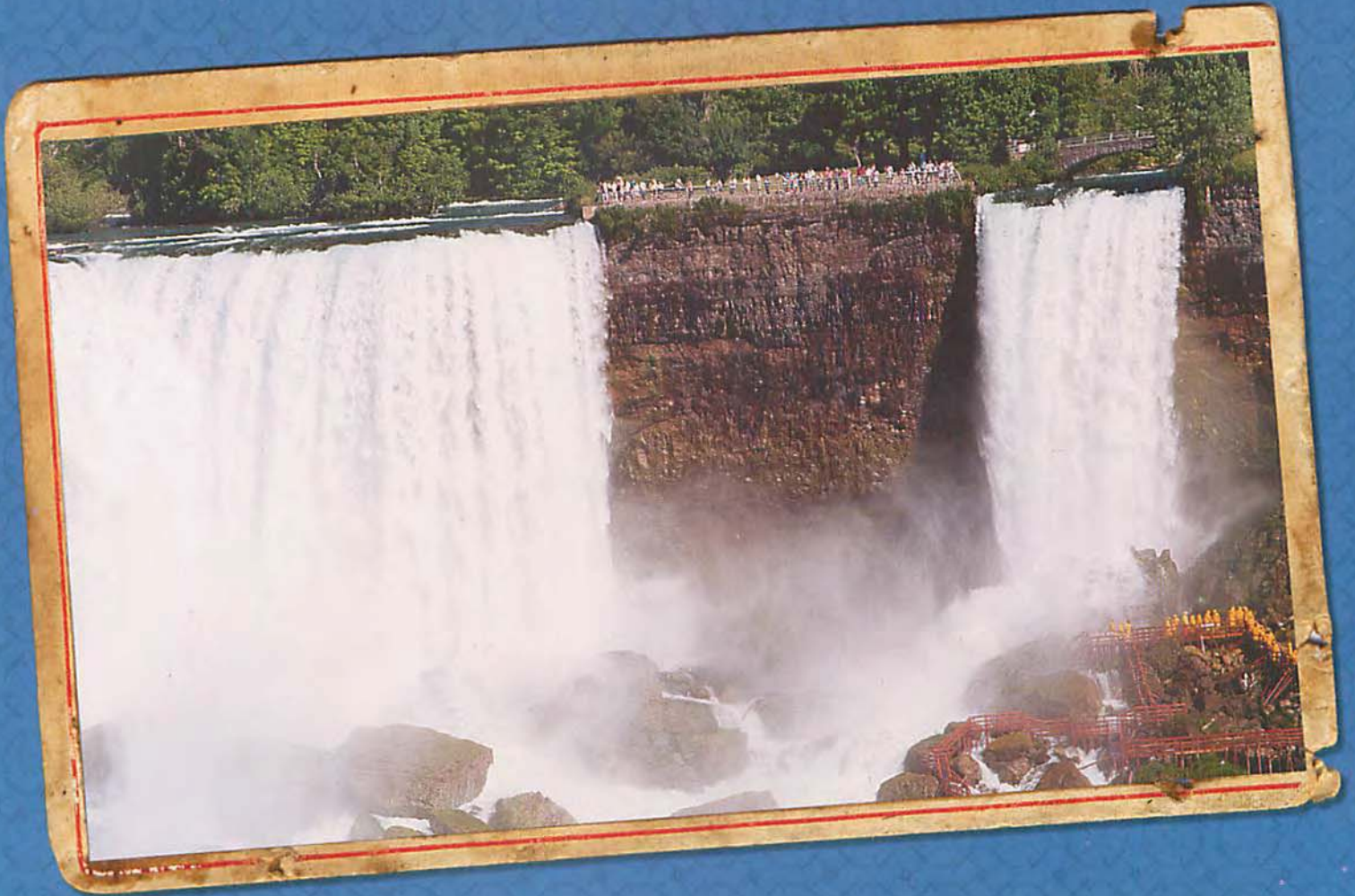


Part Two



Affected Environment

Affected Environment | Contents

Description of the Study Area.....	23
Natural Resources.....	24
Cultural Resources.....	26
Recreational Resources	27
Socioeconomic Resources	29



The American Falls

Description of the Study Area

The central resources defining the Niagara Falls Region the Falls, Rapids, River and Gorge form the international boundary between the United States and Canada and are contained within the state of New York and the province of Ontario, respectively. This binational region is rich in natural, cultural, and recreational resources. While Niagara Falls itself is an international destination and receives approximately 7 million visitors a year on the U.S. side alone, the entirety of the Niagara River corridor contains a wealth of resources of educational, scenic, scientific, and recreational value.

Beginning at Lake Erie, the Niagara River flows north and northwest for approximately 35 miles (56 kilometers) to Lake Ontario and falls approximately 326 feet (99 meters). The Upper Niagara River flows from Lake Erie and divides at Grand Island and at Goat Island. At Goat Island it flows over the American Falls and the Canadian Horseshoe Falls from heights of 70 to 110 feet (21 to 34 meters) at the former and approximately 170 feet (52 meters) at the latter. The Lower Niagara River flows from the base

of the Falls to Lake Ontario. The Niagara Gorge extends from the base of the Falls for approximately 6 miles (9.6 kilometers) to the edge of the Niagara Escarpment at Lewiston. Water depth in the Gorge can reach up to 200 feet (61 meters). The river flows on approximately 7 miles (11 kilometers) beyond the Gorge to its mouth at Lake Ontario.

Issues and concerns affecting this study area were identified by NPS specialists, as well as input of other federal, state, and local agencies. After public scoping, issues and concerns were distilled into distinct impact topics to facilitate the analysis of environmental consequences, which allows for comparison between alternatives based on the most relevant information. The impact topics are described below. Certain topics were dismissed from further consideration. Air quality was not considered because the number of net new tourists in the region is not easily defined without a heritage area plan identifying target audiences. Coastal resources were not considered because the area has no actual coastline. Soil and water resources were not considered because no specific projects have been pro-

jected for a national heritage area, so it would be impossible to discuss impacts on these resources.

Natural Resources

Regional Geology

The most prominent landform in the region is the Niagara Escarpment, a cuesta¹ formation consisting of fossil-rich dolomite that stands out in an otherwise relatively flat landscape. The Niagara Escarpment reaches from eastern Wisconsin, across the Niagara Peninsula of the province of Ontario and into Niagara County, New York. The Niagara Escarpment in Canada is a designated Biosphere Reserve by the United Nations Educational, Scientific, and Cultural Organization (UNESCO).

Some 450 million years ago, sand, silt, and clay were deposited into a shallow sea in thick sedimentary layers forming the escarpment. These became compressed into sedimentary layers of limestones, shales, dolostones, sandstones, and reef structures. As time progressed, the softer underlying material eroded and overlying dolostone broke off, forming the present vertical face of the escarpment. The escarpment displays some of the most important exposures of fossils from the Upper Ordovician and Silurian periods found anywhere in the world ².

About 10,000 to 15,000 years ago, Pleistocene glaciers released water from Lake Erie that began spilling over the escarpment nearly 10 miles (16 kilometers) downstream from the present location of Niagara Falls. The face of the Falls continued to move upriver through the erosion of softer layers in the formation and the breaking-off of harder dolostone layers at the surface. The Falls continue to retreat upstream, but at a significantly slower rate. Since the turn of the 20th century, retreat has been further slowed by diversion of water from the Upper Niagara for hydroelectric purposes.

Flora and Fauna

The Niagara region forms the northernmost portion of the Carolinian Zone, a forest habitat that ranges from the subtropical southern United States. In natural areas along the Niagara River Corridor, predominant upland tree and shrub species include

sycamore (*Populus* sp.), Russian olive (*Elaeagnus angustifolia*), cottonwood (*Plantanus* sp.), white ash (*Fraxinus Americana*), hickory (*Carya* sp.), red maple (*Acer rubrum*), red oak (*Quercus borealis*), white oak (*Quercus alba*), tulip tree (*Liriodendron tulipifera*), rhododendron (*Rhododendron maximum*), and witch hazel (*Hamamelis virginiana*).

According to the New York Natural Heritage Program, there are two natural communities located within the primary study area that are documented as ecologically significant in New York State. Second to the Falls, these two communities are the most prominent features in several of the state parks that line the river: the cliffs that line the gorge (Calcareous Cliff Community), and the steep talus slopes that lie below them (Calcareous Talus Slope Community). The Niagara Escarpment has been internationally recognized for the ancient cedar trees (*Thuja occidentalis*) that grow on its face.³ Further, local naturalists have identified several groves of ancient trees dotting the corridor and representing some of the oldest living woodland communities in New York State.

Based on findings by the New York Natural Heritage program, the combination of misting and wet seepage areas interspersed with dry open rock faces and calcareous bedrock produces one of the greatest assemblages of rare plants within New York State. No federally listed species of flora were identified; however, 14 state-listed species of flora are known to either occur at present or to have occurred in the past in the area. State-listed species include: ninebark (*Physocarpus opulifolius* var. *intermedus*), yellow giant hyssop (*Agastache nepetoides*), scarlet Indian paintbrush (*Castilleja coccinea*), slender blazing star (*Liatris cylindracea*), sky-blue aster (*Aster oolentagniensis*), elk sedge (*Carex garberi*), lesser fringed gentian (*Gentianopsis procera*), smooth cliff brake (*Pellaea glabella*), four-flowered loosestrife (*Lysimachia quadriflora*), puttyroot (*Aplectrum hyemale*), Drummond's rock cress (*Arabis drummondii*), woodland bluegrass (*Poa sylvestris*), Ohio goldenrod (*Solidago ohioensis*), and white camas (*Zigadenus elegans*).

Wildlife in the region is also diverse. The most obvious and heavily used wildlife habitat in the area is



Flora in Niagara Gorge

the Niagara River, particularly for migratory waterfowl and gulls. Bird life inventories disclose 342 species including a wide variety of waterfowl and hawks, falcons, and eagles. Gulls, however, are the main attraction of the region to birdwatching visitors, with records of 19 separate species and one-day counts of over 100,000 individual birds. According to the New York Audubon Society, the area is particularly noteworthy as a migratory stop-over and wintering site for Bonaparte's gulls (*Larus philadelphia*), with one-day counts of 10,000–50,000 (2–10% of the world population). Additionally, two migrant waterfowl species use the river in globally significant numbers: canvasbacks (*Aythya valisneria*) and common mergansers (*Mergus merganser*). The Niagara River Corridor is an Important Bird Area (IBA) designated by the National Audubon Society.⁴ The Society and the Canadian Nature Federation are cooperating in an effort to develop a comprehensive bird conservation plan for the corridor.

Many common species of small mammals may be found, including mice and voles (*Cricetidae* sp.), eastern cottontail (*Sylvilagus floridanus*), eastern gray squirrel (*Sciurus carolinensis*), woodchuck (*Marmota monax*), and little brown myotis (*Myotis lucifugus*), a species of bat. Larger mammals

include red fox (*Vulpus fulva*), coyote (*Canis latrans*), skunk (*Mephitis vison*), muskrat (*Ondatra zibethica*), raccoon (*Procyon lotor*), and white-tailed deer (*Odocoileus virginianus*). Several species of reptiles and amphibians are also common in the area including bullfrog (*Rana catesbeiana*), American toad (*Bufo americanus*), snapping turtle (*Chelydra serpentina*), and garter snake (*Thamnophis sirtalis*).

One federally listed threatened species of bird, the bald eagle (*Haliaeetus leucocephalus*), is a transient in the region. There are no federally listed mammals, reptiles, or amphibians in the area. State-listed species include the peregrine falcon (*Falco peregrinus*), the common tern (*Sterna hirundo*), and Blanding's turtle (*Emydoidea blandingi*). One of two major nesting colonies of the common tern in the area occurs on Goat Island.

Fishes in Lakes Erie and Ontario and the Niagara River include varieties of bass, catfish, perch, pike, salmon, and trout. Coldwater species like salmon, steelhead, and trout are more abundant in the Lower Niagara River, while cool-water species (e.g., walleye) and warmwater species (e.g., bass) are more abundant in the upper river. The river's

warm-water and cool-water species are self-sustaining and support very active sport fisheries. The cold-water fisheries are sustained primarily through an NYSDEC stocking program (NYPA 1984).

Lake sturgeon is a species that was once abundant in the Niagara River and both Lakes Ontario and Erie, but recently its populations have been greatly reduced by commercial exploitation and habitat degradation. Both the U.S. Fish & Wildlife Service and the New York State Department of Environmental Conservation are studying how to increase the presence of lake sturgeon.

Cultural Resources

The Niagara Region is rich in history. It has significant associations with Native American habitation and early European contact, the French and Indian War, the Revolutionary War, and the War of 1812. It was also a major link in the Underground Railroad for enslaved African Americans who were entering Canada to escape servitude in the United States. The existence of ample water made it an early site for hydroelectric power and the associated electrochemical and electrometallurgical products, activities that remain important today. The Falls provided the setting for one of the earliest major visitor attractions in the United States and Canada.

Three National Historic Landmarks have been designated in the primary study area. They are described below:

The Adams Power Transformer Building was built in 1895 and is the only surviving structure of a hydroelectric facility that has been called “the birthplace of the modern hydroelectric power station.” Until well into the 20th century, this facility enjoyed the position of being the largest hydroelectric plant in the world, but the building, currently in private ownership, is no longer in use and requires stabilization. The structure was designed by McKim, Mead, and White and constructed of stone.

Niagara Falls State Park (formerly Niagara Reservation), established in 1885, was the first state park created under eminent domain.

It rescued the beauty and enjoyment of the Falls from the deleterious effects of previously built industrial and commercial development on the adjacent river bank. Frederick Law Olmsted, who was a prime participant in efforts to create the park, designed the landscape plan for the Reservation. Olmsted’s vision was to permit the beauty of the natural surroundings and the majesty of the Falls to inspire visitors, and to limit man-made intrusions as much as possible. The resource is listed as threatened/damaged by the National Park Service’s National Historic Landmark program because of the current impacts of commercial development on the visual setting of the Falls as viewed from New York.

Colonial Niagara Historic District, within the communities of Lewiston and Youngstown on the Niagara River, was a key portage route that linked interior North America and the Atlantic Seaboard until the opening of the Erie Canal in 1825. It contains extant resources associated with relations between various Native American and European groups. The district encompasses the site of Old Fort Niagara which was developed by the French in 1726, captured by the British in 1759, and surrendered to the United States under the Jay Treaty of 1795. The British recaptured the fort during the War of 1812, but returned it to the United States after the war. The district also includes the Lower Landing Archeological District which is situated at the base of the Niagara Escarpment at the northern terminus of the historic portage around the Niagara Falls and gorge. The Lower Landing Archeological District is located within the boundary of Earl W. Brydges ArtPark State Park and is listed separately on the National Register of Historic Places.

The United States’ National Register of Historic Places contains 23 sites and districts in North Tonawanda, Niagara Falls, Lewiston, and Youngstown, including the three National Historic Landmarks listed above. The list of National

Register sites appears in Appendix D. It is probable that additional structures and sites in the region would qualify for listing on the Register. For example, in March 2004, the NYS Historic Preservation Office found two additional Niagara Falls properties eligible for listing on the National Register of Historic Places—the James G. Marshall House and St. Mary's Nurses' Residence. In the cities of Buffalo and Tonawanda and the town of Grand Island (located in the study context area) there are 52 properties listed on the National Register of Historic Places. Of these National Register properties, seven are National Historic Landmarks, including the Buffalo & Erie County Historical Society Building, Buffalo State Hospital, Kleinhans Music Hall, and the Darwin Martin House.

The City of Niagara Falls is currently undertaking a survey of historic properties in its historic downtown which is likely to identify additional Register-eligible sites. Both the villages of Youngstown and Lewiston have historic areas that are characterized by their relationship to the riverfront and concentrations of 19th-century commercial and domestic architecture. These historic areas and many of the individual properties of which they are composed may be eligible for listing on the National Register. The Niagara Region also has both Native American and industrial archaeological sites, located primarily along the Niagara River. These sites, which have been identified but not extensively examined, hold potential for gaining further knowledge about the cultural development of the area and should be explored in further detail during the planning process if a heritage area is designated.

Canada has a comparable system of recognizing historic places. A number of places within the study context area in Canada have been identified as national historic places having associations with a national historic person, site, or event (see Appendix E). These include Fort George, the Laura Secord Homestead, and Fort Erie. Several of these sites are owned and managed by Parks Canada or the Niagara Parks Commission.

The Niagara Region was active in the Underground Railroad, with numerous freedom-seekers including the well-known Harriet Tubman—finding their way across upstate New York to the Niagara River and across to Canada. Efforts have been made on both sides of the Niagara River to recognize and mark the places associated with this historically significant effort. Some of the places are documented historic properties while others are commemorative efforts. Located outside the primary study area in Niagara County, Murphy's Orchard in Burt, New York, is the only site in the region formally recognized by the National Park Service's National Underground Railroad Network to Freedom program. The farmstead, which was a stop on the Underground Railroad, features public displays and offers guided tours and presentations. Within the primary study area, places like the First Presbyterian Church in Lewiston and the site of the suspension bridge in Niagara Falls are recognized as important places associated with the Underground Railroad. Within the larger context area, the City of Buffalo has identified significant extant resources associated with the Underground Railroad, including the Michigan Street Baptist Church. Buffalo also created a commemorative park at the point of the Buffalo-Fort Erie Ferry Crossing at Broderick Park. Likewise, on the Canadian side of the Niagara River, a series of commemorative plaques mark Underground Railroad sites in Niagara-on-the-Lake, Niagara Falls, Queenston, and Fort Erie. Organized group tours are also offered by tour groups such as Motherland Connections in Niagara Falls. See Appendix F for a list of Underground Railroad sites and commemorative markers.

Recreational Resources

This description of recreational resources emphasizes resource-based activities – those activities that are particular to this area and directly relate to the Niagara River, Falls, and gorge. Recreational resources such as athletic fields, golf courses, and campgrounds were not considered in this assessment.

The richness of the region's natural resources makes the study area a destination for outdoor recreation enthusiasts. The region attracts hunters,



Sportfishing on the Niagara River

anglers, and birders. Joseph Davis State Park is the only public land within the study area that is open for hunting and is stocked annually with pheasant by NYSDEC. Other large public lands within Niagara and Erie Counties are also open to hunters.

There are at least 13 public fishing access areas managed by local cities and towns, Niagara County, and the NYS OPRHP allowing for shoreline fishing or boat access along the Lower Niagara River and Lake Ontario as well as at Reservoir State Park. In adjacent Erie County, the level of access to the Upper Niagara River and Lake Erie is comparable. The region is considered a major destination for sportfishing. There are numerous outfitters in both Niagara and Erie Counties enabling anglers to charter boats for fishing excursions on the river and lakes. Similarly due to good water access, recreational boating is popular in the region; both Lewiston and Youngstown offer boat slips with good access to village shops and restaurants. The Erie Canal Recreationway offers recreational boating access across the state of New York linking to

major bodies of water, including Lakes Erie and Ontario. The village of Lewiston is also a base of operations for the Whirlpool Jet Boat Tours, offering high-speed tours of the lower river up to Devil's Hole and back.

As a National Audubon-designated Important Bird Area, the region is a natural draw for local as well as visiting birders. The region is highlighted in numerous birding guides and on birding websites. Again, public lands along the Niagara River corridor offer a variety of opportunities to view the many species of birds that inhabit or traverse the region as well as occasion to observe other wildlife species. Birding/wildlife viewing is identified as an activity at all eight state parks within the primary study area and is certainly possible at numerous other locations within Niagara and Erie Counties as well as Ontario's Niagara Peninsula.

There are numerous local and regional trails traversing the study area and the surrounding region. The Rainbow Bridge in Niagara Falls is the western terminus of NYS Bicycle Route 5, a major cross-state route. This formally designated state bicycle route follows local roads and runs parallel to the Erie Canal/Interstate 90 corridor, and leading to Albany, New York. Another major trail through the area is the Seaway Trail, a scenic byway that follows the shoreline of Lakes Erie and Ontario for approximately 454 miles (731 kilometers). The Seaway Trail was designated as an auto tour route, but does intersect with a number of walking and biking trails.

On a more local scale, as noted earlier, the NYS OPRHP has developed the Niagara Gorge Trail System offering approximately 14 miles (23 kilometers) of trails for hikers of varying levels of expertise in Niagara Falls and Lewiston. The Niagara Parks Commission operates a 35-mile (56 kilometers) multiple-use trail running from Lake Erie to Lake Ontario on the Canadian side of the river. At North Tonawanda, there are opportunities to link trails along the Niagara River to the statewide effort to create the Erie Canal's multiple-use towpath trail. Other smaller trail initiatives include walking paths developed along the waterfront in Lewiston and Porter as well as a number of waterfront paths in North Tonawanda. Local proponents have advocated the development of a lake-to-lake greenway on the U.S. side.

Numerous opportunities to enjoy the dramatic views offered by the Niagara Falls and Gorge exist up and down the river corridor. On the U.S. side the most obvious are at Goat Island and Prospect Point at Niagara Falls State Park, Whirlpool State Park, Earl W. Brydges ArtPark, New York Power Authority's Power Vista in Lewiston, and Fort Niagara. Scenic drives along the River Road in Lewiston and Porter and along the Robert Moses Parkway offer attractive glimpses of the Niagara River, the Gorge and the Canadian shore.

Socioeconomic Resources

Regional Economic Overview

The Buffalo-Niagara Region is a major metropolitan economy. The region is strategically located within 500 miles (805 kilometers) of 55% of the United States population and 62% of the Canadian population. The Buffalo-Niagara Metropolitan Statistical Area (MSA) has a population of 1,170,111, and Canada's Niagara Region has a population of 403,504. The MSA labor force is 554,500.

The region's economic base combines a mix of aerospace and defense, auto parts manufacturing, food processing, financial and legal professional services, health care and medical supplies, call centers and information technology. As an international trade area, Buffalo-Niagara accommodates 38% of the total trade conducted between the United States and Canada. Forty-two percent of the Buffalo-Niagara region is farmland, and annual farm product sales are \$620 million. The region's 30 colleges and universities enroll more than 100,000 students annually. Higher education plays an important function in educating the workforce and stimulating innovation. Tourism has long been important at Niagara Falls, and local economic development leaders are seeking to increase its role.

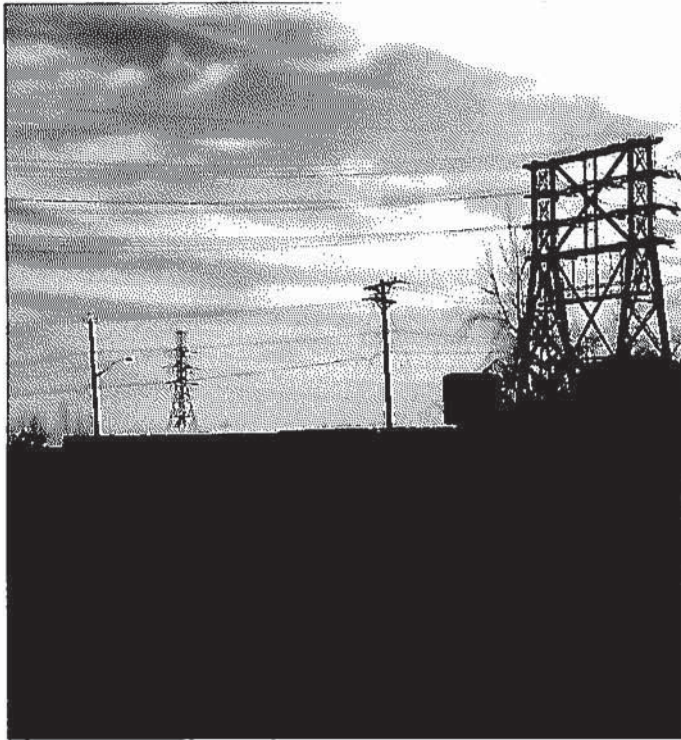
The Buffalo-Niagara Region has struggled economically in the wake of deindustrialization. The growth of personal income in the Buffalo-Niagara MSA between 1969 and 2001 lagged national growth—Buffalo-Niagara grew by 5.8% annually, while the national average grew by 7.8%. In every year of this period the Buffalo-Niagara income growth was

The region is strategically located within 500 miles (805 kilometers) of 55% of the United States population and 62% of the Canadian population.

behind the national average. Between 1997 and 2003, Erie and Niagara Counties lost 30,740 jobs. Overall, jobs in western New York declined by 5% during this period. It is worth pointing out that jobs in Erie and Niagara Counties grew in 2002 for the first time after five years of losses, while jobs were declining nationally.

The economy of Niagara Falls, New York, has suffered disproportionately from deindustrialization. Its population dropped from 102,394 in 1960 to 55,593 in 2000. International corporate consolidation has led to the closing of such industries as ESAB, Nabisco, Occidental Intermediate Chemical Division, SGL Carbon, Stratcor, The Carbide/Graphite Group, and St. Gobain Abrasives. Despite these closings, 28% of the jobs in Niagara Falls remain in the industrial sector (1997). The rising importance of the service economy is demonstrated by the growth of service jobs from 8.6% of all Niagara County jobs in 1960 to 24% of all county jobs in 1997. According to the Comprehensive Economic Development Strategy (CEDS) for Niagara County, the county's economy has lagged behind Buffalo's (Erie County) because Buffalo has realized job gains in the finance, real estate, and insurance sectors while Niagara County has not.

Deindustrialization and blighting impacts of industrial pollution have damaged the landscape and the economy of Niagara Falls (see Appendix H). The hazardous wastes in the Love Canal spawned the Superfund program in the late 1970s. Today Niagara County has 7 National Priority List Superfund Sites, 63 sites on the New York State Registry of Inactive Hazardous Waste Sites, and over 700 "brownfield" sites. Their cleanup will provide new land for economic development and expanding the tax base.



Niagara's Industrial Landscape

Niagara Falls, New York, is regarded as a key element of economic development in the greater region. The name "Niagara" is considered fundamental to the region's identity. People from around the world know about Niagara Falls, and millions are attracted there every year. Various regional economic development initiatives include both the "branding" names "Buffalo" and "Niagara." The Buffalo International Airport recently added "Niagara" to its title.

Tourism and the Regional Economy

Tourism and leisure, including the convention business, are becoming more important for regional economies seeking to compete globally. Upgrading the experience at Niagara Falls can strengthen the tourism economy, as well improving the overall quality of life for the area. Economic development professionals, including Richard Florida, author of *The Rise of the Creative Class: And How It's Transforming Work, Leisure, Community and Everyday Life* (2002), argue that the "creative class" of workers, which drives economic innovation and development, thrives in places with a high quality of life. The most economically dynamic places are "creative cities" like Boston, San Francisco, and Seattle. In order to attract the "creative class" that drives innovation and development, an attractive place with a broad variety of activities and opportunities is necessary.

At meetings concerning the proposed Niagara National Heritage Area, citizens have mentioned the importance of quality of life in shaping the local image and local economic prospects. Some people have even specifically mentioned Richard Florida's theory of "creative cities" as something for the Buffalo-Niagara Region to follow. They have argued that the Buffalo-Niagara Region cannot reach its potential unless Niagara Falls and the Niagara River are optimized for recreational and cultural potential. This is a case where a region's heritage helps "brand" it and attracts further development.

In order for Niagara Falls to fulfill its strategic role as a key regional attraction, it is necessary for it to upgrade the visitor experience to match the expectations of 21st-century travelers. Niagara Falls has been a major tourist attraction for almost 200 years, but there is a feeling that on the American side of the Falls the presentation of the visitor experience has not kept pace with that of Niagara Falls, Ontario. Since the early 1990s, Ontario has been embarked upon a comprehensive Provincial tourism strategy that seeks to develop Niagara Falls as its primary "gateway" attraction. The Ontario plan has focused on developing year-round tourist attractions, particularly a casino.

Opened in 1997, Casino Niagara spurred an investment boom in hotels, with the number of rooms growing from 11,000 to 16,000 (Niagara Falls, New York has 3,000 hotel rooms). The casino added 4,000 jobs to the 16,000 tourism jobs in Niagara Falls, Ontario. It increased the number of overnight visitors from 3 million to 4 million a year, according to Noel Buckley, President of the Niagara (Ontario) Economic and Tourism Corporation.

A new casino—the Fallsview Casino Resort, with 3,000 slot machines, 150 gaming tables, and theater and conference facilities—opened in 2004 in Niagara Falls, Ontario; and the existing Casino Niagara, with its 2,800 slot machines and 135 gaming tables, remains open. An added attraction of Niagara Falls, Ontario is the favorable exchange rate which stretches the U.S. dollar further. The Niagara Parks Commission and Niagara Falls, Ontario, have joined forces to create additional attractions, including the Butterfly Conservatory, a championship golf course at Chippewa, and a new aviary.

In 2001, the State of New York adopted a plan to allow an Indian gambling casino in Niagara Falls (as well as five other locations in western New York and the Catskills). The Seneca Niagara Casino, which has been open in the former Niagara Falls Convention Center since December 31, 2002, has changed the development dynamic in downtown Niagara Falls, New York. The casino, with 2,595 slot machines and 91 table games, has developed a strong following. It has given an impetus to new investment and is the keystone of the block-by-block redevelopment strategy for the downtown.

Meanwhile, the New York State Office of Parks, Recreation and Historic Preservation has invested \$44 million in improvements at the Niagara Falls State Park and other state-owned parks along the Niagara River Gorge. Investments include \$23 million for rebuilding the Niagara Reservation Observation Tower, \$6.5 million for the American Rapids Bridge, \$1.5 million to revamp the Gorge Discovery Center, \$1.1 million to restore the historic hay barn on Goat Island, \$2.7 million for trolleys, and \$1 million toward a new \$6 million visitor center at Fort Niagara.



Niagara Gorge Discovery Center

The New York State Office of Parks, Recreation and Historic Preservation has invested \$44 million in improvements at the Niagara Falls State Park and other state-owned parks along the Niagara River Gorge.

These projects and others yet to be implemented have been identified in the Niagara River Waterfront Master Plan and in the Niagara County Comprehensive Economic Development Strategy (CEDS) as projects contributing to the economic and community development of Niagara Falls.