

COMMUNITY SYSTEMS AND NETWORKS



NILES

INFRASTRUCTURE SYSTEMS

INFRASTRUCTURE SUMMARY

This analysis focused on the Village of Niles' drinking water, stormwater, sanitary and roadway systems. The following items were reviewed as part of this study:

- Village Staff Interviews
- Stormwater Master Plan - 2012
- Stormwater Master Plan - 2018 Update
- State of the Streets - 2018
- Water System Master Plan - 2018
- Village's Geographic Information Systems (GIS) Data
- 2019 Village of Niles Comprehensive Annual Financial Report
- CMAP Community Data Snapshot for Niles, dated June 2020

Drinking Water

The Village recently switched over their water supply from the City of Chicago to the City of Evanston through Morton Grove. The source water continues to be Lake Michigan. The water is stored in several reservoirs and tanks prior to being distributed throughout the Village for use.

The Village transmits and distributes water through 103 miles of water mains ranging in size from 4" to 24" in diameter. Pipe materials include polyvinyl chloride (PVC), cast iron, ductile iron, and high-density polyethylene (HDPE). The Village is continually improving and maintaining the water distribution system, as water mains were generally installed in the 1950's and 1960's and are cast iron pipes. There are approximately 8 miles of private water services lines in the Village. There are lead services lines within the Village, and this will need to be addressed in the future pending regulatory lead and copper rules.

There are approximately 1,511 water main operating valves and 1,132 fire hydrants, all of which are owned, operated and flushed annually by the Village. The Village is continually improving and maintaining the water distribution system. These improvements include fire hydrant and valve replacements, residential water meter upgrade/repair and the replacement of aging water mains as the budget allows. The improvements further assure the continued and uninterrupted conveyance of quality drinking water to your tap. Water loss is significantly down due to the pipe replacement program being initiated by the Village.

Water bills are issued quarterly and commercial accounts monthly, both from actual meter readings. The water rate is \$8.44/1000 gallons used. The Village water system provides an average of 6.41 million gallons (2015 data) of water daily to its residents, businesses, and other customers. This is anticipated to decrease to 4.0 million gallons due to the Village's largest customer (North Maine Water Utility) contract expiring. The North Maine Water Utility purchases roughly 40 percent of the Village's water, the second largest customer is Coca-Cola at roughly 10 percent. With the loss of the North Maine Water Utility contract, it is anticipated there may be an impact to Village water revenues.



Water Tower off of North Oriole Avenue in the Village of Niles, Illinois

Sanitary Sewer

The Village collects liquid sanitary waste in approximately 44 miles of separate sanitary sewer mains and 39 miles of combined sewer mains that are composed of pipes of varying ages and sizes. The pipes and lift stations collect the sewage and stormwater within the combined sewers, or strictly sewage from within the sanitary sewers, and convey it to the MWRDGC treatment plant in Skokie located on Howard Street. The treated effluent is discharged to the North Shore Channel.

The Village has seven interceptors (large diameter combined sewer mains) and eight Deep Tunnel overflow points as part of the Deep Tunnel and Reservoir Plan (TARP). These interceptors and overflow points are in use when the combined sewer mains reach capacity. The ultimate receiving point for the interceptors and overflow points is the McCook Reservoir.

Similar to many other municipalities, the Village's sanitary sewer system is subject to inflow and infiltration during severe storm events that can lead to surcharging of the system. The Village has an inspection and lining program to rehabilitate existing sewers and has an annual vaporooter treatment program to prevent the growth of roots. The Village also has a residential flood control assistance program for sanitary sewer backflow protection and overland flood protection. The program has been a great success as over 500 participants have been involved, mainly for sanitary sewer backflow protection. Charges for sewer usage are based on water consumption. The sewer rate is \$0.75/1000 gallons of water used.

Stormwater Management

Stormwater is collected within the Village in 39 miles of combined sewer mains, 56 miles of storm sewer mains and various detention basins, rain gardens, and bioswales. The Village straddles two major watersheds: The Des Plaines River watershed and the North Branch of the Chicago River watershed. The areas which discharge to the Des Plaines River watershed are served by separate sewers. In contrast, almost all the residential areas in the North Branch of the Chicago River watershed are served by combined sewers.

In 2012, the Village completed a Stormwater Management Plan to identify areas vulnerable to flooding and develop cost effective drainage improvements to reduce the risk of future flooding. In 2018, the Stormwater Management Plan was updated to reprioritize the projects not yet constructed. In those six years, several "Tier 1" projects were designed and constructed. These included the Cleveland Relief Sewer Project, Maryhill Cemetery storage Basin, Our Lady of Ransom storage basin, and the Oak Park Bioswale and Permeable Pavement.

The "Tier 2" projects are being divided into quartile projects. A MWRD grant for \$2 million was acquired by the Village to construct an underground stormwater detention vault at Golf Mill Park and 9101 Greenwood Avenue. Also, a proposal for design services for a storm sewer on Oketo Avenue between Keeney and Monroe Streets was recently sent out by the Village. A total of \$80 million in stormwater projects is reasoned to be in need of funding.

The Tier 1 projects were funded through a quarter of a percent sales tax increase, however, the revenue from the sales tax increase now mostly goes towards pensions. A new Village dedicated source of funding will be required for the reprioritized "Tier 2" projects.

Developments have been required to comply with the Niles stormwater management regulations since 2011, the year they were implemented. From 2011 to 2018, over 50 developments were reviewed for compliance with Niles' stormwater management regulations. Also, since the release of the 2012 Stormwater Management Plan, Niles became an authorized community to allow in-house compliance reviews for the MWRD Watershed Management Ordinance (WMO). The Village also participates in the National Flood Insurance Program (NFIP).

The Village is vulnerable to overbank flooding from the North Branch Chicago River, which flows through the Village. There is Federal Emergency Management Agency (FEMA) regulatory floodplain associated with this waterway, and the Village enforces the FEMA Flood Insurance Rate Map (FIRM).

The Village has experienced flooding in the past during extreme storm events. This includes the 1987, 2008, and 2011 storm events. The stormwater management planning and regulatory work by the Village has been implemented to mitigate the impact of flooding.

Roadways

There are approximately 91 miles of paved roadways and 9 miles of alleys. Portions of the roadway system within the Village are owned and operated by the Illinois Department of Transportation (IDOT).

The 2018 Village report, titled “State of the Streets”, states, at a minimum, approximately \$3.1 million per year is needed for its roadway program. To increase the roadways to a satisfactory level of service, the Village would need \$4.5 million per year. The Village’s current annual funding level for the roadway network is approximately \$2 million, excluding routine maintenance. As such, there is not enough money from the Motor-Fuel-Tax (MFT) to meet the roadway needs.

Ongoing Capital Development Projects

The Village has multiple ongoing projects including:

- Gross Point Road Watermain Replacement
- Howard Street Improvements
- Touhy Avenue Construction (IDOT Project)
- Various Street and Alley Improvements (Repaving)



Gross Point Road Watermain Replacement Project



PARKS, RECREATION AND OPEN SPACE NETWORK

The Niles Park District has primary responsibility for parks and recreation programming in the Village. The Village is well served by parks and the District maintains 30 different parks, recreation fields and facilities for community use. Niles parks include a variety of community and neighborhood parks and playgrounds, as well as a variety of recreation facilities such as a water park, golf course and tennis club. Park district programming also includes classes related to dance, martial arts, fitness, and sports clinics.

Park level of service analysis evaluates how well the Village's parks are serving the community. Level of Service was assessed through acreage analysis. As much as this analysis is integral in estimating how well residents of the Village are being served, it is only one of many tools that can help determine future park goals and needs.

A park acreage calculation can be used to determine Level of Service, which quantifies the minimum area required to provide the necessary parkland and recreation facilities for Village residents. With a population of approximately 29,000, the Village is recommended to have 290 acres of parkland. This analysis is based on the National Recreation and Park Association's recommendation of 10 acres of parkland per 1,000 residents.

The District operates sixteen parks totaling about 55 acres. Considering the size of Niles and a population of almost 30,000 residents, the Village is underserved in terms of total parkland. However, the Village accounts for this lack of total parkland by increased accessibility of parks from residential areas. According to data from the Chicago Metropolitan Agency for Planning (CMAP), there are 1.7 acres of accessible parkland for every 1,000 residents, which is below the regional average of 3.6 acres. However, the location of parks within the residential neighborhoods combined with the Village grid street system help make parks highly accessible to Village residents. The Village also has a 2018 walkscore of 62/100 from walkscore.com. This indicates that the Village is walkable but there is room for increased accessibility and improved pedestrian conditions.

The Cook County Forest Preserve and North Branch Trail also help supplement Village park acreage and provide passive open space and recreation opportunities. Total acreage including this land is over 210 acres. Although Niles is built-out and does not have much remaining land for park development, opportunities for park and recreation expansion should be explored.

Cook County Forest Preserve and North Branch Trail

The Village benefits from direct access and use of a large portion of Cook County Forest Preserve area and the Preserve's North Branch Trail, all located in Niles along the north branch of the Chicago River.

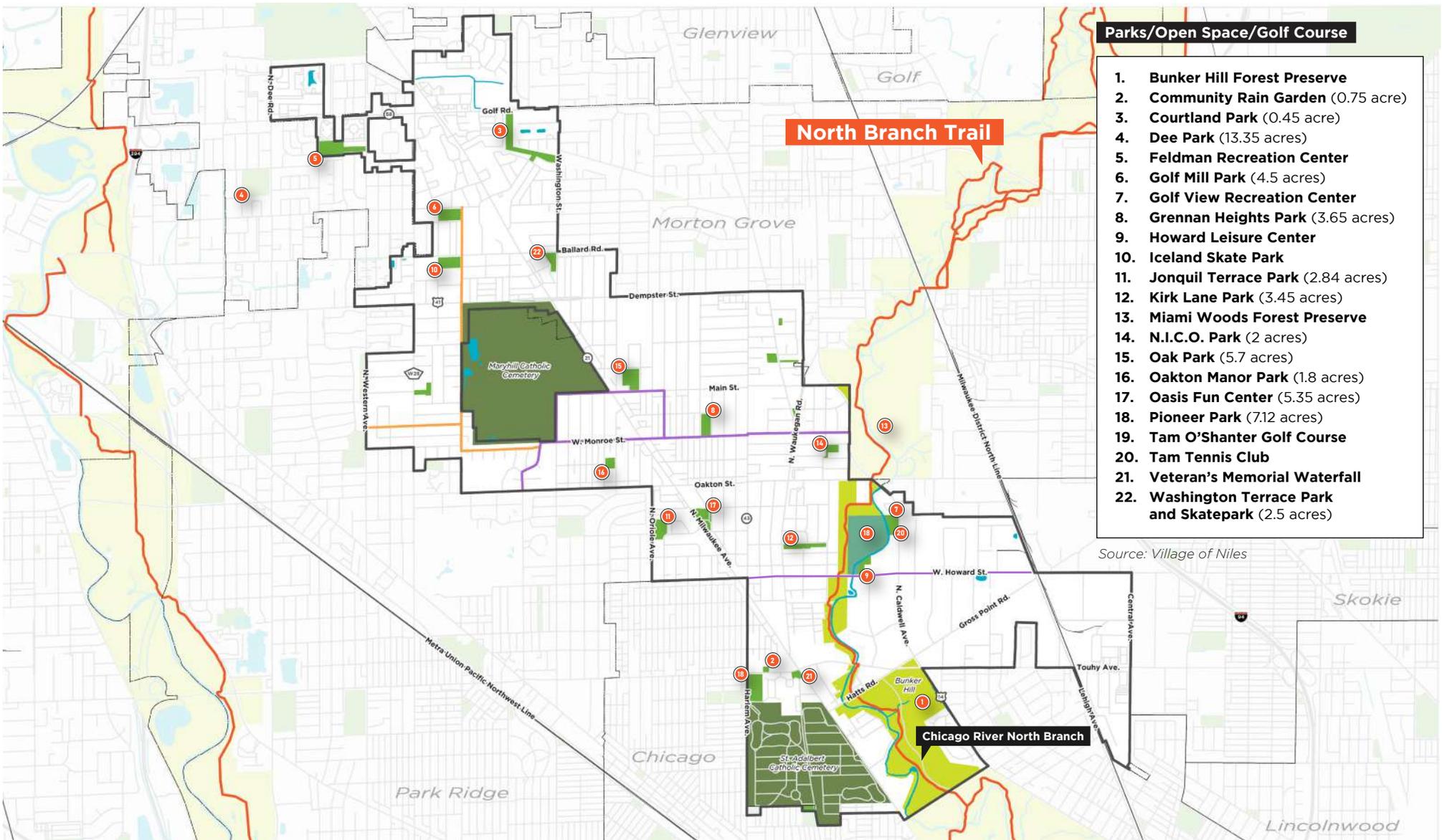
Bunker Hill Preserve is in the southern part of the Village generally between Touhy Avenue on the north and Devon Avenue in Chicago on the south. It is known for its popular picnic groves and natural areas, including a floodplain forest, open savanna and the Sidney Yates Flatwoods.

Miami Woods is located further north up the river from Bunker Hill. It is located between Dempster on the north and Oakton on the south. Miami Woods is popular for its wide trail expanse and easy access to the North Branch Trail.

The North Branch Trail represents one of the Forest Preserve's regional bike trails. It comprised of paved and unpaved trails along approximately 20 miles of the North Branch of the Chicago River. It is a popular biking route in the northern suburbs. It travels through Niles in a north/south direction as it meanders along the north branch of the Chicago River.



North Branch Trail



Parks/Open Space/Golf Course

1. Bunker Hill Forest Preserve
2. Community Rain Garden (0.75 acre)
3. Courtland Park (0.45 acre)
4. Dee Park (13.35 acres)
5. Feldman Recreation Center
6. Golf Mill Park (4.5 acres)
7. Golf View Recreation Center
8. Grennan Heights Park (3.65 acres)
9. Howard Leisure Center
10. Iceland Skate Park
11. Jonquil Terrace Park (2.84 acres)
12. Kirk Lane Park (3.45 acres)
13. Miami Woods Forest Preserve
14. N.I.C.O. Park (2 acres)
15. Oak Park (5.7 acres)
16. Oakton Manor Park (1.8 acres)
17. Oasis Fun Center (5.35 acres)
18. Pioneer Park (7.12 acres)
19. Tam O'Shanter Golf Course
20. Tam Tennis Club
21. Veteran's Memorial Waterfall
22. Washington Terrace Park and Skatepark (2.5 acres)

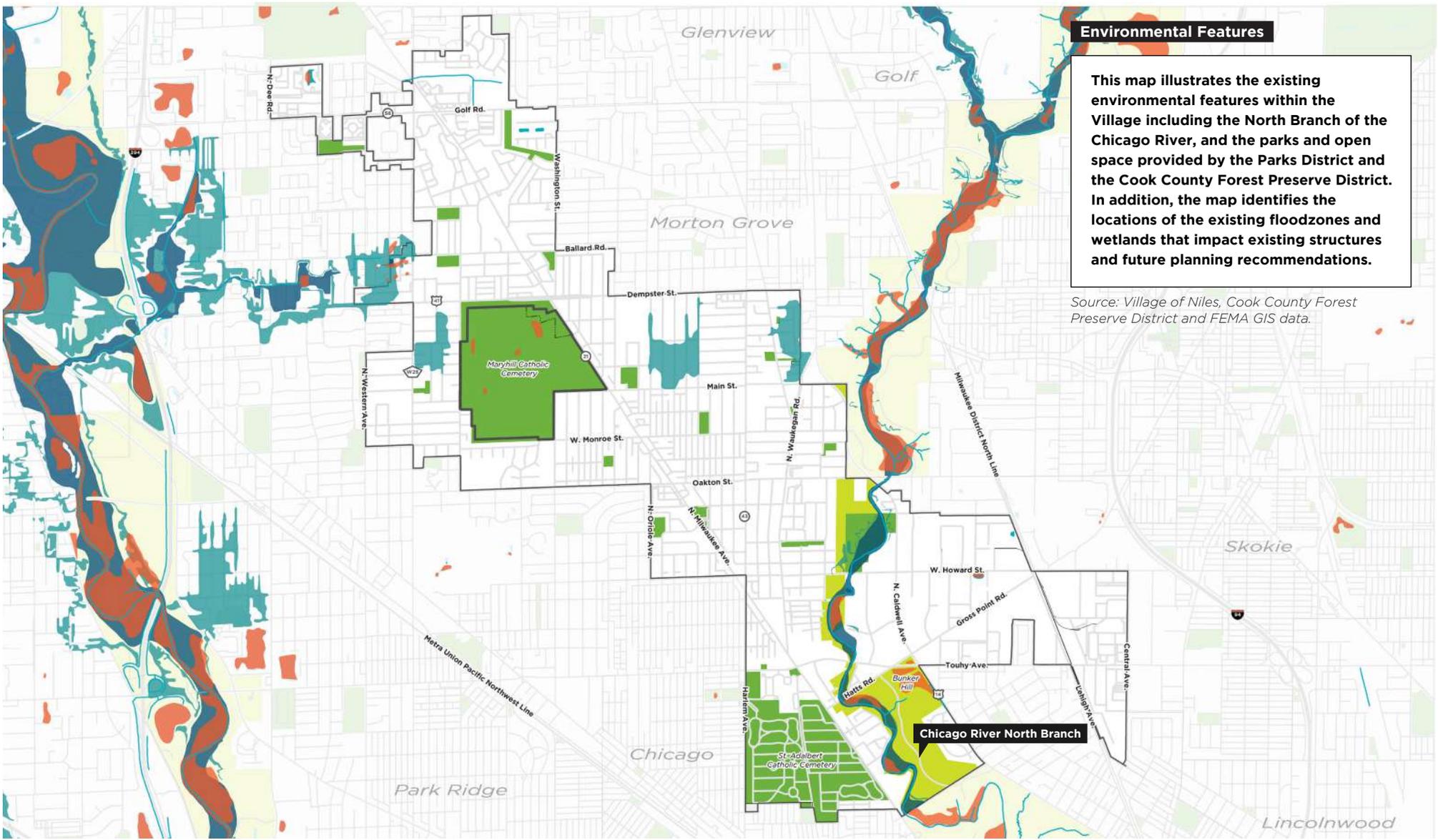
Source: Village of Niles

MAP 6.1: CITY PARKS, TRAILS AND OPEN SPACE



Legend

- | | | |
|--------------------|--------------------------------|--|
| Village Boundary | Forest Preserve of Cook County | Hike and Bike Trails |
| Other Municipality | Parks and Open Space | Signed Bike Routes |
| Water Bodies | Cemeteries | Signed Bike Routes with Shared Lane Markings |
| Streets | Golf Course | |
| Railway | | |



Environmental Features

This map illustrates the existing environmental features within the Village including the North Branch of the Chicago River, and the parks and open space provided by the Parks District and the Cook County Forest Preserve District. In addition, the map identifies the locations of the existing floodzones and wetlands that impact existing structures and future planning recommendations.

Source: Village of Niles, Cook County Forest Preserve District and FEMA GIS data.

MAP 6.2: ENVIRONMENTAL CONDITIONS North

- Legend**
- Village Boundary
 - Other Municipality
 - Water Bodies
 - Streets
 - Railway
 - Forest Preserve of Cook County
 - Parks and Open Space
 - Wetlands (Cook County)
 - Floodways (FEMA)
 - 2 Percent Annual Chance Flood (FEMA)

