



Know Your Backyard

Creek Corridor Conservation in the Town of West Seneca



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**Special thanks to the Town of West Seneca
for their ongoing stewardship of the Buffalo
River Watershed.**

Know Your Backyard: Creek Corridor Conservation in the Town of West Seneca

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The Buffalo River Watershed Restoration Project

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The views and conclusions contained in this document are those of the authors and should not be interpreted as representing the opinions or policies of the U.S. Government or the National Fish and Wildlife Foundation.

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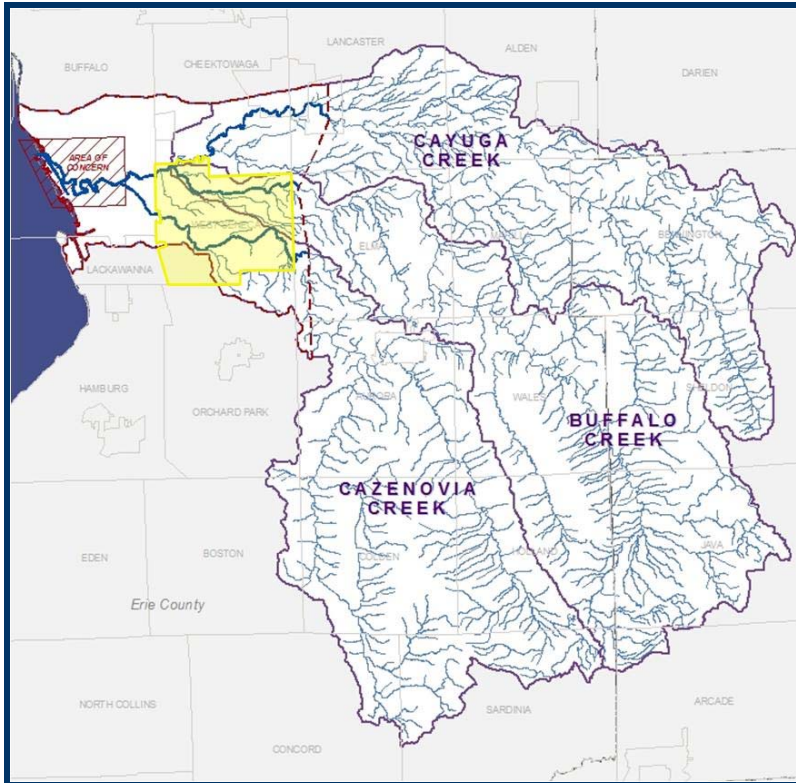


Figure 1 - The Buffalo River Watershed showing the Buffalo River “Area of Concern,” the “Habitat Opportunity Area” (from Lake Erie upstream to dashed line) and the Town of West Seneca (highlighted). Adapted from *Buffalo and Niagara Rivers Habitat Assessment and Conservation Framework, 2008*.

History of the West Seneca Oxbow Project

A 2008 grant from the National Fish and Wildlife Foundation (NFWF) enabled Buffalo Niagara RIVERKEEPER® to complete a fish and wildlife habitat inventory for the Buffalo River and its lower tributaries as part of a major federal effort to restore the river. Among the discoveries was the importance of the remaining floodplain forests and creekside wetlands, including the oxbow floodplain and wetland in the Town of West Seneca. The West Seneca Commission for the Conservation of the Environment and planning studies over the past 40 years have documented these creek corridors as places in need of conservation.

Additional grants in 2009-10 allowed Riverkeeper and a team of fish and wildlife experts to conduct field assessments and develop a habitat restoration plan for the oxbow. During this time, the state extended its protection to the wetland and the owner of the oxbow’s central 14 acres donated the land to the Town as a nature preserve to be protected in perpetuity.

Riverkeeper and the West Seneca Conservation Commission continue restoration work at the oxbow and also public outreach on “best management practices” for conserving West Seneca’s greatest natural assets—it’s stream corridors—for their contribution to the quality of life for all.



RIVERKEEPER® leads Buffalo Niagara’s efforts to safeguard our water for present and future generations. It is our mission to protect and restore water quality and quantity and to connect people with water.

Contact Buffalo Niagara RIVERKEEPER® at (716) 852-7483 or www.bnriverkeeper.org

Contact West Seneca Commission for the Conservation of the Environment at (716) 674-1833 or www.westseneca.net

I. Summary

The Buffalo River's tributaries and their associated floodplains and wetlands in the Town of West Seneca are unique in Erie County, in part because of the diversity of plants and animals they support. Protection and restoration of these creek corridors are key to conserving an irreplaceable natural and cultural heritage.

Floodplains and wetlands are integral parts of the creek systems flowing through the Town. The 100-year floodplain is the low-lying area adjacent to the stream channel that is subject to naturally occurring flooding. In addition to providing important contiguous habitat for fish and wildlife, undeveloped floodplains and wetlands protect property by safely storing stormwater - whether it is overflowing from the creek or running off the adjacent land. As adjacent and upstream land undergoes development, these riparian (creek-side) areas play an increasingly critical role in absorbing and storing stormwater, filtering out nutrients and pollutants, moderating stream temperatures, and generally improving stream water quality.

Approximately 1,100 acres of undeveloped floodplain and associated wetlands along Buffalo and Cazenovia Creeks currently provide these ecological services to the Town of West Seneca.

Buffalo Niagara RIVERKEEPER®, the West Seneca Commission for the Conservation of the Environment, and an advisory committee of technical experts initiated an ecosystem inventory of these undeveloped areas along Buffalo Creek. We began with an oxbow wetland that was recently donated to the Town of West Seneca by the Estate of Robert and Bernadette Jacobs. This property will now be protected in perpetuity, undergo restoration, and eventually serve as a limited access nature preserve.

This booklet reports some of our ecosystem inventory findings. It is intended for use by everyone who lives in the Buffalo River Watershed, but especially for those who live or work in the Town of West Seneca.

2. The Great Lakes, Buffalo River, and the Town of West Seneca

The Great Lakes Watershed contains almost 20% of the world's fresh surface water. It is the largest freshwater ecosystem on the planet.

The Buffalo River Watershed is part of this living system. It provides water, natural drainage, and fish and wildlife habitat to 446 square miles of Western New York via three major tributaries: Cayuga, Buffalo, and Cazenovia Creeks. In their upper reaches, these streams, and their tributaries, are generally fast-flowing with numerous rapids and low waterfalls as they descend from the Allegheny Plateau to the Lake Erie Plain (Figures 1, 2, & 3).

Northernmost of these tributaries is the 39-mile-long Cayuga Creek, rising in western Wyoming County. The middle tributary, Buffalo Creek, rises in the hills of southern Erie and Wyoming Counties and flows 43 miles northwest to join Cayuga Creek in the Town of West Seneca. Southernmost is Cazenovia Creek, whose 18-mile-long West Branch and 24-mile-long East Branch both rise in southern Erie County. The confluence of Cayuga and Buffalo Creeks, just upstream from Harlem Road near Clinton Street, forms the Buffalo River, which flows another eight miles to its mouth on Lake Erie (Figure 1).

In the mid-1980's, the International Joint Commission, a U.S.-Canada boundary waters oversight agency, identified the lower 6.2 miles of the Buffalo River as one of 42 Great Lakes Areas of Concern (AOCs) because of its physical, chemical, and biological

What is a Watershed?

A *watershed* is the land area or basin drained by a river or a lake. A large watershed like the Great Lakes contains sub-basins like the Buffalo River Watershed, which includes the distinct drainage areas of Cayuga, Buffalo, and Cazenovia Creeks.

9. References and Credits

Photo Credits (All plant and animal photos were taken at the West Seneca oxbow wetland)

1, 5, 10 - Margaret Wooster;
Cover, 2, 3 - Evelyn Hicks;
4, 12 - Katherine Winkler;
6 - 9, 13, 15, 16 - Bernie Clabeaux;
11 - Maureen Wall;
14 - Maureen Mayer

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ANSWERS TO QUIZ:

1. The Buffalo River Watershed is 446 square miles; 2. You live on the Marcellus, Skaneateles, Ludlowville or Moscow formation and your soil is probably a silt loam mix of glacial origin; 3. Any of the plants listed on pages 12-14; 4. Whitetail deer, beaver, fox, coyote, mink, woodchuck, opossum; 5. American basswood; 6. Three; 7. Black-billed cuckoo, red-headed woodpecker, scarlet tanager, wood thrush, black-throated blue warbler or Lincoln's sparrow; 8. Sedimentation and glaciation; 9. See page 19; 10. Japanese knotweed and common reed (phragmites). BONUS: The Town's water comes from Lake Erie at Sturgeon Point in Hamburg (Erie County Water Authority). Sewage goes either to the Buffalo Sewer Authority treatment plant on Squaw Island (Niagara River) or to private septic systems.

8. Where You At? A Watershed Literacy Quiz

For 2 points each:

1. What watershed do you live in and how large is it?
2. What bedrock formation and soil type is your home on?
3. Name five native plants with high wildlife value in your Town.
4. Name the five largest native mammals in your community.
5. Before colonization, what tree species dominated the forests surrounding Buffalo Creek?
6. How many state-protected wetlands are there in your Town?
7. Name five of the rarer forest birds known to breed or migrate through your area.
8. What primary geological processes influenced the land forms and soils where you live? What is the evidence?
9. Name five native fish common in the Buffalo River's tributaries.
10. Name two non-native invasive plant species in your Town.

BONUS QUESTION: Where does your tap water come from? Where does it go when you flush?

SCORING

- 0-4 You're not anywhere at all.
5-8 You are awake.
9-12 A firm grasp of the basics.
13-16 You're really paying attention.
17-19 You know where you're at.
20+ You not only know where you're at; you know where *it's* at.

impairments. For many decades the Buffalo River AOC had limited fish life due to low oxygen levels, little aquatic vegetation, and high levels of pollution.

The 1993 New York State Department of Environmental Conservation's (DEC) *Fish and Wildlife Habitat Inventory of the Lower Buffalo River Watershed (Inventory)* recommended that restoration efforts would need to extend upstream at least as far as the first impassable barrier for native fish migration on each tributary given the severe degradation of the lower Buffalo River. These barriers are the Como Park Lake dam on Cayuga Creek, the Blossom dam and falls on Buffalo Creek, and the Cazenovia Creek falls at Northrup Road—all roughly in the vicinity of Transit Road. The *Inventory* recommended that the remaining river corridor wetlands and forests downstream from these barriers should be protected (Figure 2).

This "Buffalo River Habitat Opportunity Area" comprises about 15% of the Buffalo River Watershed. One of its major municipalities is the Town of West Seneca (Figure 1).

In addition to habitat opportunities, the creek corridors along the Cayuga, Buffalo, and Cazenovia tributaries provide public access to some of our region's most beautiful natural areas. West Seneca provides fishing access to Cazenovia Creek at Leydecker Road near Seneca Street and walking trails at Mill Road Park. Interpretive trails and parks along Buffalo Creek include: the Burchfield Nature & Art Center on Union Road at Clinton Street, the roadside park on Indian Church Road (near Mineral Springs), and the DEC fishing access spot off Harlem Road near Clinton.

Conserving these natural creek corridor areas is key not only to restoring fish and wildlife in the Buffalo River and eastern Lake Erie, but also to people's health and their enjoyment of the natural wealth and beauty that gives West Seneca its unique character.

3. Land and Water

The sedimentary bedrock underlying the Town of West Seneca consists of four distinct geological formations (Figure 2). It took millions of years for these layers of shale and limestone to develop. 380 million years ago, this land was at the bottom of an ocean and was located 20 degrees south of the equator. Each layer contains a distinct fossil assemblage of the plants and animals that once inhabited these warm tropical oceans.

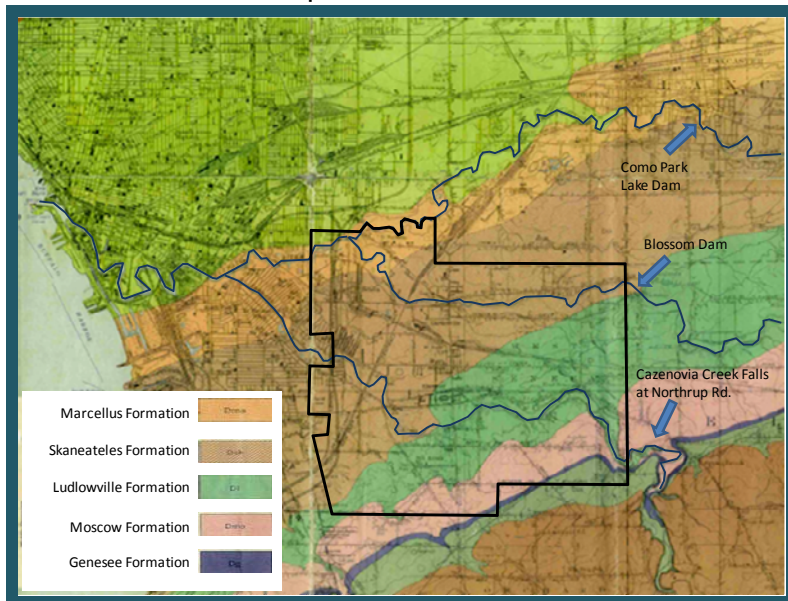


Figure 2 - Underlying bedrock layers, main tributaries, and impassable fish barriers in the West Seneca area. Adapted from: *Geologic Map of Erie County, N.Y. Bedrock Geology*, Edward Buehler and Irving Tesmer, 1963.

Layers of limestone overlaying comparatively softer layers of shale account not only for many of the Town's waterfalls and other distinctive rock features, but also for some of its historic plant communities. For example, the Seneca name for Buffalo Creek meant "Place of the Basswoods" because of the predominance of this limestone-loving tree in the landscape.

reducing paved or impermeable surfaces on your land. For more information and for runoff prevention design guidelines, contact the Erie County Stormwater Program at (716) 858-6370.

Plant native species for local and migratory wildlife. No matter how small your property is, consider planting native plants in your gardens instead of non-natives. Given our extensive alteration of the natural landscape, it is increasingly up to all of us to restore the habitats needed by wildlife, especially birds. Nearly one-third of North America's bird species are in serious decline, primarily due to habitat loss. Native plants support significantly more native species than do alien ornamentals and are often more pest resistant. Native plants reduce the need for fertilizers, pesticides, watering, mowing, and other general maintenance.

For general ideas on restoring native plants on your property, look around for natural areas in your neighborhood with site conditions similar to yours. You may want to replace or partially replace a lawn with native trees such as basswood, birch, sycamore, oak, maple, or willow. These trees can be under-planted with woody shrubs like serviceberry, spicebush (also deer resistant), hazelnut, or pagoda dogwood. Studies have shown that even modest increases in native plant cover on suburban properties significantly increase the number and species of breeding birds in the area.

Where can you purchase native plants? Many garden centers now offer plants that are "native to North America" or to the Northeast states, which is a beginning. However, these plants may not be native to the Buffalo-Niagara eco-region, and are likely to be clones, cultivars, or horticulturally-enhanced, lacking in genetic diversity. A very few nurseries in Western New York offer native plants propagated from regionally-collected seeds. Ask your plant retailer about the source of their material and let them know you are interested in native plants derived from local or regional seeds. You can also collect local seeds or, for bigger jobs, contract in advance with your local grower for plants grown from local seed. For a list of resources on native plants in the Buffalo-Niagara region, contact Buffalo Niagara RIVERKEEPER® at www.bnriverkeeper.org/program/habitat/.

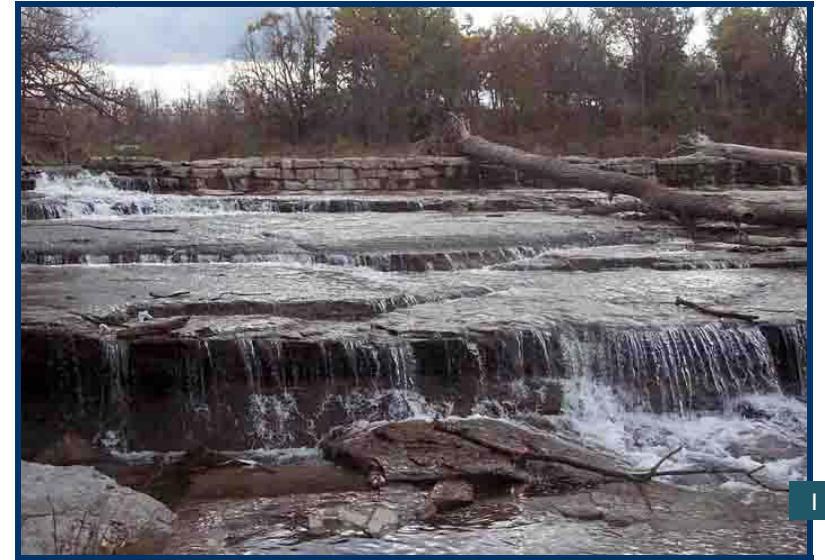
7. Stewardship

Much of the remaining natural area along Buffalo and Cazenovia Creeks in the Town of West Seneca is privately owned. Property owners have an important role to play in preserving regional water quality and restoring quality habitat for wildlife. Here are some of the things property owners can do.

Create or enhance a native vegetation buffer zone. If you live along a creek, or a ditch that drains to a creek, maintain an adequate buffer of native vegetation between the water and your yard or driveway (i.e. do not mow to the edge). Vegetated buffers settle out oils, salts, fertilizers, and other pollutants before they enter the water. They can slow stormwater runoff dramatically preventing downstream flooding. Plant roots help hold stream banks intact which prevents erosion and loss of property. In the Great Lakes region, a minimum width of 100 feet of vegetation is recommended along streambanks, but generally the wider the buffer the better.

Once established, buffer zones require little to no maintenance. Forested buffers are recommended for West Seneca's creek corridors where possible. These forested buffers add ecosystem value by providing much-needed shade and cooling for fish and other aquatic species. A forested buffer ideally consists of three tiers. Tier 1: Flood-tolerant trees nearest the creek to provide shade. Tier 2: A wider variety of trees and shrubs to filter out nutrients and sediments. Tier 3: Native grasses, ferns and wildflowers closer to home to slow stormwater runoff and provide pre-filtering of the water. For more information on planting and maintaining stream buffers, contact the Buffalo Niagara RIVERKEEPER® Stream Buffer Project at (716) 852-7483.

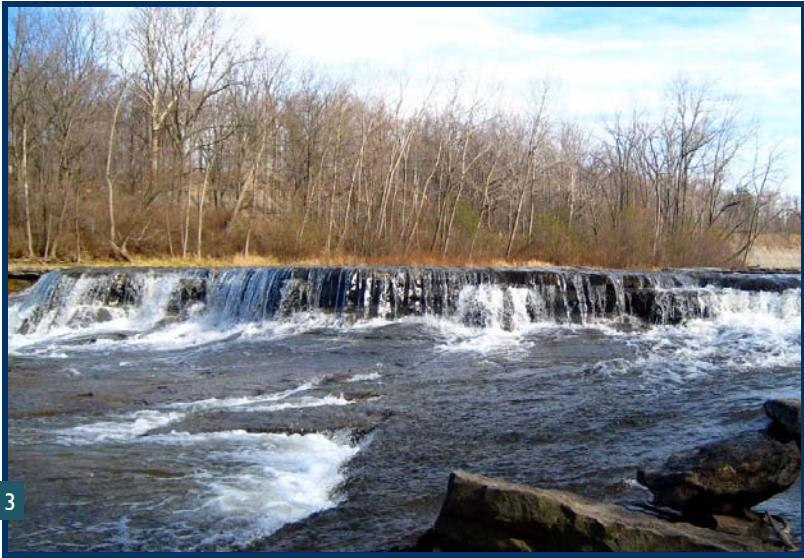
Minimize stormwater runoff from your land. Even if you do not live right next to a creek, you do live in a watershed. Water running off your land during heavy rain or snow melt may carry soil, wastes, fertilizers, and other pollutants to the nearest stream. West Seneca is part of a county-wide stormwater management program. You can help reduce runoff by creating rain gardens and



Waterfalls, such as Blossom Falls located on Buffalo Creek (Town of Elma), reveal the contact points between geological formations - in this case the Ludlowville - Skaneateles contact.



Limestone units in the Genesee Formation are prominent in the Cazenovia Creek Gorge as seen from the Transit Road Bridge.



3

These waterfalls at Northrup Road just upstream from West Seneca in the Town of Elma mark the upper limit for most fish migrating up Cazenovia Creek.



4

The Tichenor limestone, part of the Ludlowville formation, appears as ribs or “flying buttresses” along Cazenovia Creek at Mill St.

Fish

Fish populations in the lower Buffalo River system have recovered from almost zero in the decades between 1920 and 1960, to over 40 species today. However, some of these are invasive species such as round goby or sea lamprey, and some are introduced, such as coho salmon.

Native fish commonly found in the Buffalo, Cazenovia or Cayuga Creek tributaries include: black crappie, bluegill, bluntnose minnow, brown bullhead, common shiner, golden shiner, pumpkinseed, redhorse, rock bass, smallmouth bass, and white sucker. Walleye and yellow perch are present, especially in Cayuga Creek, but less common. Two “Species in Greatest Conservation Need” found in these tributaries in recent years are the longear sunfish and the black redhorse.

While water quality has improved, fish habitat remains marginal in the lower Buffalo River and in Buffalo and Cazenovia Creeks, especially for naturally reproducing native fish populations. Fishery biologists cite high water temperatures (due to lack of stream bank cover) and a lack of aquatic habitat (vegetation, boulders, pools, riffles, and snags) as factors that limit native fish survival and reproduction.

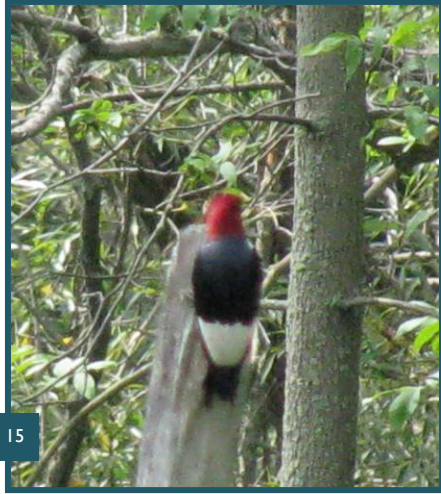
Great Lakes fishery goals for Lake Erie and the Buffalo River include restoring healthy spawning populations of native top predator fish such as walleye. Aquatic habitat goals for the Buffalo River tributaries include:

- Restore continuous, naturally-vegetated shorelines to help reduce water temperatures and siltation.
- Restore in-stream habitat quality including vegetation, boulders, snags, riffles, and pools.
- Implement stormwater control programs.
- Remove or reduce the impacts of stream barriers and channelization to the greatest extent possible. Restore natural channel conditions in at least 75% of the habitat opportunity area.

Birds

The Buffalo Ornithological Society conducted bird surveys on Cazenovia and Buffalo Creeks in 2005 and 2006. They identified 83 avian species along these tributaries. Over half (43) of these were forest and forest edge species, indicating the significance of forest habitat in the Town of West Seneca.

Among the rarer birds listed by New York State as “Species in Greatest Conservation Need” (SGCN), the survey identified six species: the black-billed cuckoo, black-throated blue warbler, Lincoln’s sparrow, red-headed woodpecker (right), scarlet tanager, and wood thrush. Many species of woodpecker, including the red-headed, nest in the tree cavities along Buffalo Creek.



The survey found only six species of marsh birds: the alder flycatcher, great blue heron, black-crowned night heron, green heron (right), red-winged blackbird, and wood duck. This low diversity could indicate a lack of natural marsh habitat. The protection and restoration of high-functioning wetlands along both creeks is crucial to bringing back a healthy marsh bird community.



Erosion erased most of the next 350 million years’-worth of our region’s ancient geologic record. It was not until the relatively recent glacial period - 2 million to 12,000 years ago - that the land took its final imprint. Repeated periods of glacial retreat and advance scraped and leveled the landscape. Successive generations of glacial lakes and Spring-flooded rivers deposited the generally deep, often water-saturated silt loam soils of the flat and fertile Erie Plain (Figure 3).

Almost all the known early Iroquois settlements on the Niagara Frontier have been found on this plain or along the Niagara River.

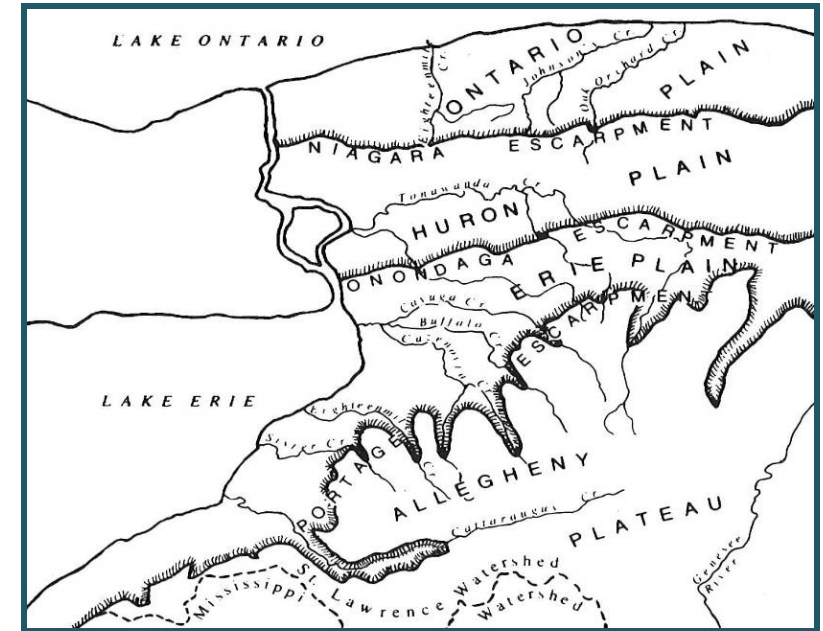


Figure 3 - Western New York Geography. Adapted from: Marian E. White, *Iroquois Culture History in the Niagara Frontier Area of New York State*, 1961.

4. Early Cultural History

Geological and archaeological evidence indicate people have lived in Western New York as early as 12,000 years ago. Tools, fashioned from stone and bones of Late Pleistocene animals such as the mastodon, have been found along glacial lakeshores, including areas of West Seneca.

Archaeologists have found evidence of almost continuous human occupation along the lower tributaries of the Buffalo River. Artifacts recovered span the Paleo-Indian period (ca. 10,000 BC) through the Late Woodland period (1500 – European Contact) to Iroquoian traditions including the Wenro, Erie and Neutral Nations. By most accounts, the Iroquois or Haudenosaunee conquered and absorbed the latter into the Confederacy by the mid-1600s. Evidence of this extensive use is scattered throughout the lower Buffalo River Watershed and provides important information for our collective cultural and natural heritage.

In 1779, the Western Campaign of the Revolutionary War destroyed many Iroquois villages across New York State, and all the main Seneca settlements along the Genesee River. In 1780, many Seneca and other refugees of the Confederacy relocated to the 130-square-mile Buffalo Creek Reservation (Figure 4). Farmer's Brother, Red Jacket, and Mary Jemison ("White Woman of the Genesee") were among those who came to live here.

In his 1880 history, "The Niagara Frontier" Orasmus Marshall has this account of what Buffalo Creek meant to the Senecas:

At the time of the arrival of the Senecas, the striking feature of this locality was the predominance of the linden or basswood over all the other trees of the forest. They fringed both borders of the creek, and spread their broad foliage over its fertile bottoms. Seneca tradition tells us, that in the season when the tree was in flower, the hunting parties from the Genesee could hear, ere they reached the creek, the hum of the bee, as it gathered, in countless swarms, its winter stores from the abundant blossoms . . . The Senecas . . . seized upon this marked peculiarity of the place, and called it Do'syo-wăa . . . meaning, The place of the basswoods.

Reptiles and Amphibians

Snapping turtles and painted turtles (below top) rely on the pocket wetlands along Buffalo River tributaries. In this area, their populations can be abundant and coexist along with American toads, leopard frogs, and spring peepers. Other frog species such as chorus frog, green frog, and bullfrog are likely present but have not yet been surveyed. Salamanders also have not been systematically surveyed though they likely inhabit the wooded wetland areas along the creeks. Garter snakes are common in the area, even an occasional albino individual (below bottom).

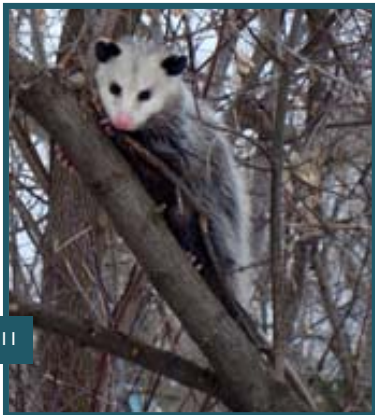


6. Animals

Mammals

Today, white-tailed deer (below), red fox, coyote, mink, striped skunk, raccoon, woodchuck, beaver (recent activity seen in photo below right), eastern cottontail, gray squirrel, chipmunk, muskrat, opossum (bottom left), and a variety of bats and smaller rodents inhabit the Buffalo Creek corridor.

Each of these species is uniquely adapted to the region. The white-tailed deer, for example, browses on leaves and other succulents all summer, but in winter is able to digest twigs, buds, and bark. Skunks, raccoons, chipmunks, woodchucks, and bats sleep all winter, with variously slower metabolisms enabling them to survive the long fast. On the other hand, opossums, North America's only marsupial, are relatively recent arrivals from the South and have no such winter survival strategies—as this little guy seemed to be telling us last February.



16

West Seneca was originally incorporated as the Town of Seneca in 1851 due to its Seneca Indian heritage. Its name was changed to West Seneca to avoid confusion with an already existing Town of Seneca in eastern New York State.

The Haudenosaunee people concentrated in several locations along Buffalo and Cazenovia Creeks. Here they developed homesteads, farms, and even a native language newspaper.

However, with the completion of the Erie Canal in 1825, pressure on the Seneca to relinquish their Buffalo Creek lands intensified. An era of unparalleled bribery, legal maneuvering, and strife occurred. This included, in 1830, the passage of the Indian Removal Act authorizing the United States President to forcibly transfer Eastern tribes to Indian Territory in the West. In 1838, the Senecas sold all their remaining reservations in Western New York to the Ogden Land Company.

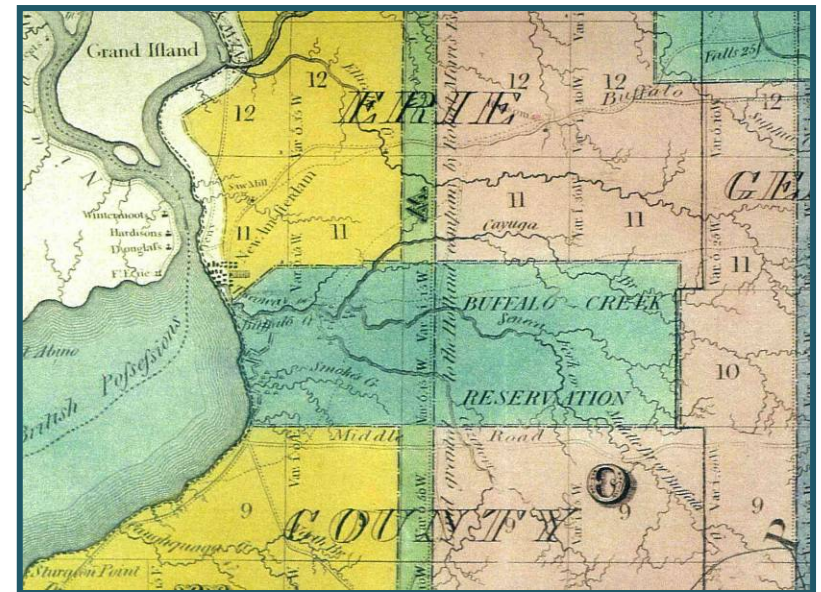


Figure 4 - The Buffalo Creek Reservation. Adapted from: *Morris's Purchase or West Geneseo in the State of New York*, Holland Land Co.: 1804, revised 1829.

9

In 1842, with the help of the Quakers and attorney Daniel Webster, the Seneca negotiated a compromise with the Ogden Land Company. The Seneca renounced their claims to the Buffalo Creek Reservation and the Ogden Company released their hold on the Allegheny and Cattaraugus territories.

While the Seneca were leaving their Buffalo Creek homes, a flood of newcomers began arriving. Among them was Christian Metz, prophet and leader of a religious commune in Germany. He believed that he saw the place that God had promised his people in the virgin forests and Indian farm clearings along Buffalo Creek. He renamed Do'-syo-wā "Eben-ezer," or *Hitherto hath the Lord helped us*, and by the summer of 1843 he had purchased five thousand acres at \$10 an acre.

The Ebenezer Community of True Inspiration farmed and logged off the land along Buffalo Creek for the next twenty years. They then moved West to found a new community in Amana, Iowa.

From the time the Ebenzers left until today, the Town of West Seneca's population has grown steadily, resulting in significant changes to the landscape. Farm fields have been replaced with subdivision housing and commercial growth. West Seneca is now considered a typical first-ring suburb of the City of Buffalo.

Nevertheless, approximately 1,100 acres of undeveloped floodplain and wetlands preserve much of the Town's remaining natural heritage (Figure 5), and numerous archaeological studies document how Iroquoian and pre-Iroquoian people once lived along its creeks.

The first goal of West Seneca's 2006 *Comprehensive Plan* is to conserve this natural and cultural legacy. The Plan further recommends:

"A stream corridor/floodplain overlay district should be established to protect these features."

In the Buffalo River Watershed non-native Japanese knotweed (*Fallopia japonica*) and Common reed (*Phragmites australis*) have colonized many acres of streambank. Removing and replacing these species with wildlife-supporting native species will require a major and long-term effort. However, it can be done, and the effort is well worth it, as native plant communities are the foundations for healthy ecosystems.



Native to eastern Asia, Japanese knotweed (left) was introduced to the United States in the 1870's as an ornamental plant. It is fast-growing, emerging in early spring and crowding out other native species.

It is easy to recognize by its hollow, reddish colored stems with raised nodes that give a "bamboo"-like appearance. Japanese knotweed produces white flowers in late summer and early autumn. Each plant can produce up to 192,000 seeds per year and reach up to 15 feet tall. It can also spread by rhizomes (root extensions) up to 60 feet in length or from cuttings from the stem or root.



There are two strains of *Phragmites australis*, one native and one exotic. The exotic, invasive strain (left) is most common in this area. It is very fast-growing, reaching heights of 12 feet. The flowers, produced in late summer, are dark purple feathery plumes. The dense stands form mainly through their underground rhizomes and can easily displace cattails and other

native species. These rhizomes can grow up to 30 feet per year and secrete an acid that is toxic to nearby plant species. Additionally, the species is very salt tolerant allowing it to establish where other species cannot. Its ability to alter soil chemistry by producing toxic chemicals coupled with its extensive yearly growth and salt tolerance make this species one of the most unwanted invaders in the area.

Native shrubs along the creek corridors which are used as a primary food by many pollinators, birds, and other animals include: elderberry, staghorn sumac, spicebush, raspberry, and a variety of dogwoods, hawthorns, and viburnums.



Flowering plants and vines of great wildlife value in the area include: common and swamp milkweed, wild bergamot (bee balm), Joe-Pye weed, various species of goldenrod, Virginia creeper, and wild grape. An array of grasses, sedges, rushes, and emergent wetland plants such as cattail, pickerel weed, and arrowhead complete the picture.



Staghorn sumac (top right) and swamp milkweed (right).

Invasive, non-native plants

Unfortunately, many non-native plants have migrated, or been introduced, into the Buffalo River Watershed and have spread aggressively to the detriment of the native ecosystem. Not all non-native plants are necessarily “bad,” but some have grown out of control because they did not co-evolve with natural predators to keep them in balance. Monocultures of invasive plants that out-compete native species sometimes take over many acres, especially along creek corridors in areas of disturbed soils. These invasive, non-native plants provide little food or habitat value. In some cases they also change soil chemistry by secreting chemicals into the soils that are toxic to other plant species.

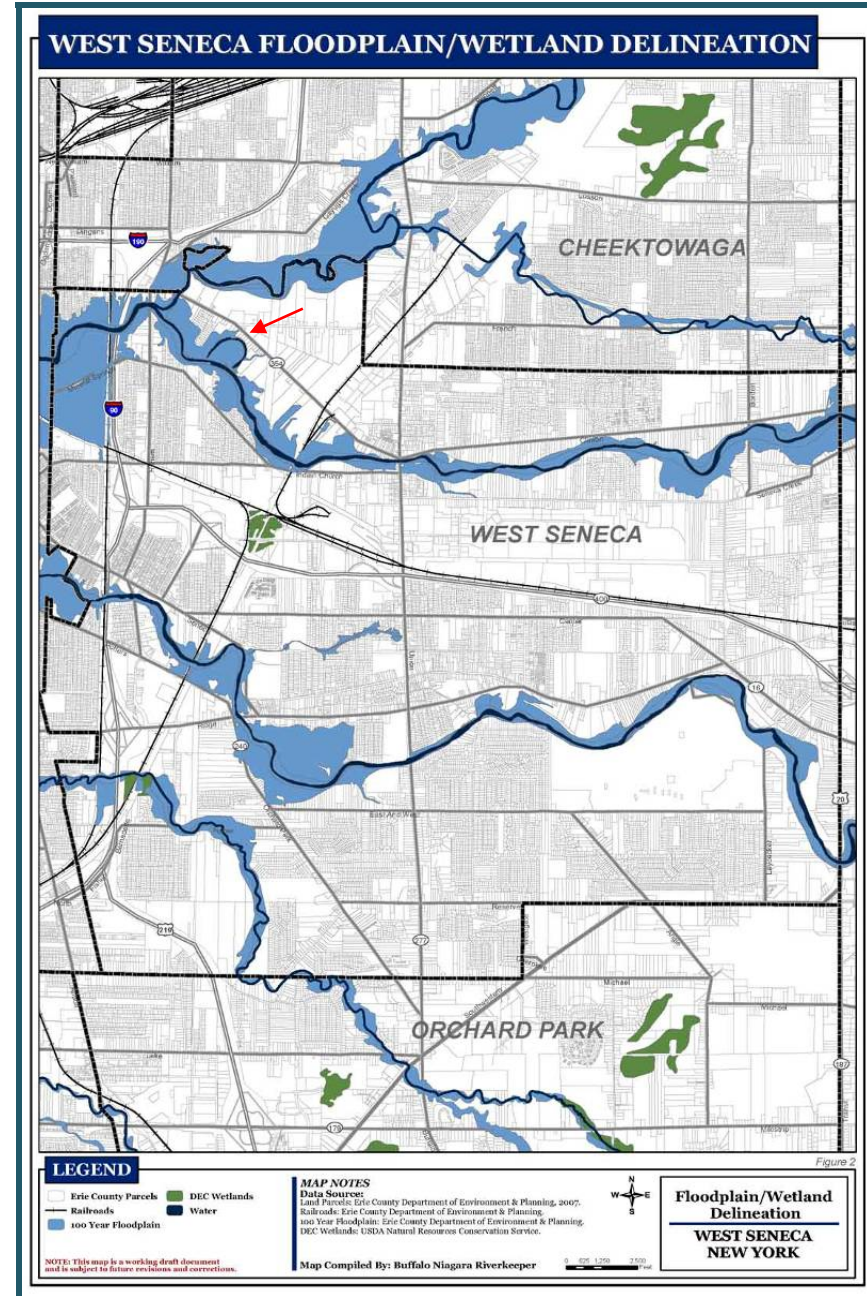


Figure 5 - Stream corridors. Note the DEC recently designated the oxbow (upper left corner) a third state-protected wetland in the Town of West Seneca.

5. Plants

Historic Vegetation

Native organisms - including plants, insects, fish, amphibians, reptiles, birds, and mammals - create an intricate web of life that has co-evolved over thousands of years. Each species' life cycle is highly dependent on the others. For example, our spring flowering oak and maple trees provide nectar to tiny flies and other insect pollinators that are an important food source for migrating songbirds. High-energy fruits like the small blue-black berries of the pagoda dogwood are ready just in time for the fall migration of birds. Removing a certain native plant from the landscape may remove the insect that feeds on it, along with the bird that feeds on that insect.

What was the native landscape of West Seneca and the lower Buffalo River Watershed like before development? In his 1920 *The History of the Buffalo Creek Reservation*, archaeologist Frederick Houghton described the forests before intensive logging and farming began:

The banks of the creeks and the wide flats bordering them were thickly set with basswoods . . . The surface of the low plains above the creek flat was diversified by low, sandy knolls and shallow, swampy depressions. Here grew heavy stands of beech, maple, hickory and walnut, all dominated by the sombre pyramids of giant hemlock and pine.

Vegetation today

A 1992 DEC Natural Heritage Program survey of the forested corridors along Buffalo and Cazenovia Creeks in the Town of West Seneca found majestic red oaks and black maples (whose nuts and seeds have high wildlife value) on the terraces above Cazenovia Creek. In addition, large cottonwoods on the floodplains (which provide fruit for songbirds and waterfowl and nesting holes for woodpeckers and raptors) were noted. The

survey also found an assemblage of native wildflowers - including green violet, Virginia bluebell, goldenseal, and purple and white trillium - "unique for Erie County" and concluded that:

The forested corridors along both Cazenovia and Buffalo Creeks warrant protection for their wildlife integrity and floristic diversity. These corridors enable wildlife to migrate freely and thus reduce the risk of inbreeding, which would weaken the gene pool. These areas exhibit a rich display of flora and fauna which are regionally uncommon in the vicinity of Buffalo.

Eastern cottonwood (below), green ash, and black willow trees dominate Buffalo Creek's floodplain. Below them, in the shady understory, we may find dense stands of ostrich ferns (below), and younger, shade-tolerant trees like the basswood and sycamore - the next generation of Erie Plain hardwood forest.

