- Expand this mixed-use Entertainment District to the west and north through expansion of the Naval Park and the development of Harborfront Center at the Erie Basin Marina.
- A new potential new bridge at Main Street permits development of a waterside residential community on portions of the North Outer Harbor.
- Some of the former marine uses are accommodated on the Seaway Pier and in the southern section of the Outer Harbor. [Map 26]

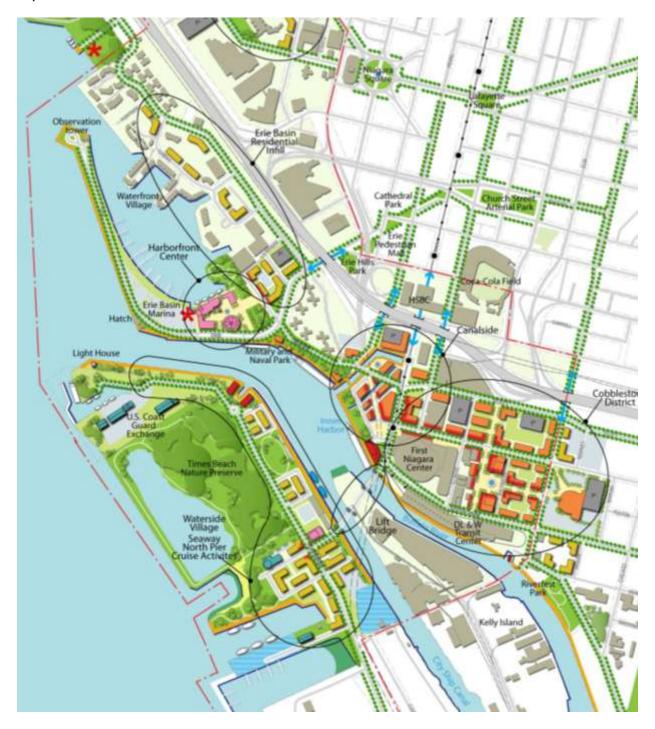
Scenario 3: Connected Land and Waterside Entertainment District

- Build out Canalside and the Cobblestone District as indicated, and extend these uses to the northern Outer Harbor to create a fully connected destination waterfront.
- New bridges at Main Street and Erie Street link signature mixed-use office development, attractions, shops, housing, and waterside restaurants.
- Lake cruise activity is located at Canalside and the Seaway Pier. [Map 27]

Map 25: North Scenario 1



Map 26: North Scenario 2



Map 27: North Scenario 3



5.2 SOUTH HARBOR

Scenario 1: Environmental Repair and Recreation

- Employment and recreation opportunities that complement and do not compete with those in the northern section of the BOA.
- Predominantly clean and green.
- New regionally-scaled public park and fairground creates passive, active, and programmed recreational opportunities
- Three employment nodes Innovation Park, Terminal A entertainment precinct, and an industrial cluster to the south.
- Has the potential to evolve with urban uses once development targets in the northern section of the BOA have been met. [Map 28]

Scenario 2: Legacy Park

- Mixed-use district anchored by a legacy waterfront park in a contemporary Olmsted style, which
 creates a high value setting for residential and employment uses.
- A cultural, innovation, and education district anchored by an expanded Innovation Park to the north, an expansion of Terminal A as an entertainment district, and further development of West Lakeside Commerce Park to the south.
- Uses that compete with the northern section of the BOA are permitted only after development targets for that area have been met. [Map 29]

Scenario 3: Waterfront City

- A mixed-use waterfrton with an urban form.
- Permitted only after development targets for the northern section of the BOA have been met.
- A network of connected waterfront parks create a series of "moments," and provide public amenity and continuous access to the water.
- Opportunities for higher-density waterside living are focused to the north.
- The central section is a mixed-use precinct, anchored by an Educational / Institutional Campus.
- Terminal A evolves as a Trade & Exhibition Center with a strong focus on entertainment.
- High-quality mixed-use office and residential developments create opportunities to live and work next to the lakefront. [Map 30]

Map 28: South Scenario 1



Map 29: South Scenario 2



Map 30: South Scenario 3



5.3 COMMUNITY FEEDBACK

The three scenarios elicited strong commentary from residents who attended open houses or viewed them on-line. Some of the highlights include:

North Harbor

- Continued development and potential expansion of Canalside has strong support.
- Intensified development of the Cobblestone district as an extension of Canalside is generally well-supported.
- Potential extension of the Naval Park toward Erie Basin Marina has strong support.
- Water taxi service between the Inner and Outer Harbors is broadly popular; while proposed bridge connections are controversial. An Erie Street bridge has weak support and strong opposition, and a Main Street bridge fairs only slightly better.
- Some support residential development on the northern portion of the Outer Harbor, but many more argue that these locations are more appropriate for public uses and public access.
- There are concerns that development adjacent to Times Beach can pose a threat to the habitat and wildlife that have made that area their home.
- Water-dependent uses such as marinas, fishing, and cruise boat docks are viewed favorably, as are regionally-significant cultural attractions.
- Scenario 1 an expanded Canalside and Cobblestone District was far and away the most favored alternative.

South Harbor

- Consistent with most previous discussion of the Buffalo waterfront, strongest support came for the expansion of public access through trails and boardwalks.
- The Waterfront City concept in Scenario 3 drew concerted opposition. Participants worried that it is not feasible, that residential development will draw from other neighborhoods, that housing would be exclusive, and that the proposed level of development was too intense.
- The Legacy Park concept in Scenario 2 drew strong support and was the second-highest ranked of the "big moves," after increased public access.
- The environmental innovation park and the innovation and education campus both drew a mix of support and opposition; with many considering the latter inappropriate for the Outer Harbor.
- Scenarios 1 and 2 split support for best alternative; while only one participant favored Scenario 3.

LAND USE PLAN

This section takes the community input that was provided for the alternative scenarios, and translates it into a land use plan for the BOA. Buffalo's Green Code is a departure from its previous land use planning approach, which was based on dividing the city into mutually exclusive single-use zones. The new place-based planning approach addresses form and character, and recognizes that the most attractive places typically have a mix of uses—residential, retail, civic, recreational, and natural—that make a city lively, interesting, and safe.

The land use plan for the BOA is built around four place types: neighborhood, campus, employment, and open space (see Appendix). Every parcel has been assigned a place-type that corresponds to a specific set of rules and regulations governing its use, form, and development character. Based on these place types, the zoning ordinance will specify what can or cannot be built and where.

6.1 PROPOSED PLACE TYPES: NORTH HARBOR

The section of the BOA to the north of the Buffalo River builds off its location adjacent to the city's Central Business District. Parcels forming the northeastern boundary of the BOA are largely designated as N-1D and N-1C. The former consist of downtown buildings such as One Seneca Tower, One Canalside, HSBC Atrium, and HARBORCENTER, which represent the most intense uses in the city. Adjacent areas to the west and south are designated N-1C, which encourages mixed-use development at a lower level of intensity than found in the downtown core. These areas include Erie Basin Marina, Canalside, and the Cobblestone District.

There are also three residential campuses that will be retained – Shoreline/Pine Harbor Apartments, Waterfront Village, and Marine Drive Apartments. Within Shoreline/Pine Harbor, any redevelopment that occurs will be encouraged to consider street realignments based on historic patterns to assist with the removal of superblocks created by urban renewal. Finally, the shoreline of the Erie Basin Marina leading out to the lighthouse will be preserved as open space. [Map 31]

6.2 PROPOSED PLACE TYPES: SOUTH HARBOR

The land use plan for what is generally known as the Outer Harbor attempts to balance the preservation of open space with opportunities for more intense redevelopment at key locations that provide ready access. The area that includes Wilkeson Pointe and the Seaway Pier, along with the existing marinas along the City Ship Canal, has been designated N-2E to allow for mixed-use redevelopment to occur.

Further south, where Terminals A and B and the former Freezer Queen complex are located, zoning will be N-1C, to permit more intense mixed-use redevelopment, taking advantage of the transportation access and the large size of the existing structures on these sites. The southern edge of the BOA is set aside for light industrial, generally in keeping with existing uses; although a section of land adjacent to Buffalo Lakeside Commerce Park to the east will be zoned D-C, or flex commercial, to allow for similar redevelopment to occur. The sliver of Kelly Island within the BOA, located north of Michigan Street, will remain industrial.

Open space is scattered at strategic points along the shoreline. In the north, the Times Beach Nature Preserve and Wilkeson Pointe will be augmented by additions at the mouth of the Buffalo River. The Small Boat Harbor and Gallagher Beach will both remain as open space, under the management of New York State.

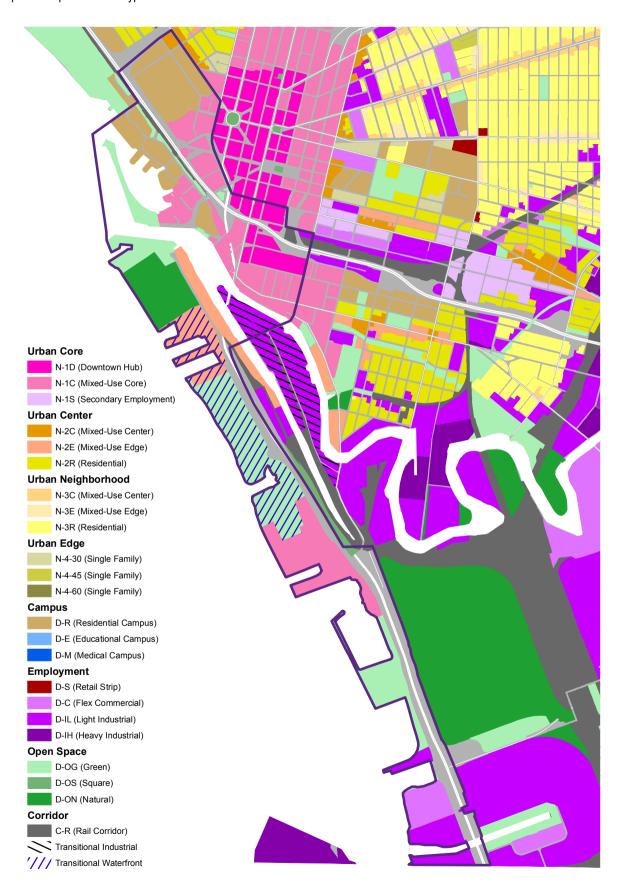
The section of the Outer Harbor centered on the Bell Slip, which was recently purchased by the state from the NFTA, is currently zoned as open space with a transitional overlay. This overlay will permit more intensive redevelopment to occur as part of a Planned Unit Development, which would require Planning Board approval. This approach allows the city to balance the public's call for access to the Outer Harbor with redevelopment that matches the existing character and can provide a revenue source for future open space improvements.

Final zoning for this section of the Outer Harbor will be informed by the master planning process currently being guided by the Erie Canal Harbor Development Corporation. A robust level of public engagement is anticipated, so that place types can be adjusted to more appropriately match the direction provided by the community. [Map 31]

6.3 PROPOSED ZONING CHANGES

The land uses proposed for the Buffalo Harbor BOA will provide guidance for the next 20 years. These designations generally offer more flexibility than the existing zoning. The Green Code is designed to encourage mixed-use developments, so that the market is able to determine what investments make sense and where, within the parameters agreed upon by the community. It is expected that this approach will be more adaptable and result in greater levels of private investment than recently experienced. The result envisioned by this planning process will be a Buffalo Harbor that balances the remaining manufacturing and shipping uses with emerging residential, commercial, recreational, and natural uses that will drive its future.

Map 31: Proposed Place Types



APPENDIX A: PLACE TYPE DEFINITIONS

NEIGHBORHOOD

Urban Core

- Downtown core, edges, and secondary employment centers that support a range of uses offices, shops, restaurants, theaters, apartments; structures built to sidewalk with ground floor activity
- Central Business District, Cobblestone District, Larkinville

Urban Center

- Mostly adjacent to downtown and the waterfront; first developed in 1800s; narrow lots (25 to 35 feet); minimal setbacks; dense mixed-use, walkable centers with array of uses in smaller buildings
- Black Rock, Cold Spring, Fruit Belt, Lower West Side, Old First Ward

Urban Neighborhood

- Developed along streetcar lines in early 1900s; slightly wider lots (35 to 50 feet); deeper setbacks; heights up to three stories; strong mixed-use cores
- Hamlin Park, Kaisertown, Riverside, South Buffalo, University Heights

Urban Edge

- Often developed around parks and parkways; large lots; spacious front yards; single-family houses; no retail activity, but usually within walking distance of denser neighborhoods
- Central Park, Kensington Heights, Park Meadow

CAMPUS

Residential Campus

- Organized as large-scale, integrated development; often with internal circulation system; may be low-, mid-, or high-rise, such as garden apartments or towers in the park
- Collegiate Village, Ellicott Towne Center, Waterfront Village

Educational Campus

- Separate from surrounding activities; often have internal circulation system; with design and layout based on specialized functions
- Buffalo State College, D'Youville College, University at Buffalo

Medical Campus

- Separate from surrounding activities; often have internal circulation system; with design and layout based on specialized functions
- Buffalo Niagara Medical Campus, Mercy Hospital, Sisters Hospital

EMPLOYMENT

Retail Strip

- Typically located adjacent to broad arterials or highway interchanges; centered around one or more big box format buildings; with generous on-site parking
- Delaware Consumer Square, Seneca/Bailey, South Ogden

Flex Commercial

- Separate from, but within close proximity to, residential neighborhoods; general commercial and mixed-use areas that benefit from flexible form standards
- Buffalo Forge (former site), Hertel Commerce Center, RiverBend

Light Industrial

- Typically located adjacent to highway, rail, and water access; intended for low- and moderateimpact employment uses with clear separation from surrounding neighborhoods
- American Axle (former site), Lakeside Commerce Park, New Buffalo Industrial Park

Heavy Industrial

- Typically benefit from remote, but accessible locations; high-impact employment uses that are generally incompatible with residential neighborhoods
- Aurubis, Honeywell, Irish Propane

OPEN SPACE

Green

- Civic greens and parks; characterized by trees and landscape; designed for passive and active recreational uses
- Houghton Park, McCarthy Park, Olmsted Parks and Parkways

Square

- Formal settings, often located at intersection of important streets; generally enclosed by building facades; designed for intensive public use
- Lafayette Square, Niagara Square, Viola Park

Natural

- Maintained as predominantly undeveloped state; typically set aside for land conservation, passive recreation, and ecological restoration
- Seneca Bluffs, Tifft Nature Preserve, Times Beach