




A Transportation for Livable Communities Initiative Study

LAKE ERIE CONNECT

Enhancing Regional Lakefront Connectivity

March 2024

NOACA

Northeast Ohio Areawide Coordinating Agency

Prepared for

Northeast Ohio Areawide Coordinating Agency

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THE LAKEFRONT TODAY

About

Lake Erie Connect is a comprehensive and collaborative effort to enhance Northeast Ohio's transportation network so that it is easy, safe, and comfortable to make it to the lake. The public, community leaders, and regional planners developed the vision for connected, sustainable, and equitable lakefront transportation within the Northeast Ohio Areawide Coordinating Agency's lakefront counties of Lorain, Cuyahoga, and Lake. With over 70 miles of shoreline and dozens of lakefront communities to plan for, Lake Erie Connect requires a strong and inclusive foundation (see Figures A and B).

The Lakefront Today

59 PUBLIC ACCESS POINTS

80 % PRIVATE LAND

70 MILES OF COASTLINE

1,535 ACRES OF FLOODPLAIN

Figure A | Coastal Area Summary

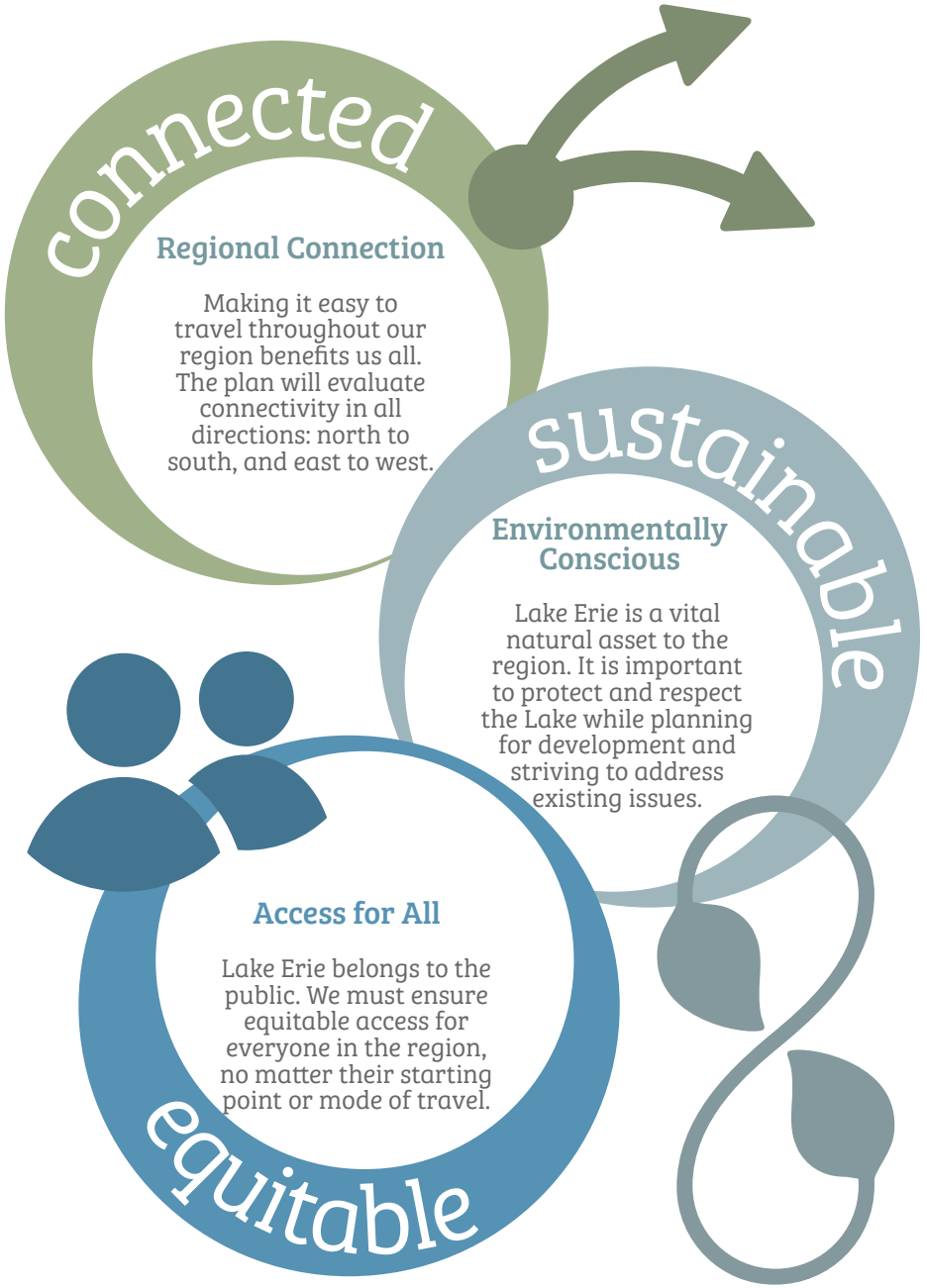


Figure B | Lake Erie Connect Goals

HEARING FROM YOU

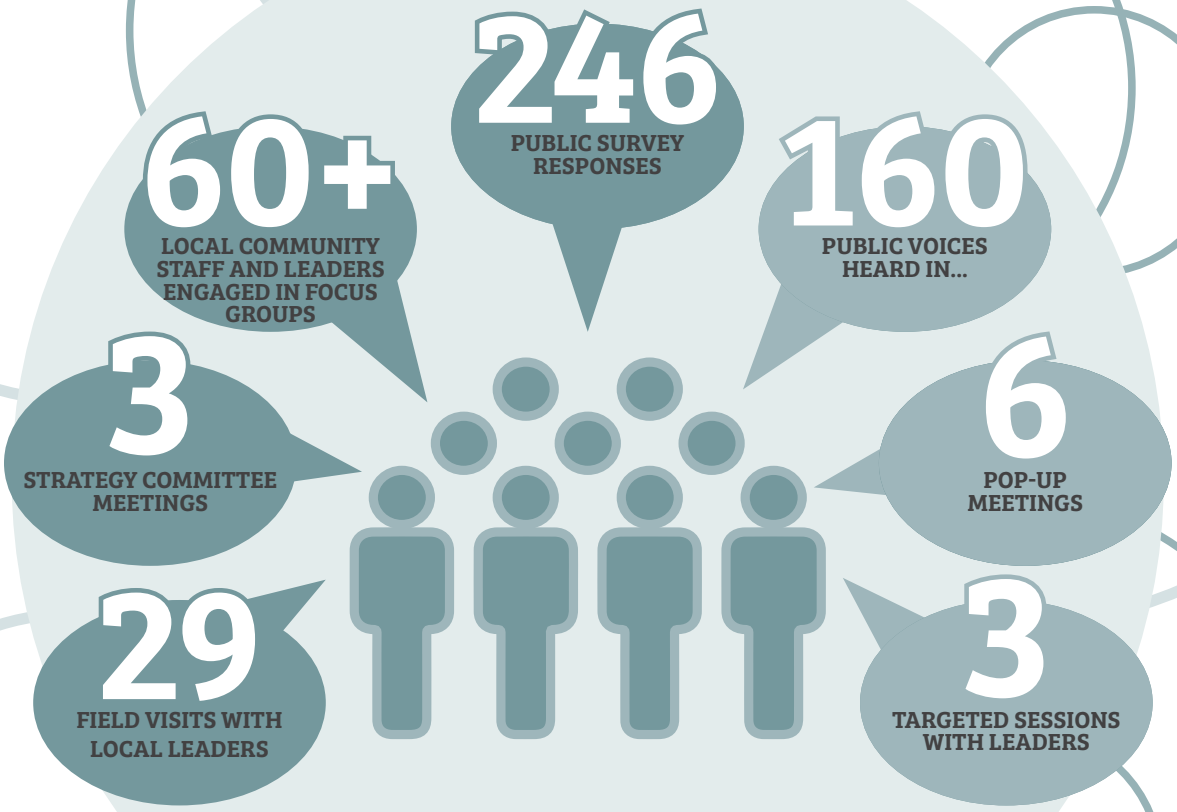
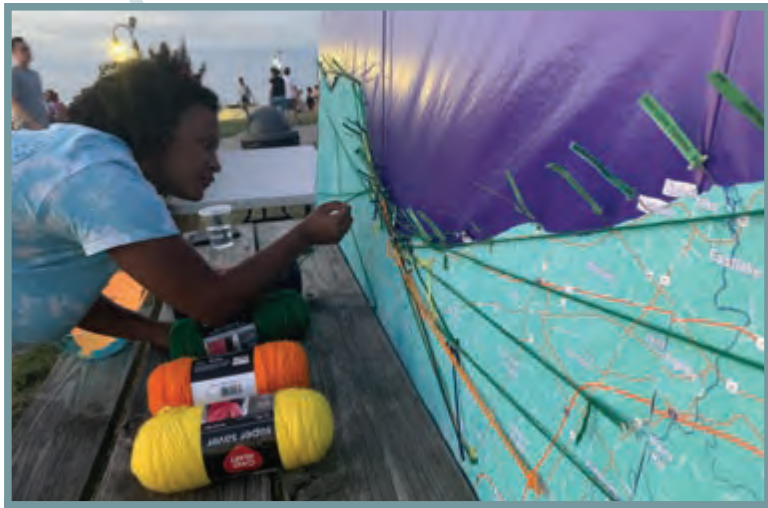


Figure C | Engagement by the Numbers

Lakewood Park Summer Solstice event, Cuyahoga County (top right, lower left); Captain's Halloween Festival in Eastlake (center right); Fall Festival in Elyria (lower right)



TRANSPORTATION TRENDS

The project team used StreetLight data from aggregated cell phone locations to identify the number, time of day, origin, and mode of trips to 59 lakefront access points across the NOACA region. Just as a watershed encompasses the land that channels rainfall to a common outlet, the travelshed maps in Figure E display the origins of people who visit the lakefront. Findings from this analysis are shown in Figure D.

This analysis captures short trips that are traditionally undetected in traffic studies, resulting in new data about the strength of multimodal lakefront travel today. At least **10,000 people walk or bike to lakefront parks everyday** in the peak season of May through September. Many, but not all, of these park goers arrive from neighborhoods close to the lake. Some others use regional trails to reach the lakefront. In total, about one-third of all lakefront trips are made by walking or biking. This is a large share relative to the region's estimated mode split across all trips (2%).

34,000 TOTAL DAILY TRIPS TO THE LAKEFRONT

10,000 TOTAL DAILY WALKING AND BIKING TRIPS TO THE LAKEFRONT

1/3

OF PEOPLE **WALK** OR **BIKE** TO THE LAKEFRONT

Figure D | Lakefront Travel Summary

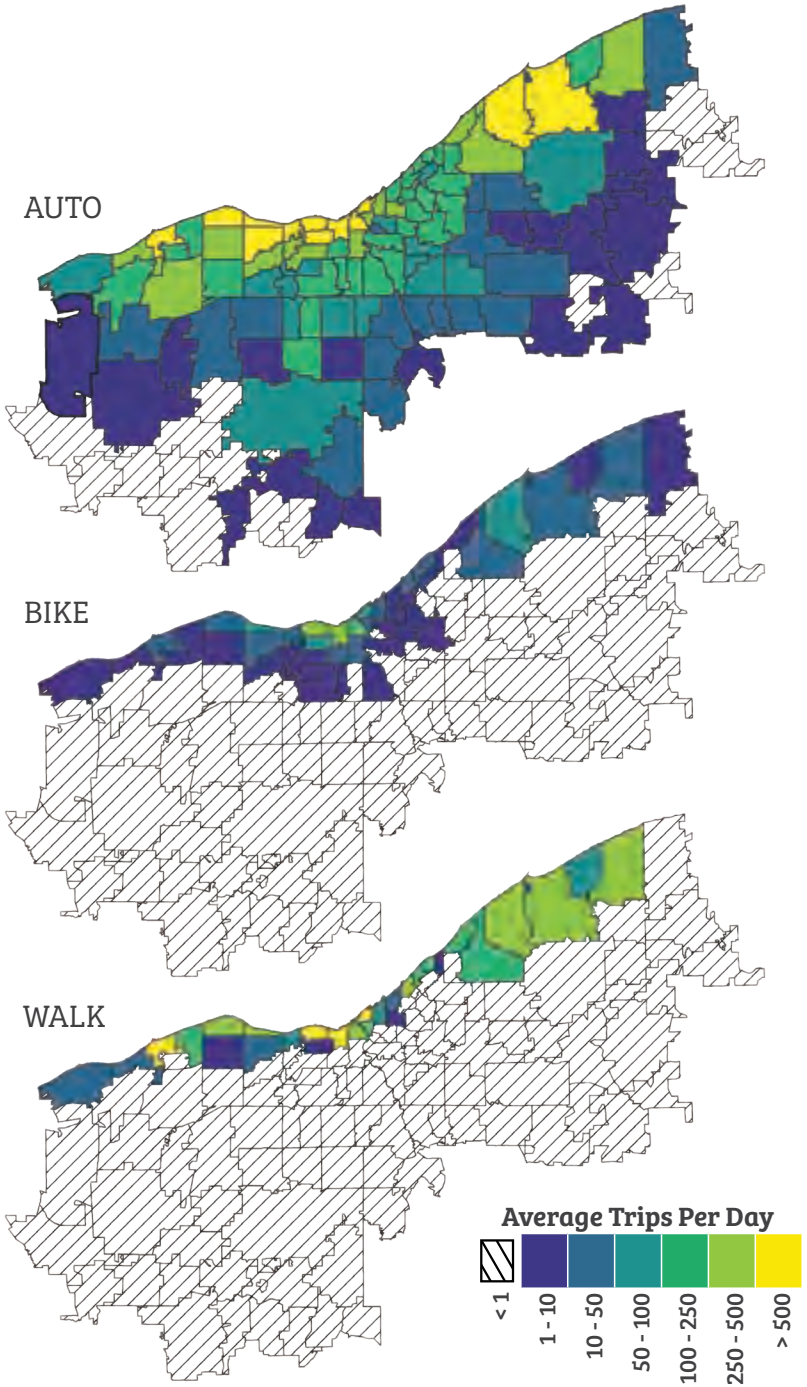


Figure E | Lakefront Trips by Origin and Mode
Sources: StreetLight (Origin and Destination, 2019)

EQUITABLE ACCESS

There is a clear, preferred route for east-west travel across the region near the lake (Figure G). The route serves as an access point, and sometimes barrier, for those traveling to lakefront parks north of the corridor. Increasing equitable access to the lakefront requires improving transportation for all modes along this east-west route. Lake Erie Connect assessed the coverage of infrastructure and Environmental Justice communities as shown in Figure F.

54% LAKEFRONT POPULATION IN ENVIRONMENTAL JUSTICE COMMUNITIES

34% OF UNCONTROLLED PEDESTRIAN CROSSWALKS MEET SAFETY STANDARDS

48% OF THE EAST-WEST LAKEFRONT ROUTE HAS BIKE INFRASTRUCTURE

61% OF THE EAST-WEST LAKEFRONT ROUTE HAS SIDEWALKS

44% OF LAKEFRONT PARKS HAVE A TRANSIT STOP NEARBY

Figure F | East-West Route Summary Findings

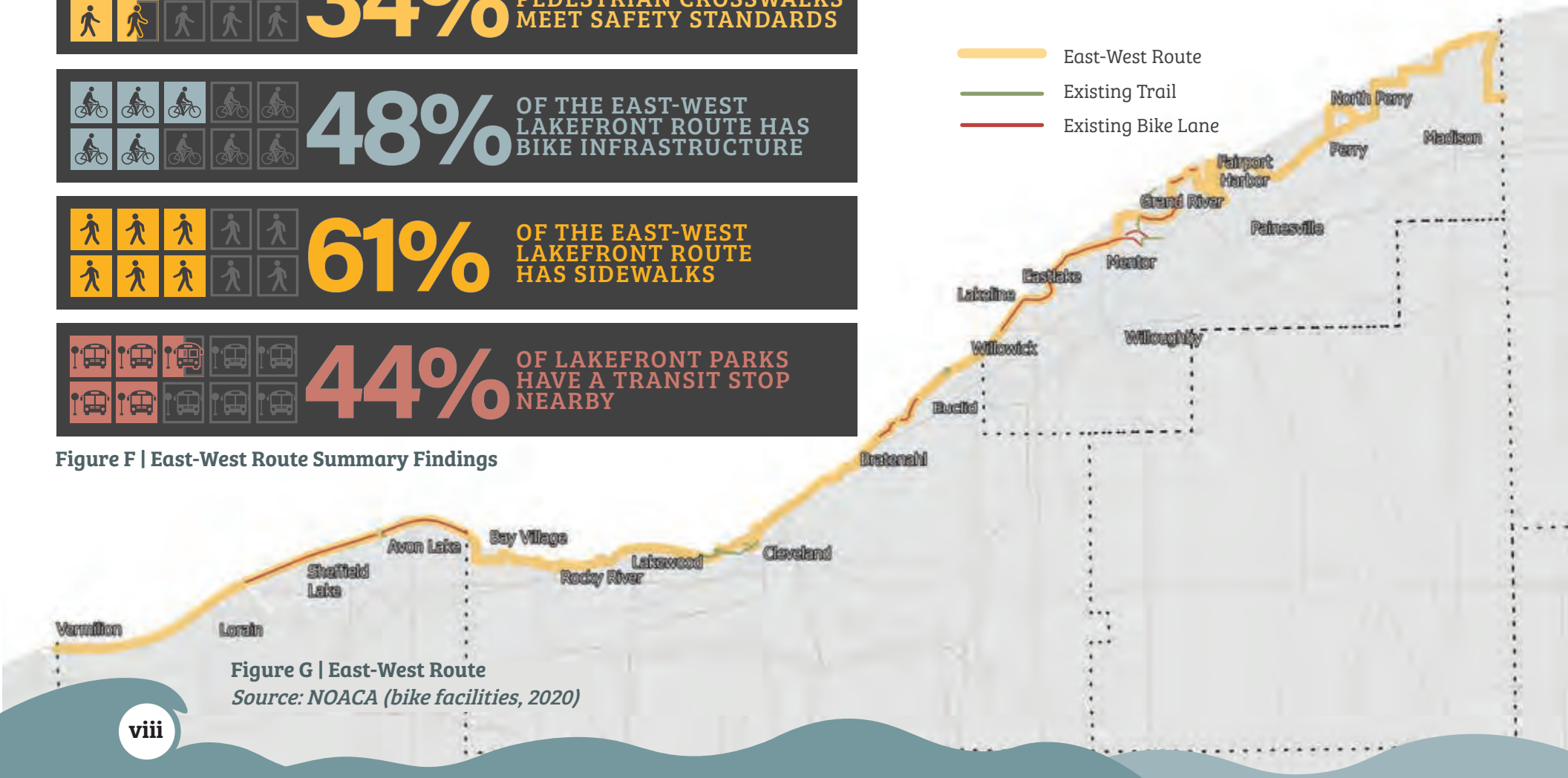


Figure G | East-West Route
Source: NOACA (bike facilities, 2020)

RECOMMENDATION SUMMARY

UNIFIED VISION

A series of maps and tables compile local initiatives and regional recommendations, creating a cohesive lakefront project list and a region that can compete for funding with one voice.

TRANSFORMATIVE CORRIDORS

Thirty corridors leading to the lake can better serve all people and trips with multimodal designs.

SUPPORTIVE MULTIMODAL INFRASTRUCTURE

Recommendations will close gaps and improve transit stops, improving the user experience and "last mile" connections.

FUTURE INITIATIVES & ACTIVITIES

The designs for three underutilized lakefront sites can spark creativity and additional investment in public land and urban design.

Lake Erie Connect was a multi-year planning process that overlapped with many other exciting initiatives to enhance the region's lakefront. The purpose of the Recommendation Summary (on this and the following pages) is to synthesize Lake Erie Connect's overarching recommendations and support the many local efforts that benefit the region as a whole. Recommendations are organized by the four main themes on the left. More detail on the recommendations is in Chapter Four.

109 INDIVIDUAL MULTIMODAL PROJECTS FORM THE VISION

30 LAKEFRONT ACCESS CORRIDORS IDENTIFIED FOR FUTURE STUDY

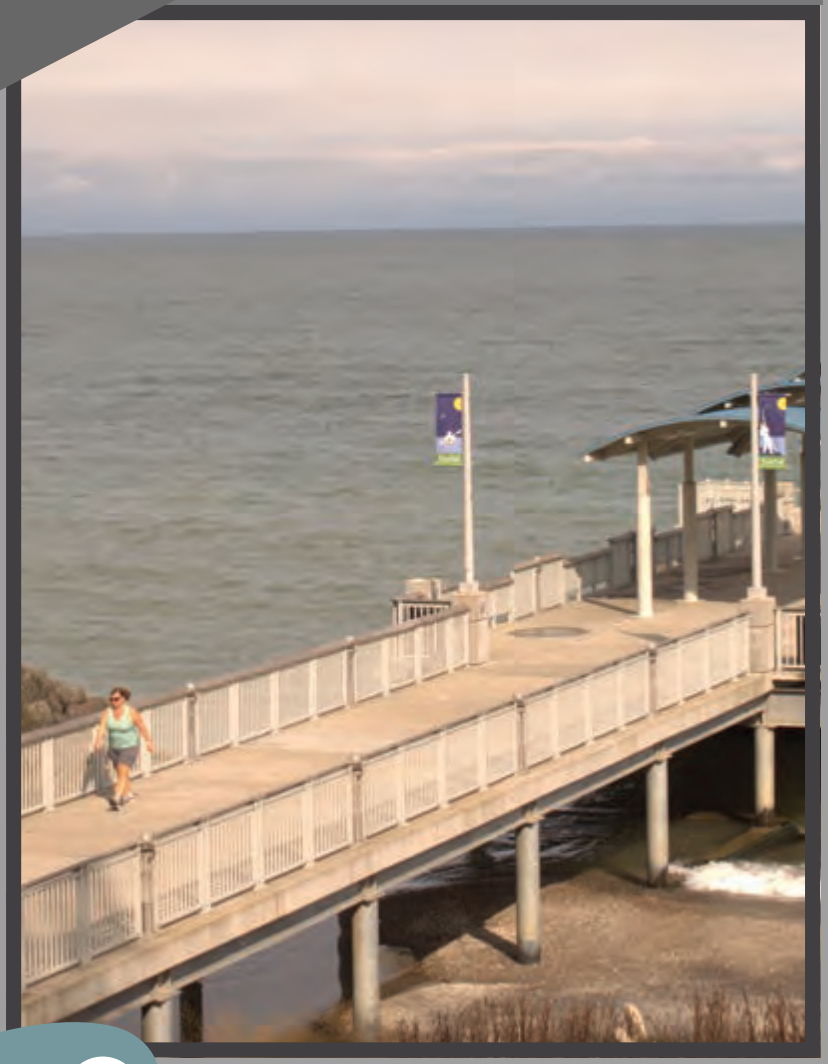
43 TRANSIT STOPS IDENTIFIED FOR IMPROVEMENTS

78 NEW OR IMPROVED CROSSWALK LOCATIONS

3 PARK SITE PLANS

UNIFIED VISION

A series of maps and tables compile local initiatives and regional recommendations, creating a cohesive lakefront project list and a region that can compete for funding with one voice.

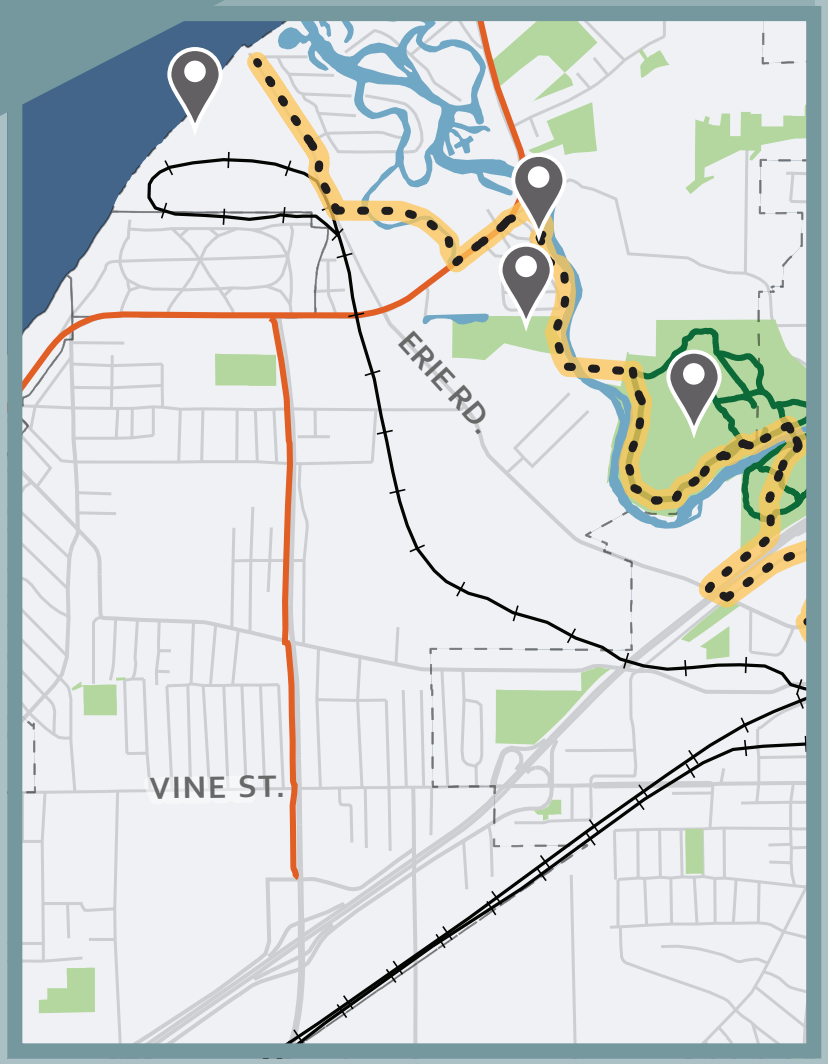


109 INDIVIDUAL MULTIMODAL PROJECTS FORM THE REGIONAL VISION

WHAT	WHY
Maintain a regional database of transportation projects near the lakefront. See Page 56	The Unified Vision included in this plan represents a moment in time; updates will need to be logged and the database can be used to track incoming funding and the region's priorities.
Pursue funding for the Unified Vision to increase the region's competitiveness. See Page 63	The Unified Vision includes a summary of 43 low-stress projects that would directly improve access to Lake Erie. Various local and regional plans are represented, and could be packaged to increase the likelihood of funding.
Focus additional policy and transportation planning in the Equity Priority Areas. See Page 65	The Equity Priority Areas are the east-west lakefront route and parks that serve Environmental Justice areas or could to greater effect. Using the Equity Priority Areas to guide future work about lakefront access and equity would activate the new transportation data produced in this plan.

TRANSFORMATIVE CORRIDORS

Thirty corridors leading to the lake can better serve all people and trips with multimodal designs.



30 LAKEFRONT ACCESS CORRIDORS IDENTIFIED FOR FUTURE STUDY

WHAT

Create Complete Streets plans for the 30 priority north-south corridors.

See Page 66

WHY

These 30 corridors connect 125,000 Northeast Ohioans to a lakefront park within a walking or biking distance. Enhancing these routes with multimodal infrastructure will promote safer access.

WHAT

Implement the region's lakefront trail plans for east-west connectivity.

See Page 74

WHY

The east-west lakefront route connects the region's lakefront parks, yet just 61 percent of the route has sidewalks today. The Lorain County Lakefront Connectivity Plan, Cuyahoga County Lakefront Public Access Plan, and Central Lake County Lakefront Connectivity Plan are keystone documents that would support the route with multimodal infrastructure. This plan closes the gap in Lake County with plans for new waterfront routes in eastern and western Lake County. Implementing these plans is the next step to supporting equitable access.

SUPPORTIVE MULTIMODAL INFRASTRUCTURE

Recommendations will close gaps and improve transit stops, improving the user experience and "last mile" connections.

78 NEW AND IMPROVED CROSSWALKS

43 TRANSIT STOPS

WHAT	WHY
Enhance transit waiting environments on the east-west route. See Page 68	Over 40 transit stops are identified in this plan for ongoing assessment and targeted improvements like overhead shelters, kiosks, benches, branding, and wayfinding.
Ensure that all uncontrolled pedestrian crossings on the east-west route have basic safety infrastructure. Consider enhanced safety improvements on a case-by-case basis. See Page 70	The east-west route must be crossed by nearly everyone traveling to a lakefront park. This plan prioritizes 35 uncontrolled crossings near lakefront parks that should be assessed for improvement. Some appear to lack basic safety infrastructure, like striping and signage, while others may need more enhanced infrastructure based on traffic conditions.
Support lakefront public access with additional pedestrian crossings on the east-west route. See Page 72	Lake Erie Connect identified areas where pedestrian access to the lakefront is limited, and provides a list of forty-three locations where new pedestrian access should be considered.

FUTURE INITIATIVES & ACTIVITIES

The designs for three underutilized lakefront sites can spark creativity and additional investment in public land and urban design.

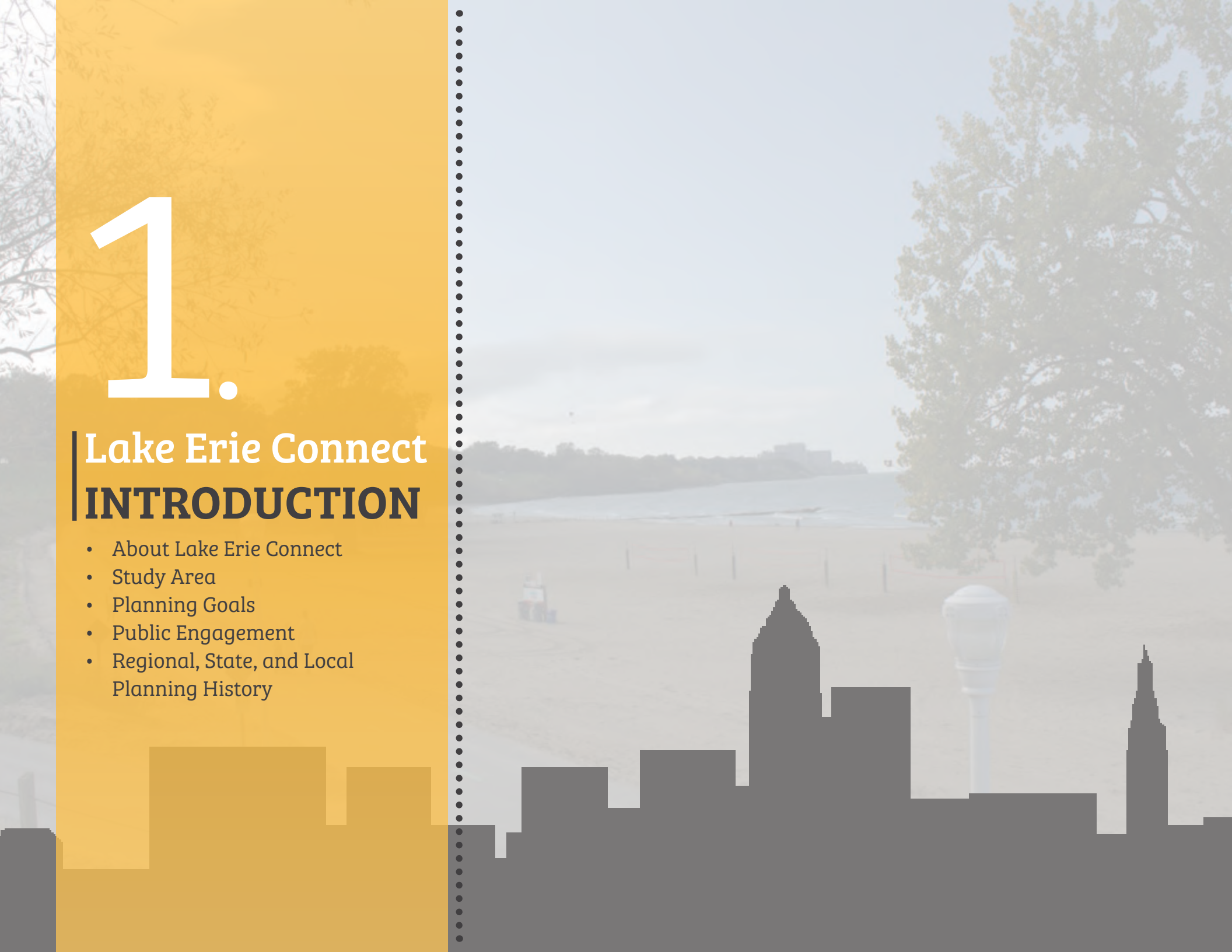
3 PARK SITE PLANS

WHAT	WHY
Support land acquisition and reclamation by public agencies. See Page 76	New plans are in motion for at least ten new or improved public spaces on the lakefront. New parks pose a minimal risk of congestion based on this plan's analysis, and would strengthen the environmental resiliency and economy of the region.
Look for opportunities to enhance public art and placemaking near the lakefront. See Page 49	Placemaking supports a resilient and exciting lakefront experience by offering unique things to look at and do along the way, while accentuating the personality of a community.
Create a consistent, regional wayfinding scheme designed for all modes. See Page 48	The region today has inconsistent branding and sparse wayfinding in many locations. Welcoming, consistent wayfinding will help the public easily navigate all that the lakefront has to offer.

1.

Lake Erie Connect
INTRODUCTION

- About Lake Erie Connect
- Study Area
- Planning Goals
- Public Engagement
- Regional, State, and Local Planning History



ABOUT LAKE ERIE CONNECT

About

Lake Erie Connect is a comprehensive and collaborative effort to enhance Northeast Ohio's transportation network so that it is easy, safe, and comfortable to make it to the lake. The planning process relied on input from the public, community leaders, and regional planners to form the vision for lakefront transportation. The plan will guide future decision-making about policies, projects, and programs related to coastal land use and transportation. Lake Erie Connect is a Northeast Ohio Areawide Coordinating Agency (NOACA) Regional Transportation for Livable Communities Initiative (TLCI) plan.

NOACA

The Northeast Ohio Areawide Coordinating Agency (NOACA) is the transportation and environmental planning agency that represents state, county, city, village, and township officials in Greater Cleveland. NOACA addresses the transportation, air quality, and water quality needs of Cuyahoga, Geauga, Lake, Lorain, and Medina counties. The agency and its partners cooperatively develop and implement plans to ensure that travel throughout the region is safe, cost-effective, and environmentally sound. Around 2.1 million people live in the NOACA region.[1]

1 eneo2050: An Equitable Plan for Northeast Ohio, NOACA, 2021. https://www.eneo2050.com/vision-plan. Accessed 10 Feb. 2022.

TLCI

NOACA's proactive planning approach through the TLCI program leverages limited public dollars to support the region's overall prosperity and reinvestment to encourage greater equity and resiliency. TLCI advances the goals of NOACA's Regional Strategic Plan by focusing on the following objectives:

- Develop transportation projects that provide more travel options through complete streets and context sensitive solutions, increasing user safety and supporting positive public health impacts
- Promote reinvestment in underutilized or vacant/abandoned properties through development concepts supported by multimodal transportation systems
- Support economic development through place-based transportation and land use recommendations, and connect these proposals with existing assets and investments
- Ensure that the benefits of growth and change are available to all members of a community by integrating principles of accessibility and environmental justice into projects
- Enhance regional cohesion by supporting collaboration between regional and community partners
- Provide people with safe and reliable transportation choices that enhance their quality of life

Lakeview Park summer concert series, Lorain County

STUDY AREA

Five County Region

The primary study area of Lake Erie Connect extends one mile inland from the coastline in the NOACA region as shown in Figure 1.1, to best capture movements to and between lakefront sites. Both a one mile and a half-mile buffer from the lakefront are used as analysis areas in this study. Despite this limited focus area, this plan demonstrates that the lakefront is a draw to people throughout the five NOACA counties of Cuyahoga, Geauga, Lake, Lorain, and Medina. This includes areas further inland like Medina and Geauga counties. While some lakefront parks today have a localized draw, others, like Painesville Township Park in Lake County, for example, attract people from all over the region including Geauga and Medina counties (see Appendix A for maps of the regional draw to this and other lakefront parks). This plan further solidifies the entirety of the NOACA region as a community with a coastal heritage and identity.

Regional Planning for Lakefront Needs

Regional planning strives to advance many shared local goals, but also looks to honor the distinct identity and needs of each community. Compared to inland communities, lakefront communities face unique circumstances such as changing water levels, sensitive coastal landscapes, coastal access, and water-based tourism. Planning for these unique needs will help strengthen the region overall and capitalize on one of many features that makes Northeast Ohio unique.

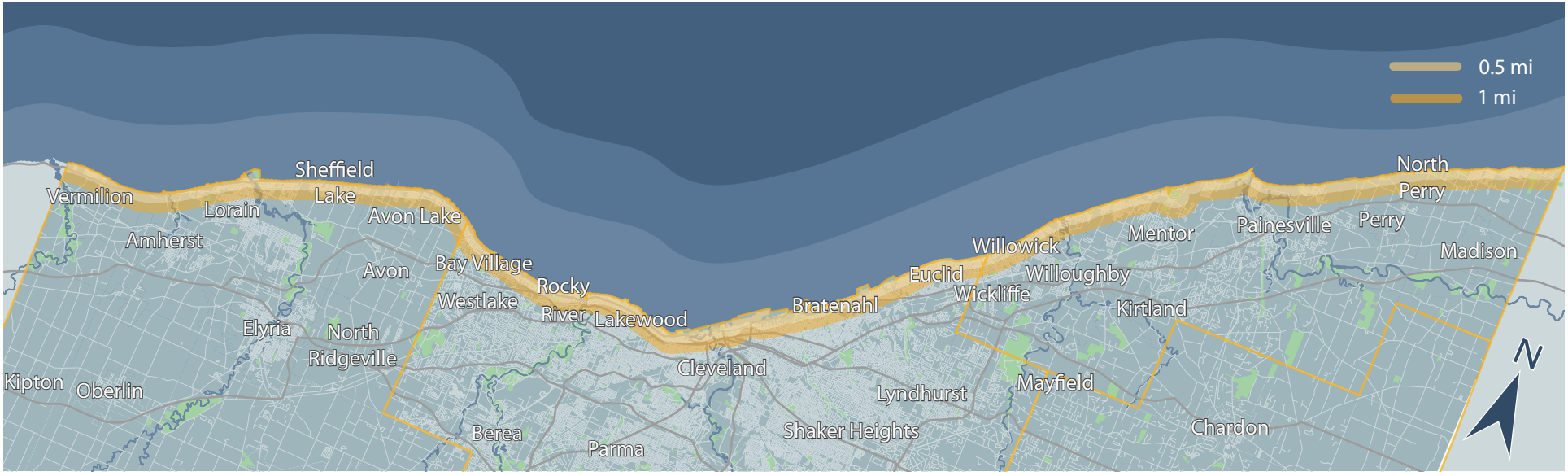


Figure 1.1 | Lake Erie Connect Study Area
Source: NOACA (road network)

PLANNING GOALS

With over 70 miles of shoreline and dozens of lakefront communities to plan for, Lake Erie Connect required a strong and inclusive foundation. The goals in Figure 1.2 and the approach listed below reflect three overarching principles: transportation connections, sustainability, and equity. These principles guide the planning process but can also be used to guide implementation efforts.

Planning by the People

- Residents and business owners, who call the region home, know Lake Erie best.
- Intentional engagement in Environmental Justice communities is vital in addressing regional lakefront access gaps.
- By engaging the public early and often, Lake Erie Connect builds a complete understanding of the lakefront's needs and priorities.

User-Centered Transportation

- Understanding the experiences of people who bike, walk, drive, and take transit lead to solutions that are authentic and grounded in reality.
- Lake Erie Connect focuses on users' needs, creating connections to the lake that are comfortable, safe, and interesting.
- Increasing multimodal access is a key goal of Lake Erie Connect.

Many Plans, One Lakefront

- The Lake Erie shoreline is an asset for all communities in Northeast Ohio.
- Lake Erie Connect aligns existing and in-progress plans from each community with regional goals, resulting in a unified vision for the lakefront.

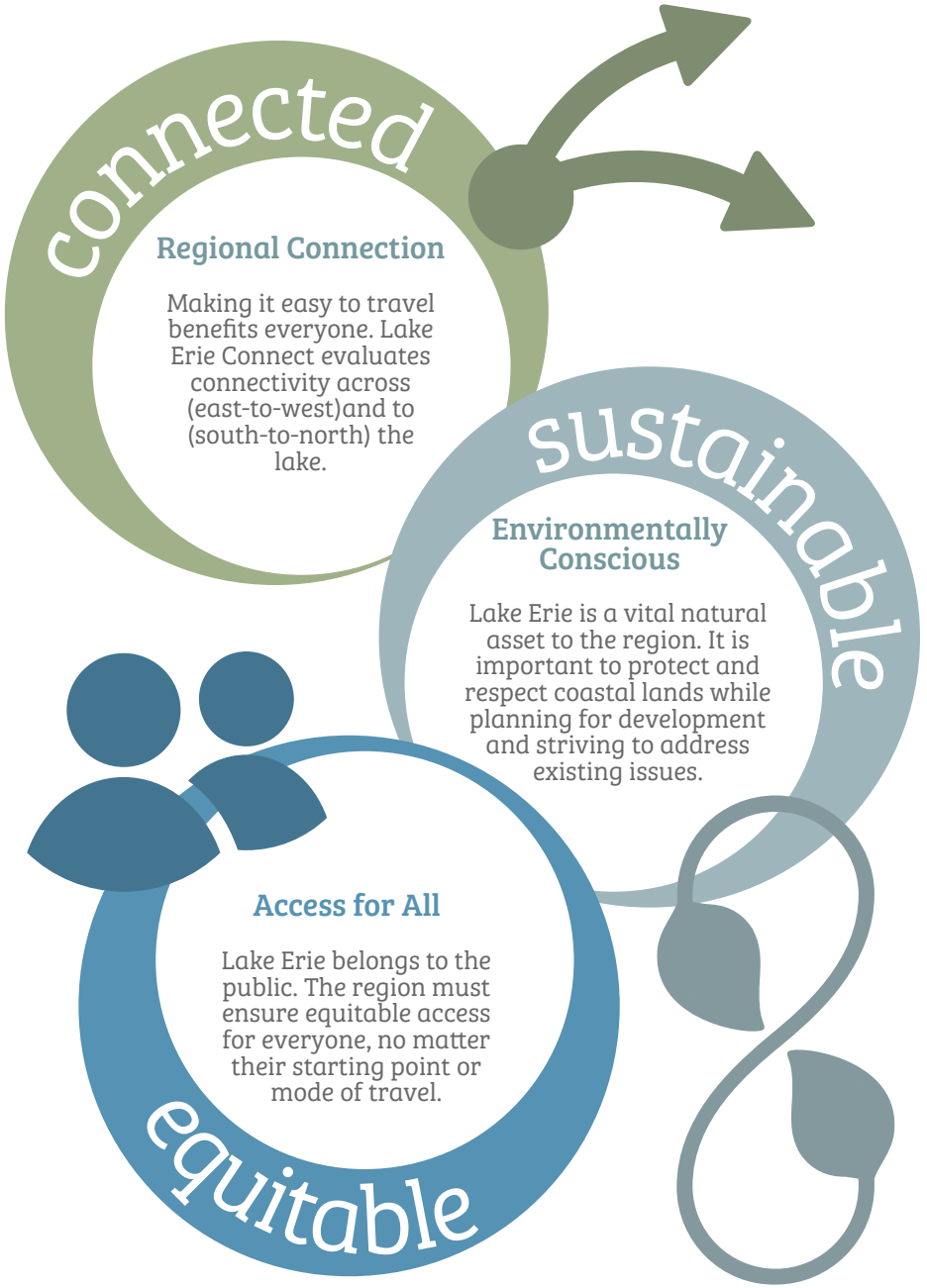


Figure 1.2 | Lake Erie Connect Goals

ENGAGEMENT HIGHLIGHTS

Engagement Activities

Lake Erie Connect included extensive community engagement. Figures 1.3 and 1.4 show the timeline of engagement activities and a summary of engagement outcomes. The following pages summarize key findings from each activity. Appendix B contains detailed public engagement results.

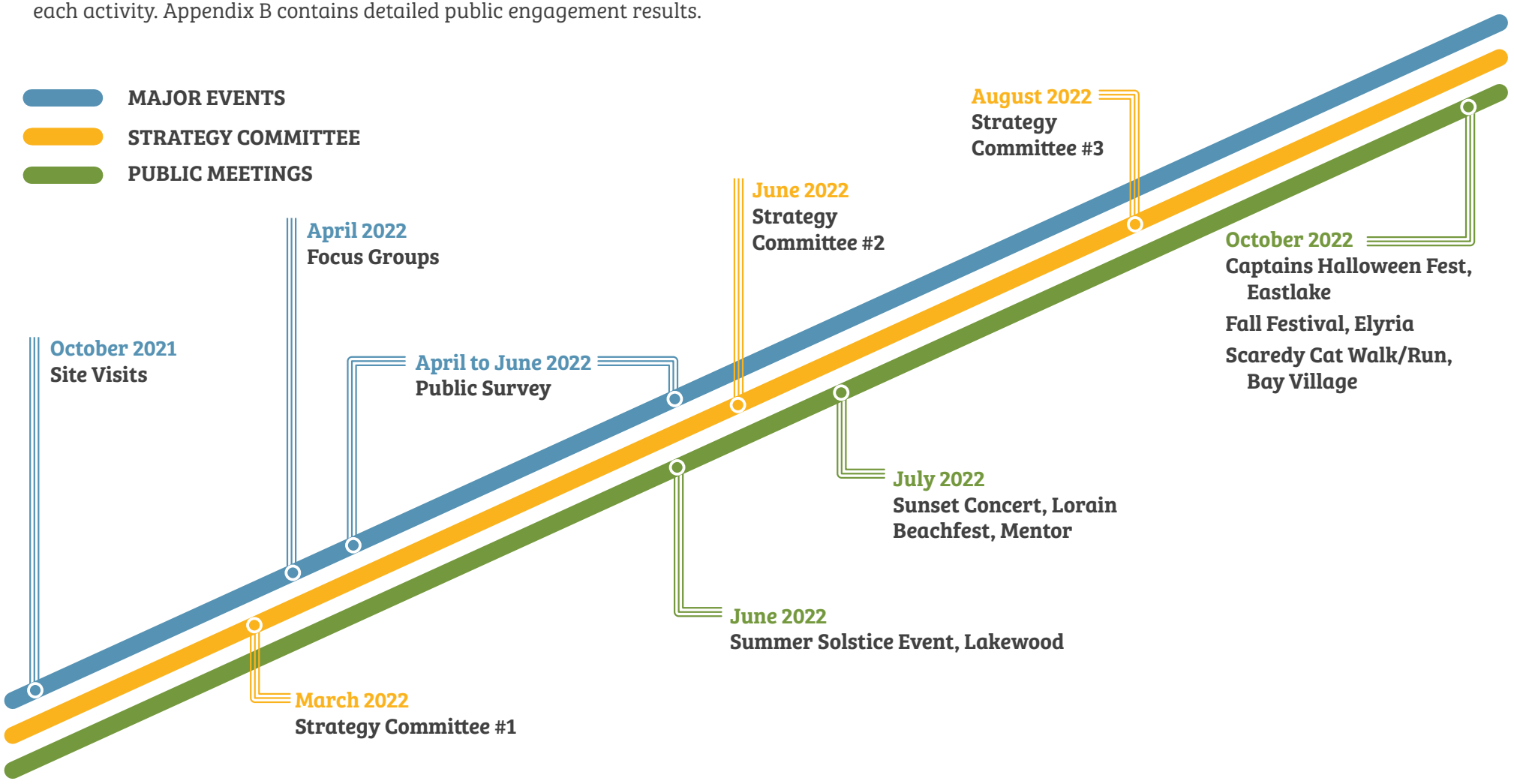


Figure 1.3 | Engagement Timeline

ENGAGEMENT HIGHLIGHTS

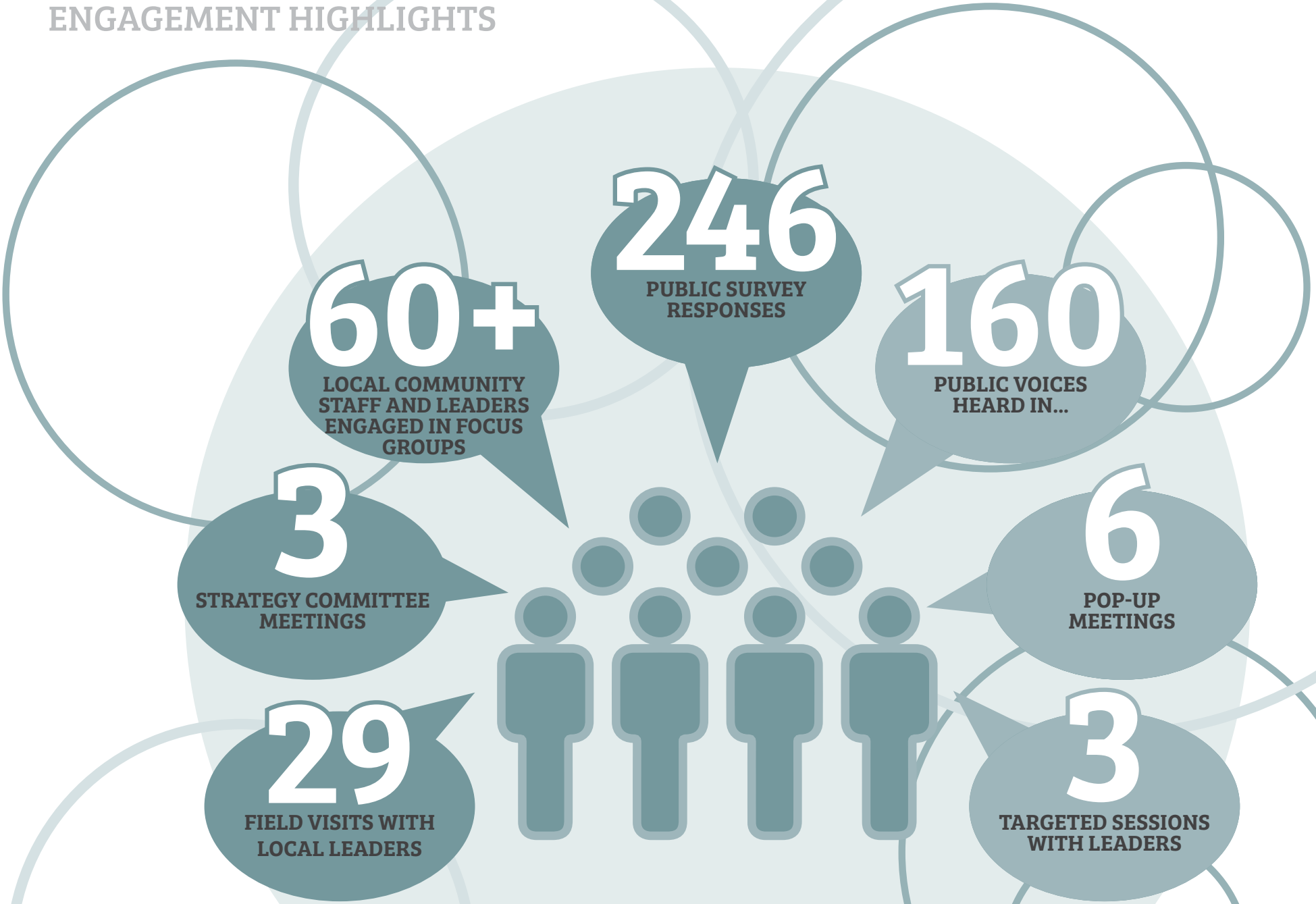


Figure 1.4 | Engagement by the Numbers

ENGAGEMENT HIGHLIGHTS

October 2021 Site Visits

Around 35 local leaders toured 29 lakefront parks across the NOACA region to develop a sense of today's lakefront conditions. The site visits resulted in the following key takeaways:

- There are already many plans, ideas, and visions for improvements to specific lakefront parks.
- Stakeholders are eager to work towards a more cohesive regional vision.
- Most lakefront parks have major barriers preventing comfortable multimodal access, such as a highways, railroads, or lack of sidewalks.

Site visit participants in Painesville Township Park, Lake County

April 2022 Focus Groups

Around 50 civic stakeholders, city staff, and nonprofit organizations participated in four virtual focus groups to identify a regional vision (Figure 1.5). Key takeaways from the focus groups include:

- There is strong consensus across the region that in just five years, the lakefront could be clean, accessible, and connected (Figure 1.6).
- Communities along the lake are already prioritizing lakefront improvements and increased public access to Lake Erie.
- Lakefront travel can be categorized as an "east-to-west" movement for tourism, and a "south-to-north" movement for local access. The latter is the greatest need and has been studied the least in each county.

Other	8%
Parks & Recreation	10%
Government Administration	10%
Economic Development	21%
Transportation Planning / Engineering	22%
Community Planning	29%

Figure 1.5 | Focus Group Participants by Role

Figure 1.6 | Focus Group Participants' Most Common Words for the Lakefront's future

ENGAGEMENT HIGHLIGHTS

Public Survey

The Lake Erie Connect public survey received 246 individual responses from across the region. The survey was advertised digitally, on social media, and through email to stakeholders (Figure 1.7). Key takeaways include:

- People tend to visit lakefront parks that are closest to them, except for parks that have a mix of amenities like restrooms, swimming areas, and other things to do.
- About half (48%) of respondents do not visit nearby lakefront parks because they are not easy to access.
- Respondents generally expressed concern about environmental preservation and the need to address erosion, litter, and water pollution.

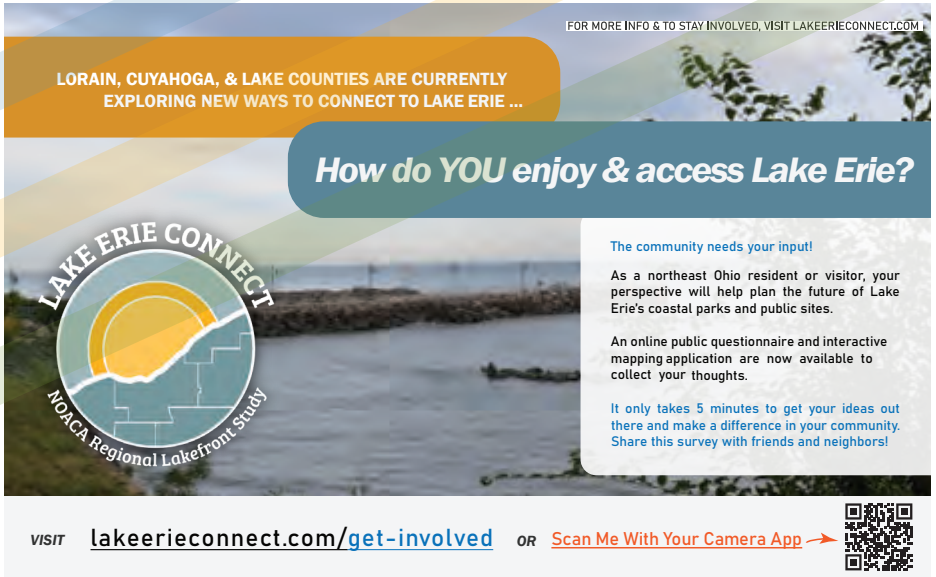
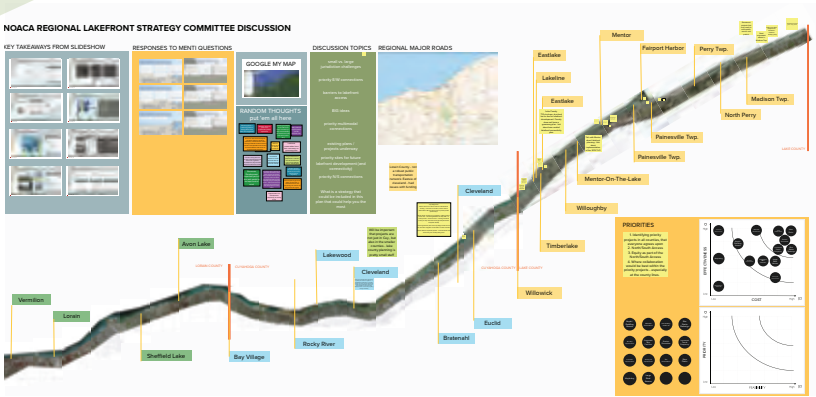


Figure 1.7 | Public Survey Advertisement



Mural, a collaborative online tool, was used to facilitate the virtual Strategy Committee meetings.

Strategy Committee Meetings

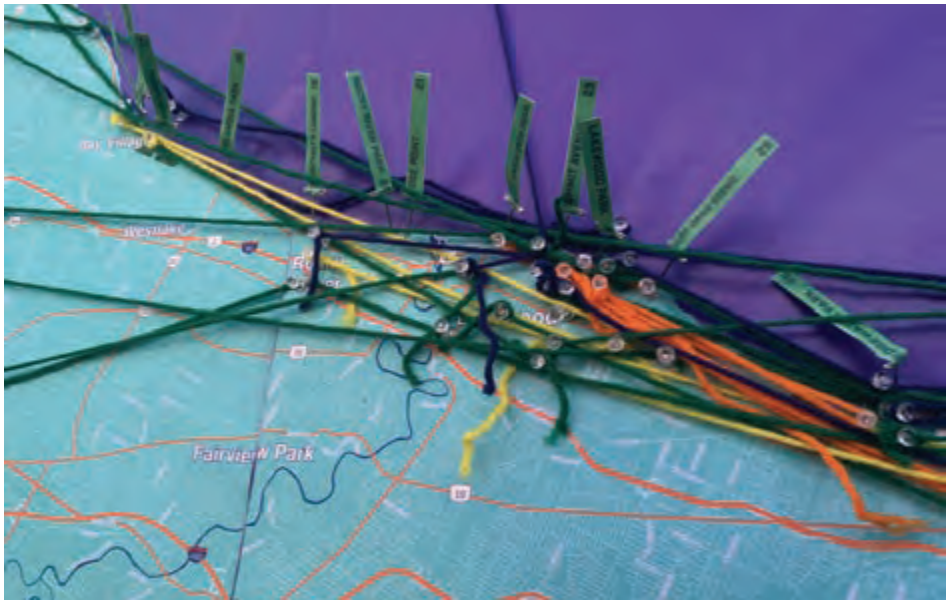
A Strategy Committee of elected officials provided guidance throughout the project. The Committee ensured the project team had current information on lakefront initiatives and was developing a plan that aligned with local visions and goals. The virtual Strategy Committee meetings provided significant guidance on topics like:

- Lakefront initiatives and local efforts to enhance transportation around lakefront sites;
- Guidance about plan priorities and implementation goals; and
- Site-specific recommendations, including the selection of three priority sites for conceptual design.

Walking Workshops

The project team attended three large community events (one per lakefront county). At each event, the team facilitated a mapping activity to collect information on where people want to access the lake and their ideal modes of transportation. The project team called this round of engagement the Walking Workshops, and invited the public to attend on social media and the project website. Safety, last-mile comfort, and multimodal improvements were identified and used to develop the plan recommendations.

Overwhelmingly, Northeast Ohioans were supportive and hopeful for more public access to the lakefront and greater biking and walking connectivity.



Lakewood Park Summer Solstice event, Cuyahoga County (top, lower left); Lakeview Park summer concert series, Lorain County (lower center); Mentor Headlands Beachfest, Lake County (lower right)

ENGAGEMENT HIGHLIGHTS

Planning Pop-Ups

Three "pop-up" activities were presented to the public in Fall 2022 throughout the NOACA region. The activities gathered input on the types of crosswalk infrastructure people would prefer to see on the lakefront east-west corridor, and showcased the project goals and findings (Figure 1.8). Overwhelmingly, participants preferred enhanced, high-visibility crosswalks with median islands and supportive signs over standard crosswalks.

One event was held in each lakefront county:

- Captain's Halloween Fest, Eastlake (Lake County)
- Fall Festival, Elyria (Lorain County)
- Scaredy Cat Walk/Run, Bay Village (Cuyahoga County)

Captain's Halloween Fest, Eastlake

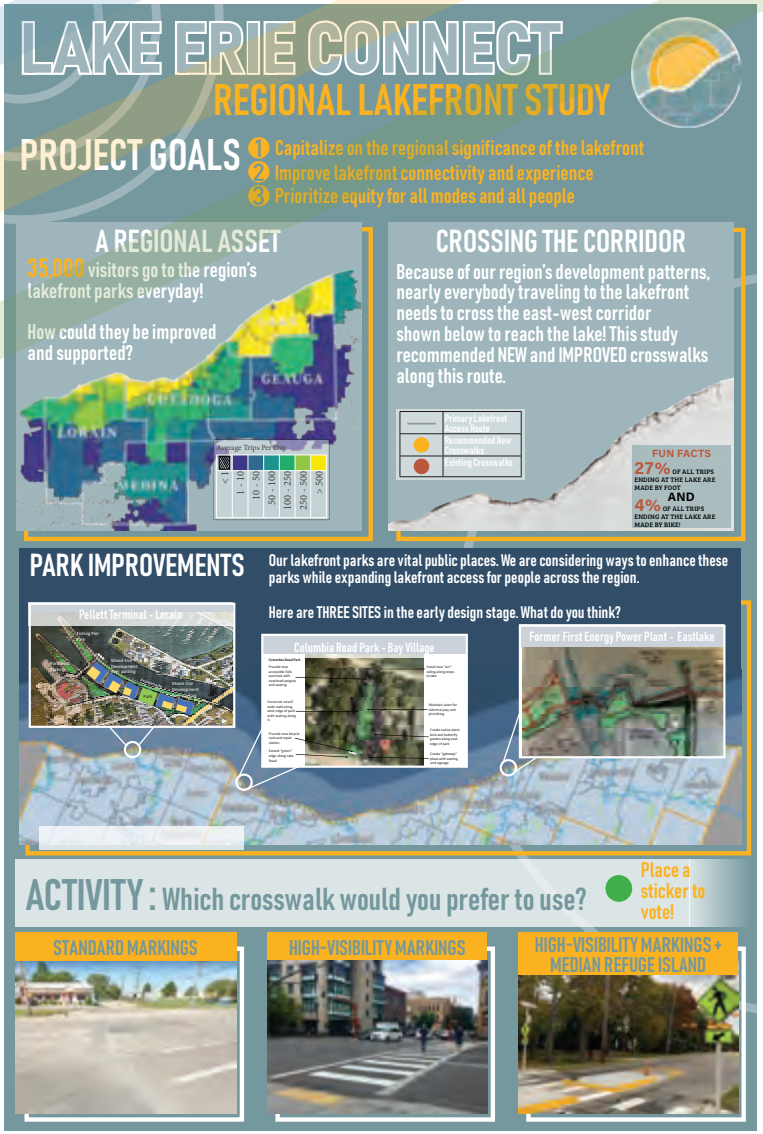


Figure 1.8 | Activity Board, Captain's Halloween Fest

PLAN INVENTORY

Regional and Statewide Plans

Existing regional and statewide plans underscore the lakefront's importance to Northeast Ohio (Figure 1.9). At the regional level, *Vibrant NEO 2040* prioritizes the lakefront as a strategic area for reinvestment, highlighting the need for new biking and walking connections between Lake Erie and local neighborhoods. NOACA's *Water Quality Strategic Plan* and *Clean Water 2020* prioritize lakefront restoration and protection. *eNEO2050*, NOACA's Long Range Plan, envisions a trail across the coastline of Lake Erie.

Statewide plans also provide support to Lake Erie Connect. The Ohio Department of Natural Resources (ODNR), for example, published the *Ohio Trails Vision Plan* in 2019, which calls for a long distance hiking trail that connects to Lake Erie in Lake County. The Ohio Department of Transportation (ODOT) has planned a comprehensive State Bike Route system, which includes a key route along the coastline in Lorain, Cuyahoga, and Lake counties. Lastly, *Walk.Bike.Ohio* is ODOT's statewide bike and pedestrian plan. The plan provides significant data and policy guidance to help communities connect key destinations with low-stress biking and walking connections. Figure 1.10 shows the timeline of relevant lakefront plans in the region, including local plans described later in this Chapter.

Figure 1.9 | Selection of Regional and State Plans

PLAN INVENTORY

Lakefront Planning Timeline

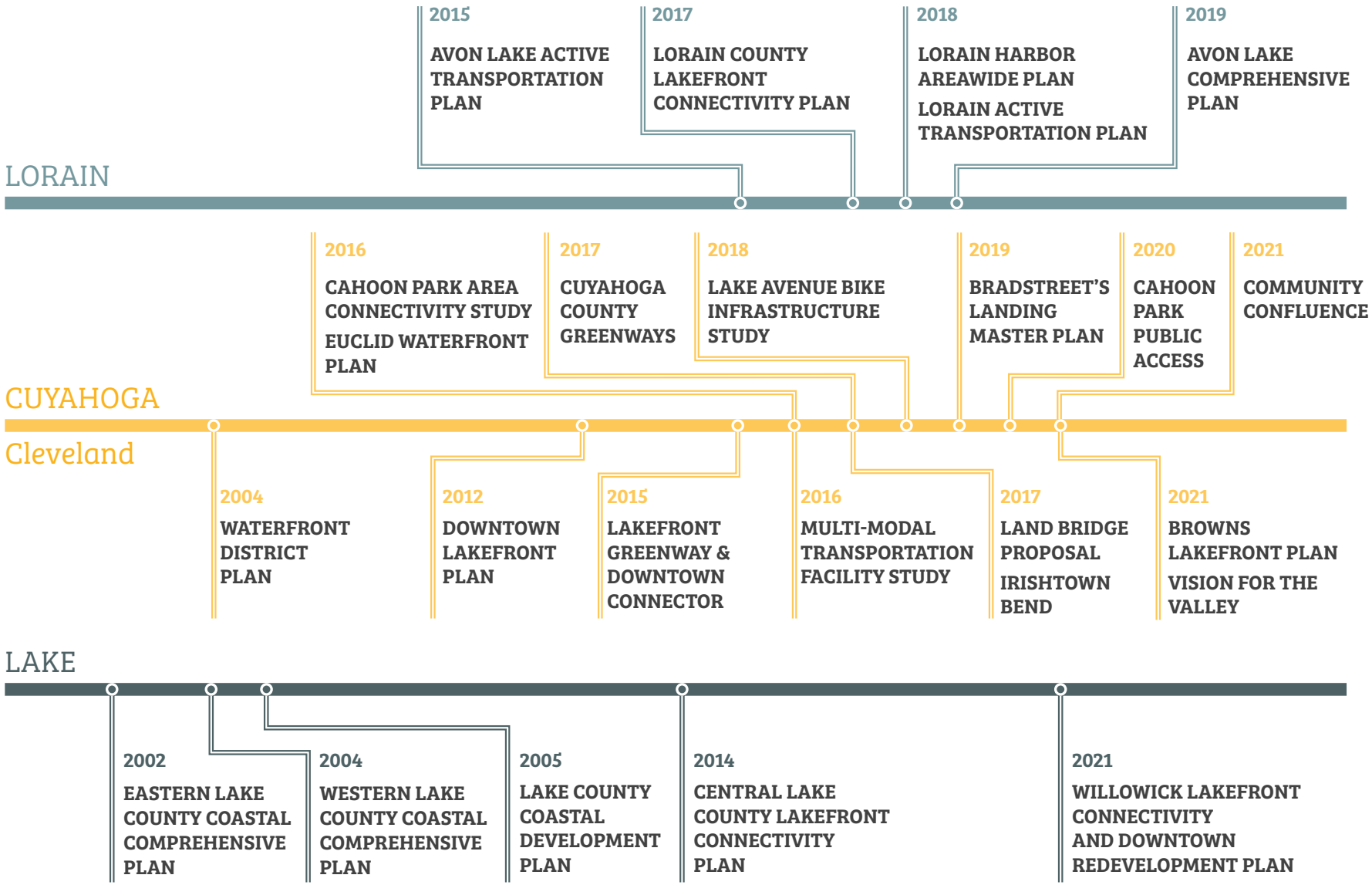


Figure 1.10 | Timeline of Select County and Local Plans

PLAN INVENTORY

Lorain County

Table 1.1 shows that in Lorain County, a number of recent planning efforts illustrate the importance of Lake Erie to transportation and recreation. The cities of Avon Lake and Lorain have each invested in active transportation planning to increase public access and safe transportation to the lakefront. Countywide, the Lorain County Lakefront Connectivity TLCI Plan called for improved north-to-south and east-to-west connections along the coast.

The City of Sheffield Lake has implemented recommendations from this plan in two phases, resulting in improved access near its community senior center. Lorain County Metroparks has created new lakefront connections on the east side of Lorain as a result of its 10-year strategic plan.

NAME	YEAR	COMMUNITY	DESCRIPTION
Avon Lake Comprehensive Plan	2019	Avon Lake	Avon Lake's most recent comprehensive plan emphasizes active transportation and conducted a holistic study to explore additional public access to Lake Erie.
Lorain Active Transportation Plan	2018	Lorain	This plan is both a Safe Routes to School Plan and a citywide bike and pedestrian plan. Lorain Connected is a coalition of non-profits, government organizations, and community advocates working to implement this plan.
Lorain Harbor Areawide Planning Report	2018	Lorain	This plan discusses the potential for the Lorain Harbor Pier and Black River Landing to become a cohesive district. Brownfield remediation is required to redevelop the pier.
Lorain County Lakefront Connectivity Plan	2017	Countywide	This NOACA TLCI plan explores bike and trail connections across the county and provides market analyses for several redevelopment options near the lake.
Avon Lake Active Transportation Plan	2015	Avon Lake	This NOACA TLCI plan recommends a series of trails, bike lanes, and pedestrian improvements to connect neighborhoods to schools, parks, and shopping.
Lorain Metropark 10-Year Plan	2014	Lorain Metroparks	While many of the recommendations of this 10-year plan have been implemented, the plan still shows a number of visionary, countywide connections that would improve public access to parks and lakefront sites.

Table 1.1 | Lorain County Plan Inventory

PLAN INVENTORY

Cuyahoga County

A number of countywide and local initiatives in Cuyahoga County will impact future lakefront development (Table 1.2). For example, the recent Cuyahoga County Lakefront Public Access Plan prioritizes several corridors for design and multimodal enhancements near the lake. Other local plans recommend improvements to existing parks, such as Bradstreet's Landing in Rocky River and Cahoon Park in Bay Village.

Community Confluence is a recent TLCI plan that recommends scenic overlooks in the Rocky River Valley to enhance the area's already-rich recreational opportunities near the waterfront. Euclid's Waterfront Plan and recently-constructed lakefront trail has provided a unprecedented example of mitigating erosion while creating a premier public space. In fact, Euclid's waterfront trail is used as precedent in NOACA's *eNEO2050,* inspiring a regional waterfront trail as an illustrative, visionary project.

NAME	YEAR	COMMUNITY	DESCRIPTION
Cuyahoga County Lakefront Public Access Plan	2022	Countywide	Cuyahoga County Planning Commission's new lakefront plan prioritizes certain sites and segments of the shoreline based on public input and property owner interest.
Community Confluence	2021	Lakewood, Rocky River	This NOACA TLCI plan recommends multimodal infrastructure on the Detroit and Clifton bridges that connect Rocky River and Lakewood, and various other transportation improvements near the river valley.
Cahoon Park Public Access Study	2020	Bay Village	The Cahoon Park Public Access Study furthers a prior NOACA TLCI plan, offering renderings and a more detailed framework for implementation.
Bradstreet's Landing Master Plan	2019	Rocky River	The Bradstreet's Landing Master Plan proposes a new design for Bradstreet Landing to better connect it to surrounding neighborhoods.
Lake Avenue Bicycle Infrastructure Study	2018	Lakewood	This NOACA TLCI plan recommends a road diet on Lake Avenue in the City of Lakewood.
Cuyahoga County Greenways	2017	Countywide	This NOACA TLCI plan is a foundational, countywide vision for a connected system of bike connections for all ages and abilities.
Euclid Waterfront Plan	2016	Euclid	The City of Euclid's waterfront planning has resulted in a new trail along the coastline, setting a bold new standard for lakefront public space.
Cahoon Park Area Connectivity Study	2016	Bay Village	This NOACA-led TLCI explored multimodal and parking improvements in Bay Village's large municipal park.

Table 1.2 | Cuyahoga County Plan Inventory

PLAN INVENTORY

Cleveland

Cleveland's industry grew in part because of its proximity to the shipping channels on Lake Erie and the Cuyahoga River. There are still strong industrial uses on Cleveland's waterfront today. Recognition of the unique opportunity Cleveland has for water-based recreation and tourism continues to grow.

Connecting the mall to North Coast Harbor has been a pivotal initiative in recent years, as has the stabilization and revitalization of Irishtown Bend on the Cuyahoga River. In addition to these efforts, a number of NOACA TLCI and other plans have recommended new trail networks to better connect people to lakefront destinations (Table 1.3).

NAME	YEAR	COMMUNITY	DESCRIPTION
Cleveland Harbor Eastern Embayment Resilience Study (CHEERS)	2022	Cleveland	The CHEERS plan recommends restoring the natural shoreline on the City's eastern lakefront through a series of parkland restoration projects.
Vision for the Valley	2021	Cleveland	This NOACA TLCI plan envisions public multimodal access to the Cuyahoga River and modernized infrastructure in the river valley.
Browns Lakefront Plan	2021	Cleveland	The Browns Lakefront Plan is a vision to connect Cleveland's mall to the harbor with a land bridge. A detailed feasibility study is underway to explore ways to implement this vision and is resulting in several options.
Irishtown Bend	2017	Cleveland	This NOACA TLCI plan envisions a new park on the bend of the Cuyahoga River, with multimodal transportation connections to downtown and Ohio City.
Cleveland Mall to North Coast Harbor Land Bridge	2017	Cleveland	The plan for a land bridge connecting Cleveland's downtown mall to North Coast Harbor originates from this conceptual proposal by the non-profit Green Ribbon Coalition.
Cleveland Multi-Modal Transportation Facility	2016	Cleveland	This NOACA TLCI plan designs a new multimodal facility to connect public transit, Greyhound, and Amtrak services in a single station near the lake.
Lakefront Greenway and Downtown Connector	2015	Cleveland	This NOACA TLCI plan recommends new off-road trails and enhancements of the existing Lakefront Bikeway from North Coast Harbor to Gordon Park.
East 185th Street Corridor Study	2015	Cleveland, Euclid	This NOACA TLCI plan explores pedestrian, bicycle, and traffic safety improvements on East 185th Street, including its northern terminus at Lake Erie.
Downtown Lakefront Plan	2012	Cleveland	This lakefront plan reimagines North Coast Harbor as a new mixed-use community. Elements of this plan were implemented on the East 9th Street Pier.
Cleveland Waterfront District Plan	2004	Cleveland	This plan put forth a bold initial vision for how Cleveland could activate its lakefront.

Table 1.3 | City of Cleveland Plan Inventory

PLAN INVENTORY

Lake County

Recent plans in coastal Lake County, as shown in Table 1.4, include regional coastal and trail plans, and a number of localized studies. The Chagrin River is also being studied for improvements in Chagrin Connect; a concurrent, related effort to this plan.

Chagrin Connect is exploring opportunities to enhance river access points and link them with new trails in Lake County.

NAME	YEAR	COMMUNITY	DESCRIPTION
Vine Street Study	2022	Eastlake, Willowick, Willoughby	This NOACA TLCI is exploring reconfiguration options on Vine Street to improve transit and multimodal connectivity.
Willowick Lakefront Connectivity and Downtown Redevelopment Plan	2021	Willowick	This NOACA TLCI recommends a separated bike lane on Lakeshore Boulevard and reimagines the lakefront at Willowick's current City Hall as a mixed-use development with a park and trail near the water's edge.
Grand River Waterfront Entertainment District Plan	2021	Grand River	This NOACA TLCI explores land use changes in downtown Grand River, supported by transportation investments in streetscape, parking, and pedestrian safety improvements.
Osborne Park Redesign	2021	Willoughby	The coastal Osborne Park is facing severe erosion. With grants from ODNR, it is being redesigned as a premiere public destination that protects the natural environment and improves public access.
Central Lake County Lakefront Connectivity Plan	2014	Mentor, Surrounding Areas	This NOACA TLCI develops a visionary trail network complete with boardwalks, new pedestrian bridges, and various alignment options linking key destinations, including the lakefront, in Central Lake County.
Laketran 10-Year Plan	2013	Countywide	This strategic plan explores the need for more transit service as the county grows. The plan recommends route changes and system improvements to increase ridership and improve service.
Lake County Coastal Development Plan	2005	Countywide	The Lake County Coastal Development Plan marries the earlier Western and Eastern plans into an overall vision that proposes specific improvements at sites along the lakefront. Many of these proposed improvements are completed or underway.
Western Lake County Coastal Plan	2004	Countywide	These two plans work in tandem to create a countywide, coastal vision. The plans identify ten priority projects, like boating facilities, a regional bike network, and a cooperative regional approach to secure funding, development, conservation, and tourism.
Eastern Lake County Coastal Plan	2002	Countywide	

Table 1.4 | Lake County Plan Inventory

2.

The Lakefront TODAY

- Lakefront Parks
- Community Overview
- Environmental Assets
- Overall Lakefront Travel

LAND USE

This Chapter explores the assets and challenges along the lakefront today. The region's lakefront has a backbone of strong public parks that range in size and context, yet the coastal land of Northeast Ohio developed primarily around private interests and the region's economy. Private homes, vacated railroads, major highways, and underused power plants dot the landscape, often making physical connections for people biking or walking more difficult.

Land Use

Great Lakes waters are considered public lands. The Ohio Supreme Court has ruled that private owners do not own the land below the natural shoreline, or the line at which water usually stands.[1] This definition is more generous to private landowners than those in nearby states, restricting the public from walking along the shore (unless, as the saying goes, "both your feet are wet"). While owning a lakefront home is certainly an enjoyable experience for many in Northeast Ohio, contiguous miles of private lakefront property limit the public's coastal access and changes the area's character.

In total, about 80% of the region's coastline is bound by private land, while the remaining 20% is publicly accessible coast (Figure 2.1). There are over 96,500 acres of land within two miles of the Lake Erie shoreline in the NOACA region (Table 2.1). Land use varies throughout this two mile band, but in general, residential, industrial, and commercial uses dominate the landscape. Of the three lakefront counties, Lake County has retained the greatest ratio of public land (16%).

There is additional land use analysis and a summary map in Appendix C.

1 Supreme Court Reaffirms 1878 Decision Holding That State's Trust Over Lake Erie Extends to the 'Natural Shoreline, Ohio Supreme Court, 2012. https://www.supremecourt.ohio.gov/PIO/summaries/2011/0914/091806.asp. Accessed 10 Feb. 2022.

Figure 2.1 | Miles of Coastline by Ownership
Source: Cuyahoga, Lake, and Lorain County auditors

LAND USE CATEGORY	% OF LAND, BY COUNTY			TOTAL (ACRES)
	LORAIN	CUYAHOGA	LAKE	
Residential	45	47	43	43,326
Public	12	12	16	13,211
Public Utilities	2	3	1	1,646
Tax-Exempt	2	7	3	3,864
Commercial	14	17	14	14,380
Agricultural	11	0	12	7,690
Industrial	12	11	10	10,325
Unclassified	1	4	1	2,085
Total (Acres)	27,277	31,010	38,240	96,527

Table 2.1 | Land Use Summary
Source: Cuyahoga, Lake, and Lorain County auditors

PLAN INVENTORY

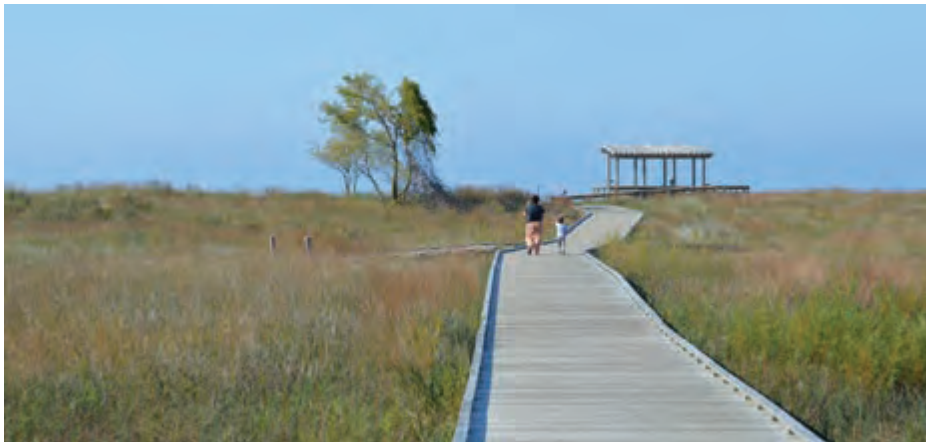
Communities

There are 22 lakefront communities in the NOACA region. The population and miles of coastline in each community are shown in Table 2.2.

Lakefront Parks

Lake Erie Connect focuses on the existing 59 public access points (also referred to as lakefront parks). Not all public access points are designated parks, but many of them conserve environmental resources or were strategically acquired and preserved for future public use. Although the public also accesses the lakefront through privately-owned businesses like hotels and restaurants, these were not included in this study. Figure 2.2 on the following page lists each park.

59 PUBLIC ACCESS POINTS



Headlands Beach State Park and Nature Preserve, Lake County

COMMUNITY	TYPE	POPULATION	COASTLINE (MILES)
Vermilion	City	6,022	3.25
Lorain	City	64,904	8.75
Sheffield Lake	City	8,957	3.50
Avon Lake	City	25,206	5.50
Bay Village	City	16,163	5.25
Rocky River	City	21,755	1.25
Lakewood	City	50,932	2.25
Cleveland	City	372,624	11.25
Bratenahl	Village	1,379	2.75
Euclid	City	49,692	2.25
Willowick	City	14,204	2.00
Lakeline	Village	216	0.75
Timberlake	Village	629	0.25
Eastlake	City	17,511	3.00
Willoughby	City	24,118	1.50
Mentor-on-the-Lake	City	7,131	2.25
Mentor	City	47,148	3.50
Fairport Harbor	Village	3,108	0.75
Painesville	Township	16,820	5.00
Perry	Township	6,276	2.50
North Perry	Village	887	2.50
Madison	Township	14,801	5.50
	Total	770,483	75.75

Table 2.2 | Lakefront Communities in the NOACA Region
Source: US Census Bureau (population, ACS 5-year estimates 2015-2020)
Coastline length was estimated by the project team using GIS

PARKS

LORAIN COUNTY

City of Vermilion (Sites 1-2)
- *Showse Park*
- *Brownhelm Township Lakefront Park*

City of Lorain (Sites 3-7)
- *Waverly Place Park*
- *Lakeside Landing*
- *Lakeview Park*
- *Century Park*
- *Lorain Public Pier*

City of Sheffield Lake (Sites 8-11)
- *Lakewood Beach Park*
- *West Shore Park*
- *Sheffield Lake Community Park*
- *Shell Cove Park*

City of Avon Lake (Sites 12-14)
- *Miller Road Park*
- *Veterans Memorial Park*
- *Avon Lake Cemetery*

CUYAHOGA COUNTY

City of Bay Village (Sites 15-18)
- *Lakeside Cemetery*
- *Cahoon Memorial Park*
- *Huntington Reservation*
- *Columbia Park*

City of Rocky River (Sites 19-21)
- *Bradstreet's Landing*
- *Rose Point*
- *Rocky River Park*

CUYAHOGA COUNTY (Continued)

City of Lakewood (Sites 22-25)
- *Webb Road Access*
- *Lakewood Park*
- *Summit Avenue Access*
- *Cliff Drive Access*

City of Cleveland (Sites 26-31, 33, 34)
- *Edgewater Park*
- *Cleveland Lakefront Nature Preserve*
- *Wendy Park*
- *North Coast Harbor*
- *Euclid Beach*
- *East 55th Street Marina*
- *Villa Angela and Wildwood Park*
- *Gordon Park*

City of Bratenahl (Site 32)
- *Bratenahl Road Access*

City of Euclid (Site 35, 36)
- *Euclid Park*
- *Sims Park*

LAKE COUNTY

City of Willowick (Site 37)
- *Willowick City Hall/ Lakefront Lodge*

City of Eastlake (Sites 38-40)
- *Quentin Road Park*
- *Willowbeach Park*
- *Eastlake Fishing Pier*

LAKE COUNTY (Continued)

City of Willoughby (Sites 41-43)
- *Sunset Park*
- *Osborne Park*
- *Beachview Road Access*

City of Mentor-on-the-Lake (Sites 44-45)
- *Overlook Beach Park*
- *Mentor Beach Park*

City of Mentor (Site 46)
- *Mentor Lagoons Nature Preserve*

Painesville Township (Site 47, 49)
- *Headlands Beach State Park/ Nature Preserve*
- *Painesville Township Park*

Village of Fairport Harbor (Site 48)
- *Fairport Harbor Lakefront Park*

Perry Township (Sites 50, 51)
- *Lake Erie Bluffs*
- *Perry Township Park*

Village of North Perry (Site 52, 53)
- *North Perry Village Park*
- *Lakeshore Reservation*

Madison Township (Sites 54-59)
- *Bill Stanton Community Park*
- *Madison Township Park*
- *Bennett Road Access*
- *Tuttle Park*
- *Arcola Creek Park*
- *Green Road Access*

Figure 2.2 | Lakefront Public Access Points
Numbers correspond to sites in Appendix A.

ENVIRONMENTAL ASSETS

Land near Lake Erie is a tremendous environmental asset. Unique coastal habitats like riverine and forested wetlands support many rare and migratory species. Some coastal land is especially prone to flooding and erosion, making development unsuitable or risky, and increasing the public benefit of conservation. Additional detail, including maps and tables of the environmental assets summarized in Figure 2.3, can be found in Appendix C.

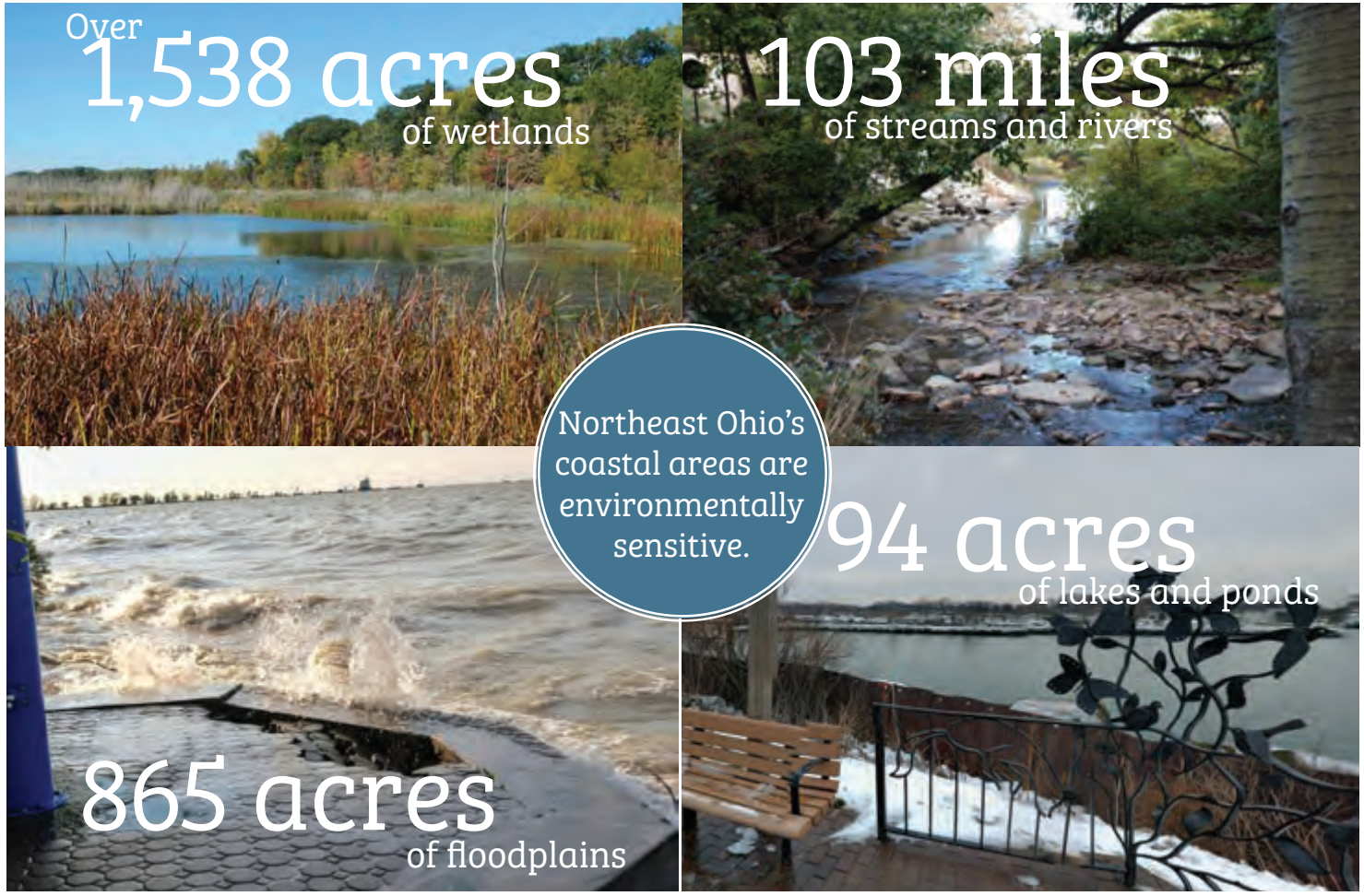


Figure 2.3 | Environmental Summary
Mentor Lagoons Nature Preserve by the Ohio Department of Natural Resources (top left); Huntington Reservation by Cleveland Metroparks (top right); Fairport Harbor Lakefront Park by Gentry Photography (lower left); Cleveland Lakefront Nature Preserve (lower right)

ENVIRONMENTAL JUSTICE

Environmental Justice refers to the requirement for federally-funded entities to meaningfully engage people who have historically been marginalized in decision-making. It also requires that planners evaluate the negative consequences of public policies or projects in areas with disproportionately high populations of low-income or non-white residents.

Figure 2.4 identifies Traffic Analysis Zones (TAZs) within the study area that meet NOACA's Environmental Justice criteria because of poverty, race, or both. Approximately 54% of the lakefront population (those living within two miles of the coastline) reside in Environmental Justice areas.

ENVIRONMENTAL JUSTICE MEANS:

"No group of people, including racial, ethnic, or socio-economic group should bear a disproportionate share of the negative environmental consequences resulting from federal, state, local programs and policies."
- US EPA

Figure 2.4 | Environmental Justice Areas
Sources: NOACA (Transportation Analysis Zones, EJ areas)

LAKEFRONT TRAVEL

Regional Travel Patterns

The project team used StreetLight data to identify the number, time of day, origin, and mode of trips that are made to the 59 lakefront access points. Just as a watershed encompasses the land that channels rainfall to a common outlet, the travelshed maps in Figure 2.5 display the origins of people who visit the lakefront by their mode of transport. Findings from this analysis include:

- Lakefront sites are regional destinations, drawing nearly 34,000 people from throughout the five-county NOACA region daily in the peak season of May through September.
- Overall, 83% of trips to the lakefront are longer than one mile. While most visitors to the lakefront do not live along the shoreline, the parks are still serving a local purpose, attracting 17% of trips from areas directly nearby.
- For parks generating 100 or more trips per day, individual travelshed maps were created. These can be found in Appendix A.

Understanding the Analysis

StreetLight is a company that aggregates and processes cell phone location data for transportation analysis. This data can be used to estimate trip characteristics like travel speed, routes, origins, and destinations. In Ohio, StreetLight data is provided to public agencies through the Ohio Department of Transportation. For Lake Erie Connect, the project team gathered StreetLight data for all trips that started in the region and ended at a lakefront public access point, summarized by ZIP Code. The resulting analysis gives regional and local planners new information about lakefront travel, including the average number of trips to parks per day, the origin of trips, and the mode visitors use to get there. More information on the StreetLight methodology can be found in Appendix D.

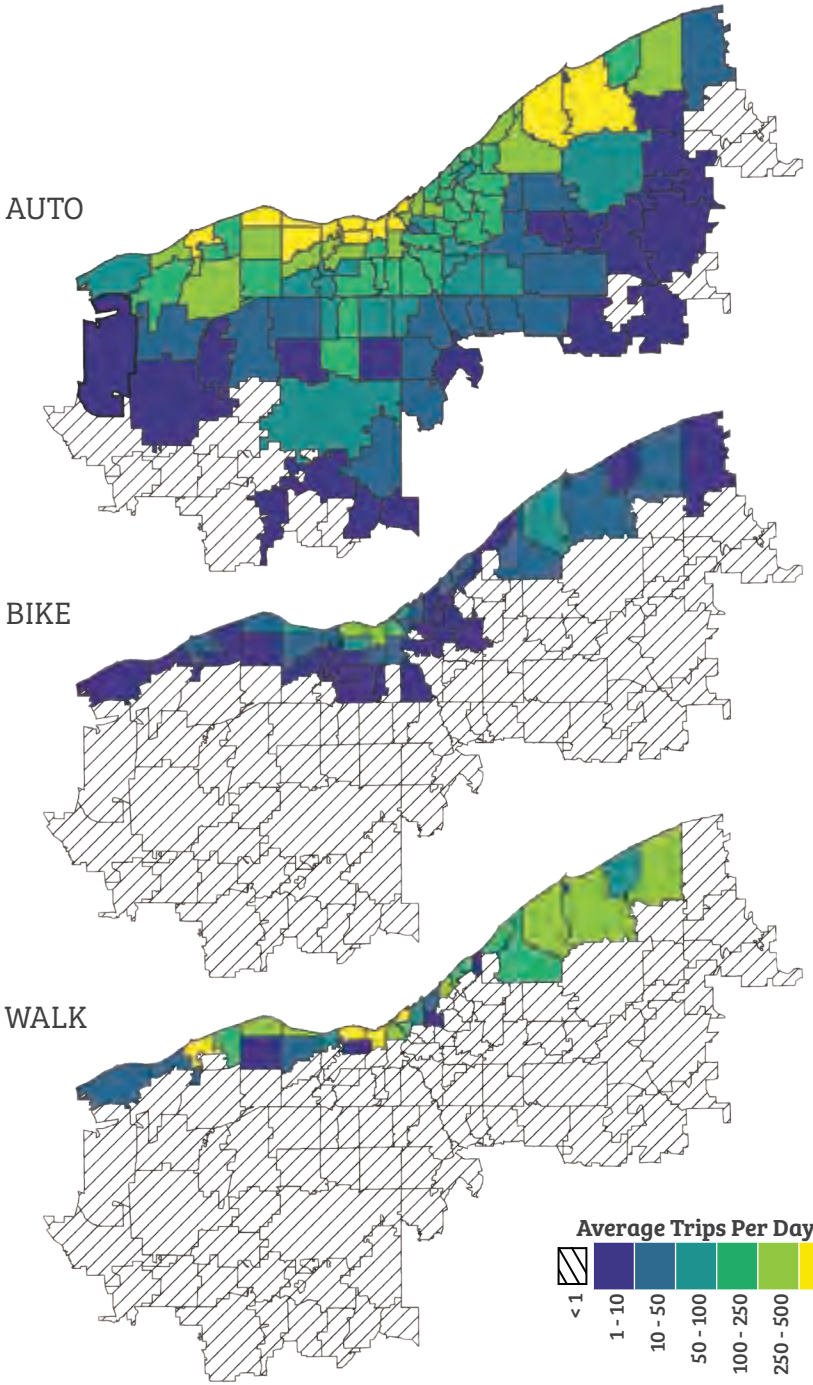


Figure 2.5 | Lakefront Trips by Origin and Mode
Sources: StreetLight (Origin and Destination, 2019)

LAKEFRONT TRAVEL

Walking and Biking Trips

Given that 83% of trips to the lakefront are longer than one mile, it is not surprising that most visitors arrive to the lakefront using a car. However, the StreetLight analysis used for this study measures short trips that are traditionally undetected in traffic studies, resulting in new data about the strength of multimodal lakefront travel today.

The key finding of this analysis is that at least 10,000 people walk or bike to lakefront parks everyday in peak season. Many, but not all, of these park goers arrive from neighborhoods close to the lake. Some others use regional trails to reach the lakefront. In total, about one-third of all lakefront trips are made by walking or biking. This is a large share relative to the region's estimated mode split across all trips (2%).

Time of Day

Figure 2.6 shows the distribution of trips by time of day, from 4:00 AM to 8:00 PM. Trends from this data include:

- Travel to the region's lakefront parks is concentrated during daylight hours.
- Many lakefront trips occur outside of the traditional AM and PM peak travel time. Peak times for lakefront trips align loosely with the lunch and leisure hours of first-shift workers.

The impact of lakefront travel on peak rush hour, especially in the AM hours, appears to be minimal. Future public parks and other recreational destinations will likely follow this trend, attracting visitors throughout the day and outside of the typical AM and PM peak. Congestion and parking demand are discussed in more detail in Chapter Three.

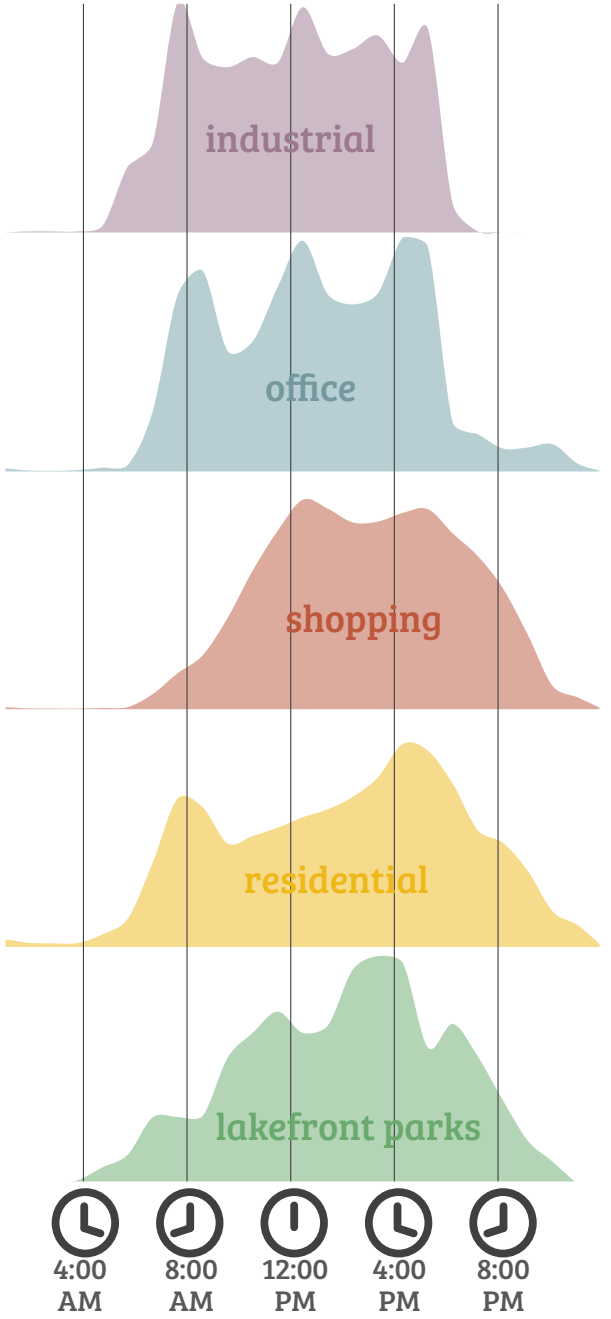


Figure 2.6 | Lakefront Trips by Time of Day
Sources: StreetLight (Trip data, 2019)

LAKEFRONT TRAVEL

Time of Day By Mode

People walk, bike, and drive to the lakefront through the day and evening. Figure 2.7 shows the distribution of lakefront trips by mode and time of day. In general, most visits occur during mid-day and evening, but there are a number of early morning and late evening trips as well. People walk to the parks throughout the day, and tend to bike more in the mid-day and evening hours. Anecdotal evidence suggests that many people enjoy walking to the parks to enjoy the sunset.

Safety for all road users, especially those walking and biking, is analyzed further in Chapter Three.

Euclid Beach, Cuyahoga County

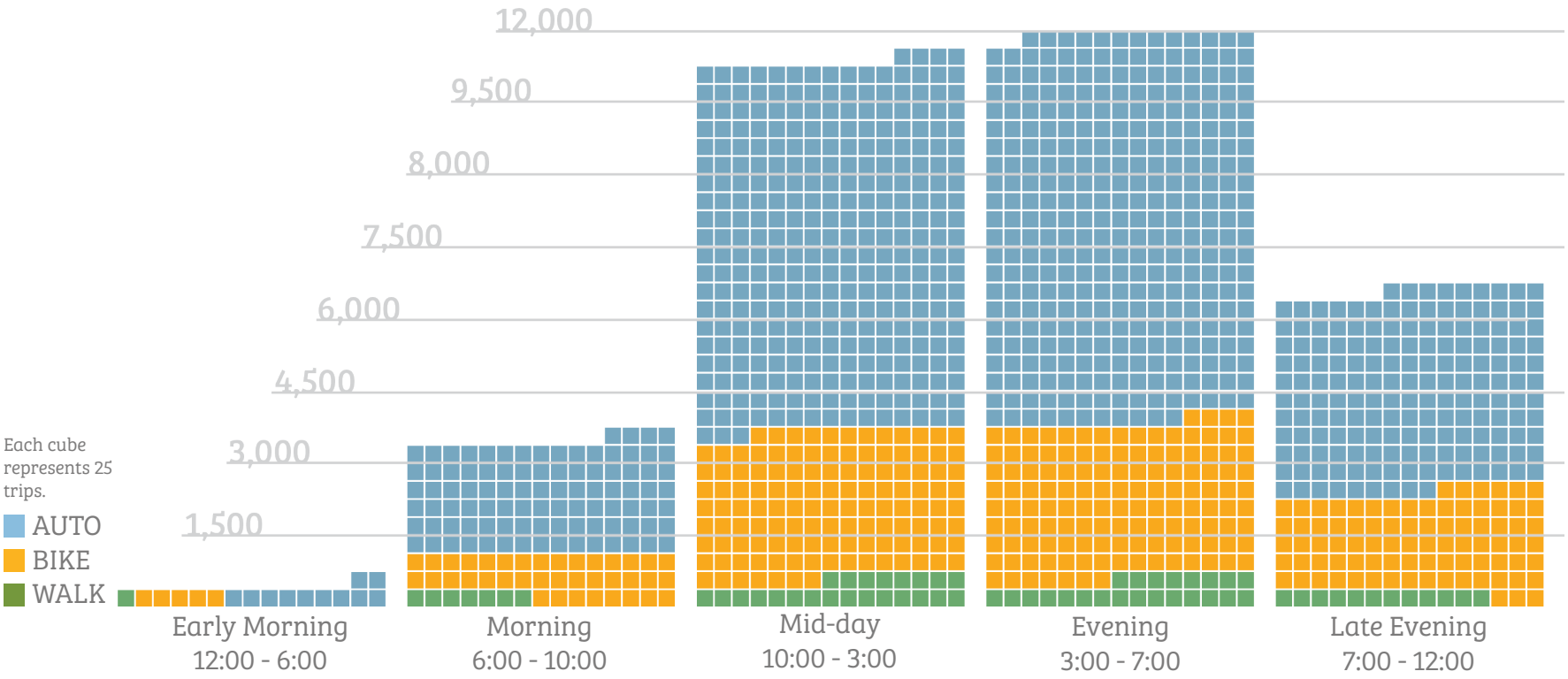


Figure 2.7 | Lakefront Trips by Time of Day and Mode
Sources: StreetLight (Trip data, 2019)

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3.

Increasing **ACCESS**

- The Trip
- The Last Mile
- The Destination

INCREASING ACCESS

Defining High-Quality Access

While increasing access is a goal of this plan, the concept of "access" can be a matter of perception and is difficult to define. Using the public's stated needs and perceptions of the lakefront (see Chapter One) and the analysis of current lakefront trips (see Chapter Two), the project team has defined the following criteria to define high-quality lakefront access:

- People should be able to safely walk, bike, or take transit to the lakefront with fully-connected and comfortable infrastructure like sidewalks, crosswalks, low stress bike facilities, and transit stops and routes.
- People living near the lakefront should not have to travel far to enjoy high-quality lakefront amenities. Parks throughout the region should offer the activities most people enjoy.
- All lakefront parks should support local activities and informal gatherings. Drop-off, loading, and vehicle parking should be obvious and convenient to visitors.
- Lakefront parks should continue to support off-peak trips, including during evening hours, with pedestrian-scale lighting and mindful facility design.
- Many visit multiple lakefront parks in one day and enjoy scenic trips along the coast. Access for these visits should be encouraged with seamless and consistent wayfinding.

Additional needs that must be addressed to ensure high-quality, equitable access are described throughout this Chapter. A number of aspirational solutions are also identified and discussed. Recommendations are solidified and summarized in Chapter Four.

Lakefront Travel Phases

This Chapter explores three phases of lakefront travel: the trip, the last mile, and the destination. Within each phase, infrastructure is assessed and needs for increasing access are identified. Figure 3.1 below summarizes the major topics addressed within each phase.

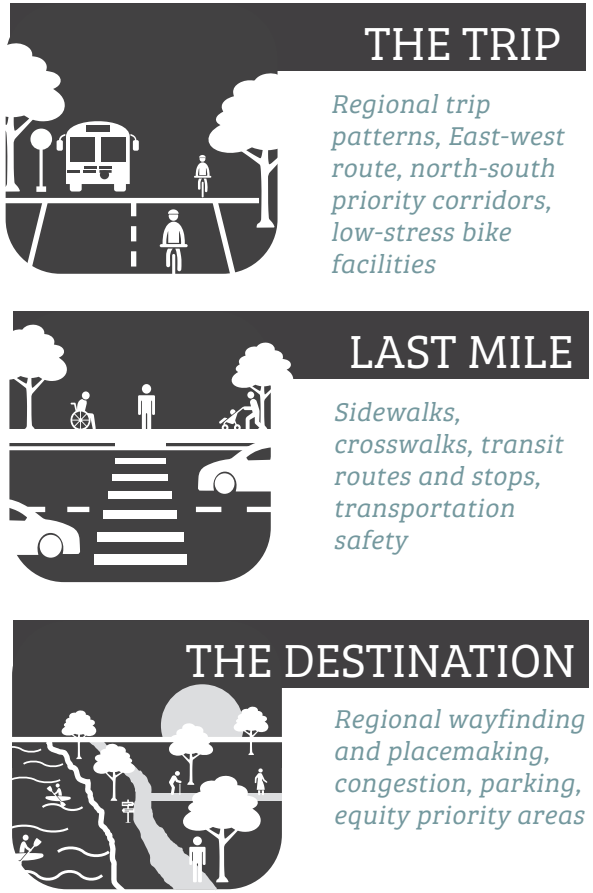


Figure 3.1 | Phases of Lakefront Access

Major Routes to the Lake

People visit Northeast Ohio's lakefront parks from across the region, as shown by the average trips per day ending at the lakefront in Figure 3.2. Over half (68%) of park visitors come to the lakefront from Cuyahoga County, while Lake and Lorain attract 17 and 13 percent of trips, respectively. The major routes and corridors used to reach the lakefront are summarized directionally in this section, east-to-west and north-to-south.

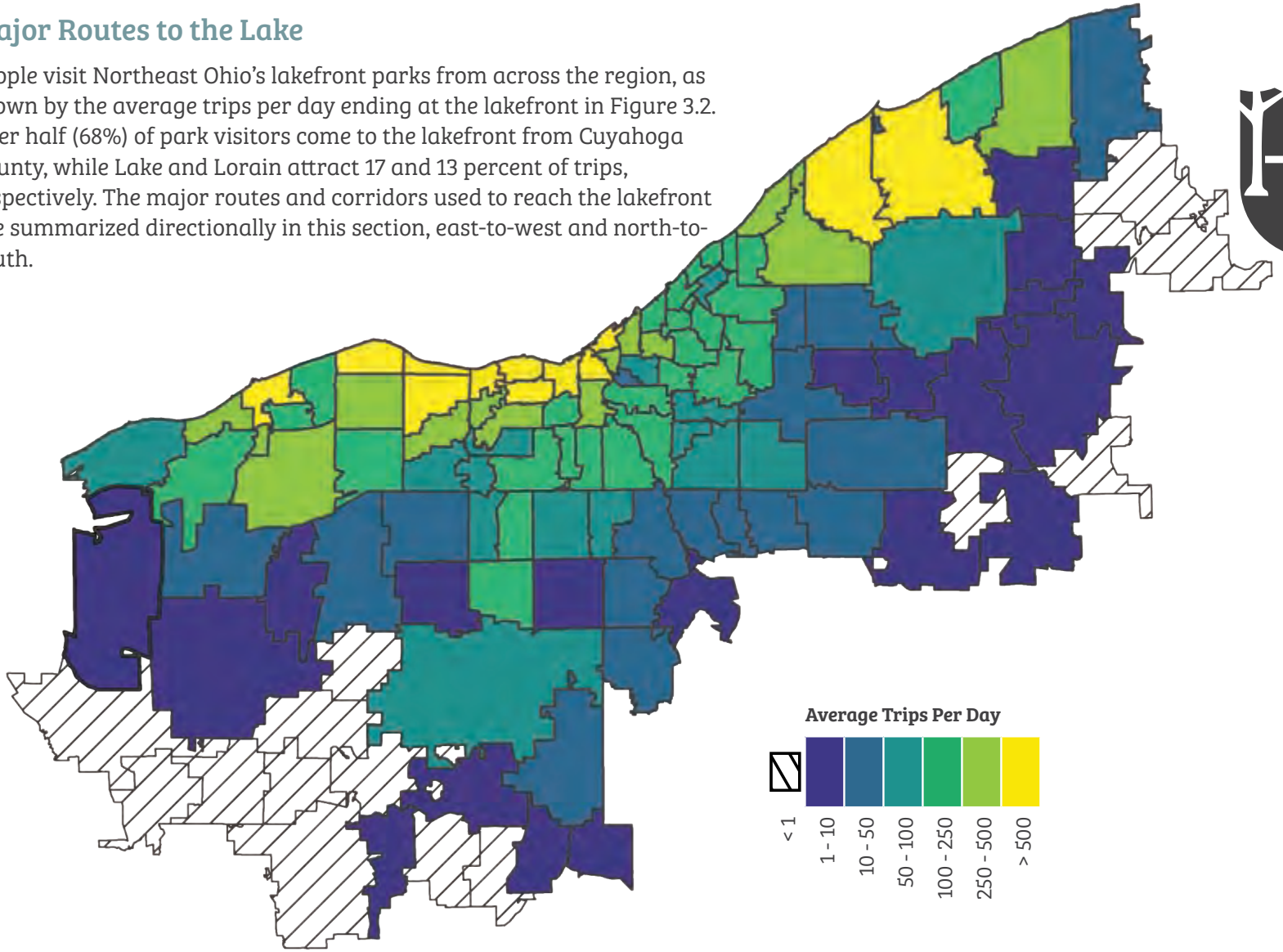


Figure 3.2 | Lakefront Trips by Origin
Source: StreetLight (Origin and Destination, 2019)

BIKE INFRASTRUCTURE

To assess the comfort of today's infrastructure for bicyclists, the project team relied on NOACA's Level of Traffic Stress (LTS) data layer. This methodology was first developed by Northwestern University and has been adapted by public agencies including NOACA and the Ohio Department of Transportation. There are four levels of LTS, numbered one through four. Each represents an audience that may feel comfortable biking in the roadway or dedicated bike infrastructure available given the speed, traffic volumes, and width of the road. See Figure 3.3 for a definition of the levels used in this study.

It is clear from the trip generation and modal analysis that a large number of people who live within one mile of a lakefront park walk or bike to travel there. However, about 20% of lakefront trips longer than one mile are also made by walking or biking. Interconnected, comfortable trails and bike infrastructure enable people to reach the lakefront from inland communities. Existing low-stress bike facilities on the priority corridors are displayed in maps throughout this Chapter to help support the importance of multimodal lakefront travel (see Figure 3.4, for example).

More low-stress connections are needed to close gaps between neighborhoods and the lakefront in many areas. Some of the region's bike trails are short segments along individual roads or parks. Many are fragmented, short, and connect only to high stress roads. Others, like the Centennial Lake Link Trail in Cuyahoga County or the Colorado Avenue trail extension in Lorain, are true lakefront connectors. These regional examples, among others, are models for lakefront connectivity that could be replicated elsewhere.

Chapter Four includes more information on planned bike infrastructure.

Figure 3.3 | Level of Traffic Stress (LTS) definitions
Source: NOACA (LTS, 2018 Bike Maps)

The Whiskey Island connector connects the Centennial Lake Link Trail, the Towpath, and Edgewater Park to Whiskey Island.

The Colorado Avenue trail extension in the Lorain takes riders to Lakeside Avenue, a residential street ending at Lake Erie. This route was constructed in 2018 with NOACA funding.

EAST-WEST TRAVEL

There is a clear, preferred route for east-west travel between lakefront parks across the region. This east-west lakefront route is used by most people who travel to a lakefront park, and facilitates movement across the lakefront between communities. The route serves as a primary access point, and sometimes barrier, for those traveling to lakefront parks north of the corridor, as covered in the next trip phase ("The Last Mile"). In addition to data like traffic volumes and trip patterns, previous plans were used to inform the alignment of the east-west route, especially in Lorain and Cuyahoga counties.

In total, the east-west route is 106 miles long and crosses 26 local communities. The average speed limit on the route is 35 miles per hour and traffic averages 7,700 vehicles per day. In Lorain County, the east-west route begins in the City of Vermilion and follows US-6 and State Route 2 along Lake Erie. This alignment was the focus of NOACA's Lorain County Lakefront Connectivity TLCI plan in 2017, which still resonates with County leaders today.

In Cuyahoga County, the east-west route weaves through lakefront parks and high-density neighborhoods on various roads. The 2021 Cuyahoga County Lakefront Public Access Plan first identified this east-west route, highlighting nodes along it that should eventually connect into a planned lakefront trail.

In Lake County, the east-west route was determined based on regional planning efforts like the Lake Erie Coastal Ohio Trail, the State Bike Route System, and NOACA's Lake County Bicycle Transportation Map. Discussions with the Strategy Committee and local leaders finalized the route. Figures 3.4 and 3.5 show the east-west route.

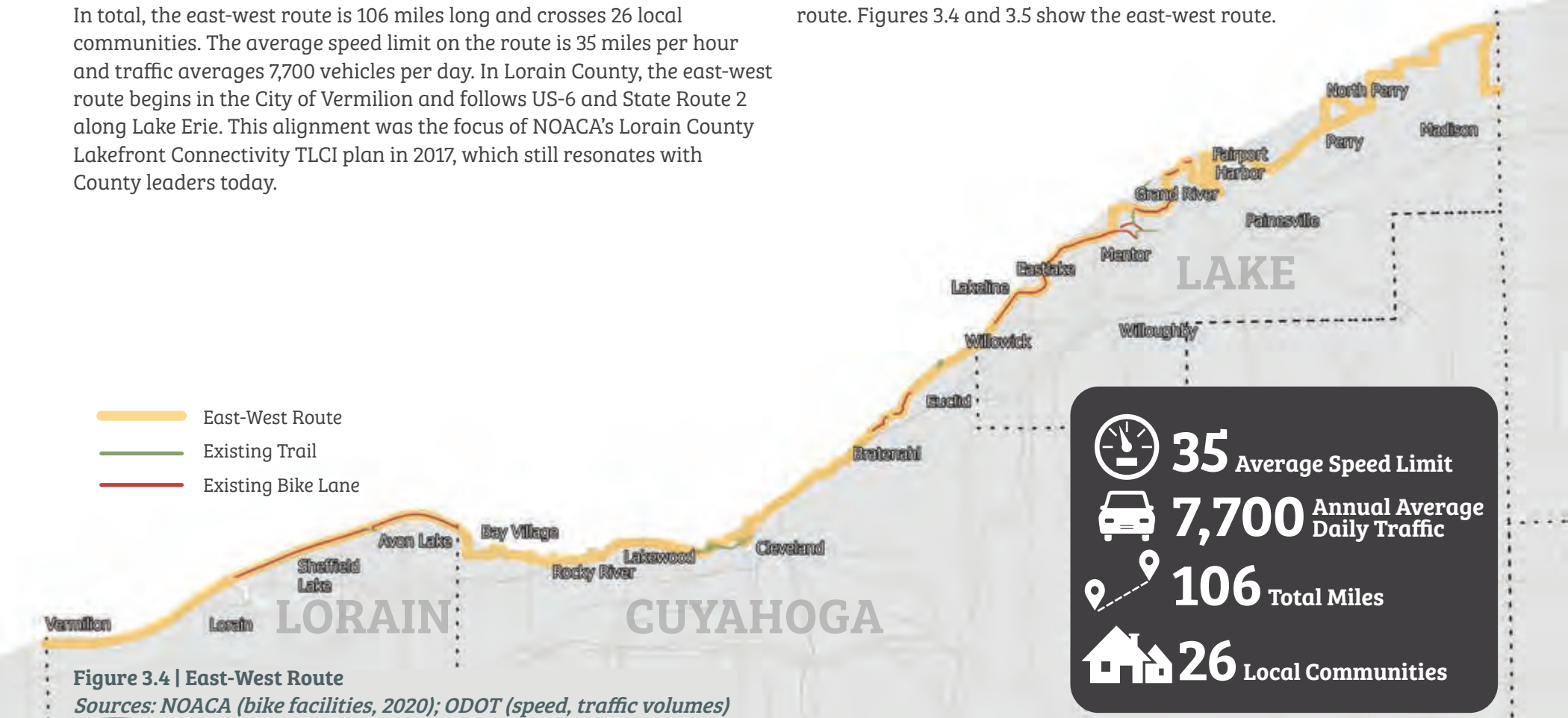


Figure 3.4 | East-West Route
Sources: NOACA (bike facilities, 2020); ODOT (speed, traffic volumes)

EAST-WEST TRAVEL

Figure 3.5 shows the east-west route in detail and names each road included.

1. LIBERTY ROAD
2. ERIE AVENUE
3. LAKE ROAD
4. BRADLEY ROAD
5. WOLF ROAD
6. PORTER CREEK DRIVE
7. CAHOON ROAD
8. COLUMBIA ROAD
9. CLAGUE ROAD
10. FALMOUTH DRIVE
11. CLIFTON BOULEVARD
12. LAKE AVENUE
13. COVE AVENUE
14. EDGEWATER DRIVE
15. WEST BOULEVARD
16. PARK STREET
17. WHISKEY ISLAND DRIVE
18. RIVER ROAD
19. MULBERRY AVENUE
20. WINSLOW AVENUE
21. WEST 24TH STREET
22. DETROIT AVENUE
23. CENTER STREET
24. MERWIN AVENUE
25. WEST STREET
26. OLD RIVER ROAD
27. MAIN STREET
28. WEST LAKESIDE AVENUE
29. WEST 3RD STREET
30. ERIESIDE AVENUE
31. NORTH MARGINAL ROAD
32. LAKE ERIE COASTAL TRAIL
33. MARTIN LUTHER KING JR DRIVE
34. LAKESHORE BOULEVARD
35. ANDREWS ROAD
36. CORDUROY ROAD
37. JORDAN DRIVE
38. HEADLANDS ROAD
39. HEISLEY ROAD
40. OLIVE STREET
41. RIVER STREET
42. RICHMOND ROAD
43. RICHMOND STREET
44. EAST STREET
45. FAIRPORT ROAD
46. HIGH STREET
47. 2ND STREET
48. FAIRPORT NURSERY ROAD
49. RIDGE ROAD
50. PERRY PARK DRIVE
51. PARMLY ROAD
52. ANTIOCH ROAD
53. LOCKWOOD ROAD
54. MCMACKIN ROAD
55. CHAPEL ROAD
56. RED BIRD ROAD
57. LAKE ROAD
58. BENNETT ROAD
59. DOCK ROAD

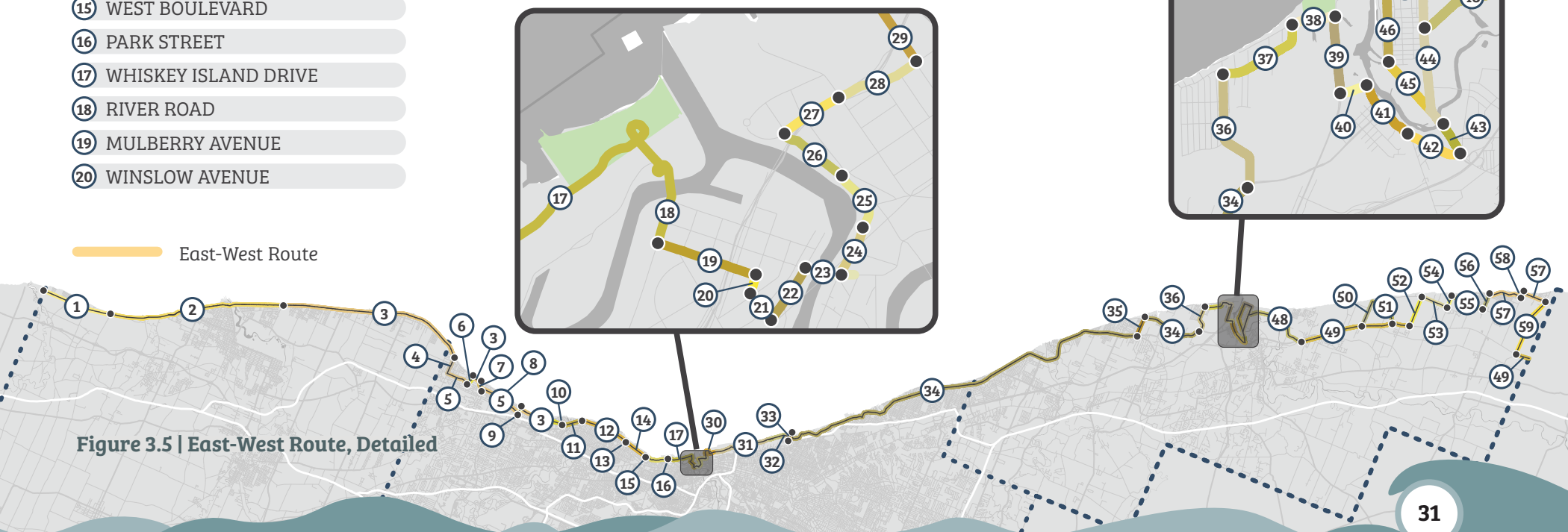


Figure 3.5 | East-West Route, Detailed

EAST-WEST TRAVEL

Table 3.1 displays summary conditions on the east-west route in each lakefront county. The route is the longest, at 48.8 miles, and has the highest traffic volumes in Lake County. In each county, the route has a median Level of Traffic Stress (LTS) of three for bicyclists, meaning it is not comfortable for most adults. In many places, the east-west route has at least four lanes. Crashes are highest on the route in Cuyahoga County. Regionally, between 2010 and 2020, there were 282 bicycle and/or pedestrian recorded crashes on the route.

Table 3.2 summarizes the coverage of existing and planned bike infrastructure on the east-west route. In total, nearly half (48.3 percent) of the route has existing bike infrastructure today, and an additional 26.7 percent has a plan in place for infrastructure to be added. Chapter Four includes information on these and other planned projects. Lake County has the least planned bike infrastructure on the east-west route. As such, additional bike facilities are recommended in Lake County in detail in Chapter Four.

COUNTY	TOTAL MILES	AVERAGE AADT*	MEDIAN LEVEL OF TRAFFIC STRESS	MAXIMUM # OF TRAVEL LANES	TOTAL BIKE AND/OR PEDESTRIAN CRASHES, 2010-2020
Lorain	21.8	9,500	3	2	67
Cuyahoga	34.9	7,400	3	2	139
Lake	48.8	7,000	3	2	76
Total	**105.5**	**7,700**	**3**	**2**	**282**

Table 3.1 | East-West Route Summary Conditions

Sources: NOACA (LTS, AADT, lanes, 2020); ODOT GCAT (crashes, 2010-2020)

****Average annual daily traffic weighted by segment mileage***

COUNTY	EXISTING BIKE INFRASTRUCTURE, MILES	% OF ROUTE WITH EXISTING BIKE INFRASTRUCTURE	PLANNED BIKE INFRASTRUCTURE, MILES**	% OF ROUTE WITH PLANNED BIKE INFRASTRUCTURE**	% OF ROUTE WITH EXISTING AND PLANNED BIKE INFRASTRUCTURE
Lorain	11.4	52.3%	10.4	47.7%	99.9%
Cuyahoga	21.6	61.9%	12.0	34.4%	96.3%
Lake	18.0	36.9%	5.7	11.8%	48.7%
Total	**51.0**	**48.3%**	**28.2**	**26.7%**	**75.0%**

Table 3.2 | East-West Route Bike Infrastructure

Source: NOACA (bike infrastructure, 2020)

****Planned facilities included where of lower stress than existing facilities, or where no facility exists.***

NORTH-SOUTH TRAVEL

Most trips (83 percent) that end at the lakefront exceed one mile. From inland communities especially, at least some south-to-north travel is required. The project team and Strategy Committee for Lake Erie Connect used trip data, park locations, and past planning initiatives to identify the priority North-South corridors shown in Figure 3.6. Together, these corridors deliver the majority of visitors to the lakefront and are a vital link in the transportation network. Some north-south corridors were excluded for having relatively little traffic or having received recent attention or investment in Complete Streets planning.

The thirty north-south lakefront corridors total 58 miles of roadway, and are within a half-mile radius of 125,000 residents. The average speed limit is around 35 miles per hour, and an average 11,000 vehicles per day use the corridors.

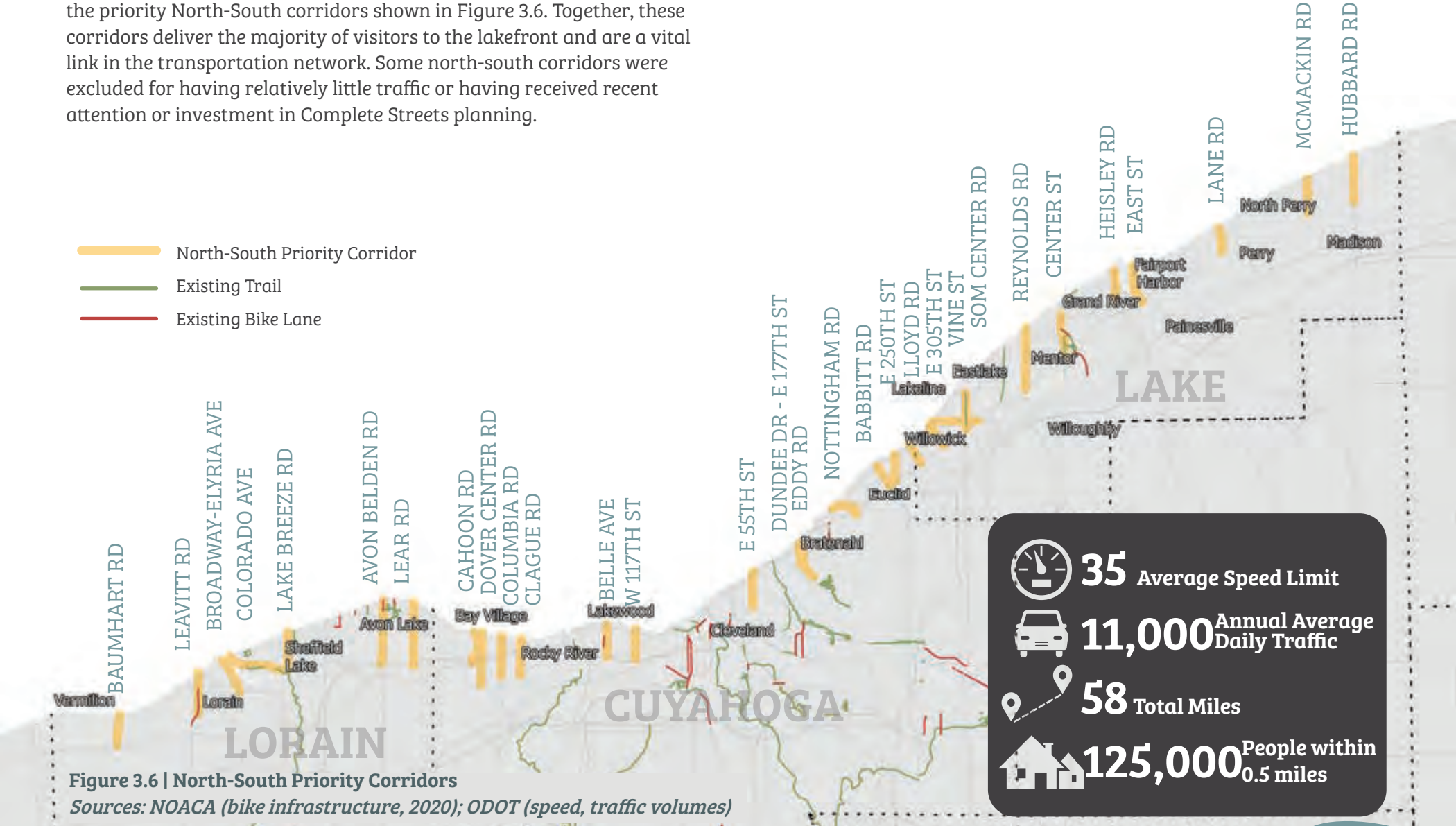


Figure 3.6 | North-South Priority Corridors

Sources: NOACA (bike infrastructure, 2020); ODOT (speed, traffic volumes)

NORTH-SOUTH TRAVEL

Table 3.3 summarizes the characteristics of each north-south corridor including its LTS, population reach, and crash rate per mile. The length of each corridor, from its terminus at the lakefront to the nearest intersection with a highway or major arterial, is also included.

The table also includes information on existing and planned multimodal infrastructure. Most of the north-south corridors have a relatively high LTS, indicating that comfortable bike facilities for all ages and abilities are not available and the road has high traffic or speeds.

CORRIDOR	LTS*	LENGTH, MILES	POPULATION WITHIN 1/2 MILE**	BICYCLE AND/OR PEDESTRIAN CRASHES PER MILE 2010-2020	EXISTING AND PLANNED BIKE INFRASTRUCTURE***
Baumhart Road	4	1.6	500	0.6	
Leavitt Road	3	2.1	4,500	4.3	Existing bike lane
Broadway-Elyria Avenue	3	1.9	4,500	11.4	
Colorado Avenue	3	3.2	1,900	2.8	
Lake Breeze Road	3	2.0	1,000	1.0	
Avon Belden Road	3	3.4	1,600	2.1	Existing bike lane
Lear Road	4	3.3	1,800	0.9	Existing bike lane
Cahoon Road	3	1.8	3,300	1.7	Bike lane recommended in Cahoon Park TLCI plan
Dover Center Road	3	2.7	3,200	5.5	Bike lane recommended in Cuyahoga Greenways TLCI plan
Columbia Road	4	2.0	3,300	4.4	Trail recommended in City of Westlake Bike Plan
Clague Road	3	1.9	2,700	2.7	Bike infrastructure recommended in Cuyahoga Greenways TLCI plan
Belle Avenue	2	1.3	12,000	6.8	Bike infrastructure recommended in Cuyahoga Greenways TLCI plan
West 117th Street	3	1.5	11,000	63.4	
East 55th Street	3	1.8	3,000	21.2	Existing bike lane on northern section; bike infrastructure recommended in Cuyahoga Greenways TLCI plan and Midway TLCI plan

Table 3.3 | North-South Priority Corridors

Sources: NOACA (LTS, 2020); US Census Bureau (population, ACS 5-year estimates 2017-2020); ODOT GCAT (crashes, 2010-2020)

Median **Sum of population in Census Blocks within 0.5 mile of corridor, rounded to nearest 100 ***Planned facilities included where of lower stress than existing facilities, or where no facility exists.

NORTH-SOUTH TRAVEL

CORRIDOR	LTS*	LENGTH, MILES	POPULATION WITHIN 1/2 MILE**	BICYCLE AND/OR PEDESTRIAN CRASHES PER MILE 2010-2020	EXISTING AND PLANNED BIKE INFRASTRUCTURE***
Dundee Drive/ East 177th Street	1	1.1	7,500	1.9	
Eddy Road	3	2.0	5,800	9.4	
Nottingham Road/ Lakeshore Boulevard	3	1.7	6,900	14.3	Bike infrastructure recommended in Cuyahoga Greenways and East 185th Street TLCI plans
Babbitt Road	3	1.2	6,000	23.4	
East 250th Street	3	1.4	8,400	2.1	Bike infrastructure recommended in Cuyahoga Greenways TLCI plan
Lloyd Road	3	1.3	5,600	0.8	
East 305th Street	3	1.3	6,100	0.8	
Vine Street	4	2.3	5,000	11.6	
Som Center Road	4	1.8	4,200	1.6	Existing trail in some locations
Reynolds Road	4	3.1	4,000	3.5	
Center Street	3.5	2.3	2,300	6.0	Existing trail in some locations; trail recommended in Central Lake County Lakefront Connectivity TLCI plan
Heisley Road	5	1.5	1,100	0.0	Trail recommended in Central Lake County Lakefront Connectivity TLCI plan
East Street	3	2.0	2,600	1.0	Trail recommended in Central Lake County Lakefront Connectivity TLCI plan
Lane Road	2	1.2	800	0.8	Trail recommended in Central Lake County Lakefront Connectivity TLCI plan
McMackin Road	3	1.7	2,800	1.2	
Hubbard Road	2	2.4	1,585	2.1	

Table 3.3 (Continued) | North-South Priority Corridors

Sources: NOACA (LTS, 2020); US Census Bureau (population, ACS 5-year estimates 2017-2020); ODOT GCAT (crashes, 2010-2020)

Median **Sum of population in Census Blocks within 0.5 mile of corridor, rounded to nearest 100 ***Planned facilities included where of lower stress than existing facilities, or where no facility exists.

TRANSFORMING THROUGH TRANSPORTATION

The trip to the lakefront can be as inviting and exciting as the destination, and should prepare visitors for a positive lakefront experience while showcasing the values of each local community. This plan broadly recommends that multimodal infrastructure and Complete Streets designs be considered for the east-west lakefront route and the north-south corridors.

Complete Streets

A "Complete Street" accommodates people biking, walking, and taking transit within the public right-of-way. There is no one-size-fits-all Complete Streets design. Instead, best practices include a set of strategies to consider during planning and design. Projects often include a mix of elements like sidewalks, bike lanes, paved shoulders, shared-use paths, bus lanes, transit stops, crosswalks, median islands, and green infrastructure. Figure 3.7 below summarizes the benefits of taking a Complete Streets approach to transportation planning.

Multimodal Corridor Options

The north-south corridors are ideal candidates for multimodal improvements that prioritize the needs of people biking or walking to the lakefront. To highlight the opportunity for change, the project team developed multimodal configuration options for three of the north-south corridors: Broadway-Elyria Avenue in Lorain County, Babbitt Road in Cuyahoga County, and Reynolds Road in Lake County. These roads were selected with stakeholder input and represent various contexts, connect to lakefront parks, are near to neighborhoods and business districts, and could close an existing infrastructure gap. They serve as inspirational examples of possible changes for other north-south corridors. A traffic analysis study that includes robust community engagement will be needed to implement many of the elements depicted in the options.

BENEFITS OF COMPLETE STREETS

BUSINESS	SAFETY	COMMUNITY	ENVIRONMENT	HEALTH	RECREATION
In business districts or Main Streets, Complete Streets projects can support circulation with pedestrian-scale lighting, bike parking, transit shelters, and micro-mobility options.	By providing space for all modes, Complete Streets projects reduce safety risks for vulnerable road users.	Public art, historic preservation, and interpretative signage are all community-driven benefits that can complement Complete Streets.	Green infrastructure can reduce water runoff and improve water quality. When more people are biking and walking instead of driving, emissions and congestion are lower.	Complete Streets allow more people to bike and walk. Making physical activity easy and convenient can improve public health.	Complete Streets projects often include streetscaping elements that enhance the aesthetic appeal and recreational value of transportation.

Table 3.7 | Benefits of Complete Streets

TRANSFORMING THROUGH TRANSPORTATION

Broadway-Elyria Avenue in Lorain County

Broadway-Elyria Avenue is a four-lane road that carries approximately 5,800 cars per day.[1] The road connects the South Lorain neighborhood, Route 2, and downtown Lorain to the Lorain Harbor, fishing pier, and boat launch. The road has sidewalks, and could offer additional multimodal benefits.

The project team used available data and today's right-of-way conditions to develop the three possible options shown in Figure 3.8. Each option reduces travel lanes and creates space for on-street parking, curb bump-outs, bicycle facilities, or other amenity zones. Some combinations of these elements, like those shown in Options Two and Three, would require space beyond today's curbs, while Option One would stay in the existing footprint of the road.

1 Ohio Department of Transportation traffic counts, https://gis.dot.state.oh.us/tims/map, Accessed November 2022

Broadway-Elyria Avenue today

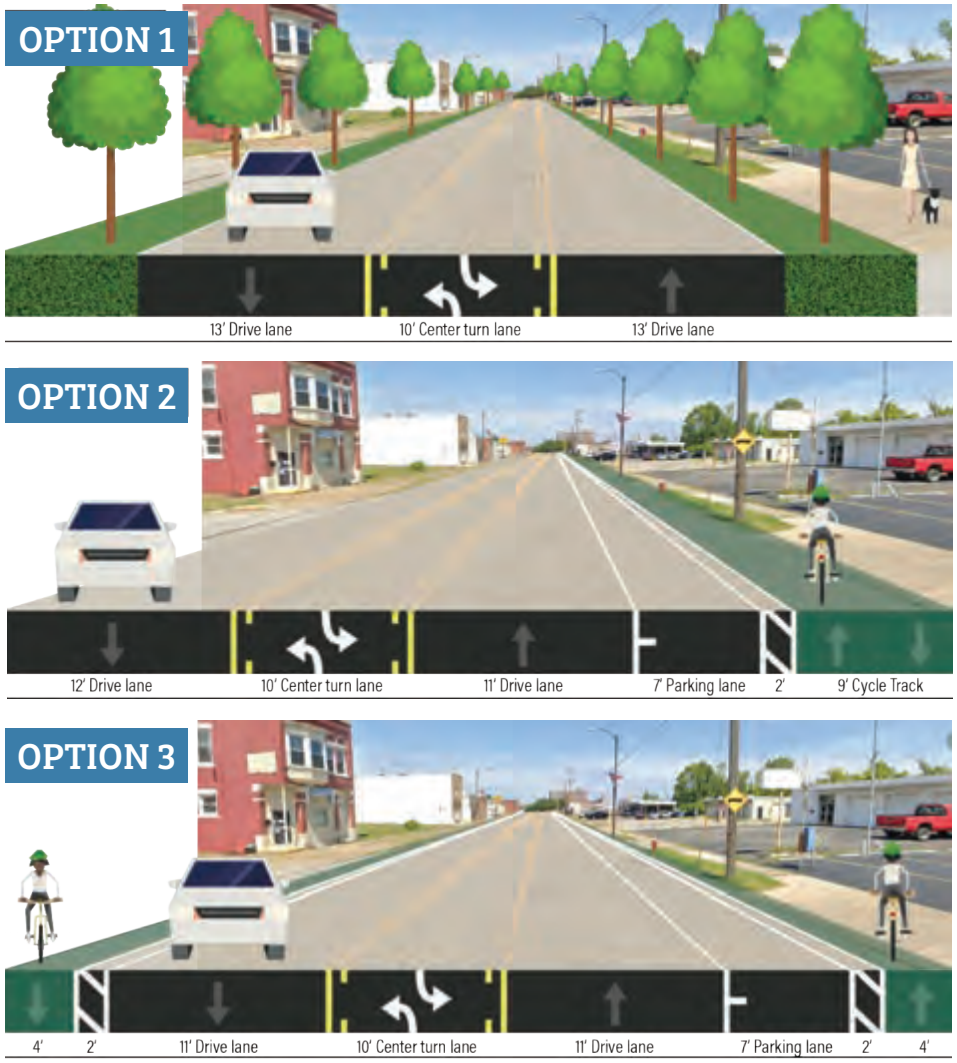


Figure 3.8 | Multimodal Options for Broadway-Elyria Avenue

Babbitt Road in Cuyahoga County

Babbitt Road in the City of Euclid connects US-20 and I-90 to Lakeshore Boulevard and Euclid Park. Babbitt Road varies from three-to-four lanes throughout the City with sidewalks on both sides and carries approximately 10,900 cars per day.[2] The project team used available data and today's right-of-way conditions to develop the possible options shown in Figure 3.9. North of I-90, separated facilities like a shared use path (Option One) might be the best fit given that there are already just two travel lanes for vehicle traffic. South of I-90, where the road widens to three travel lanes, a road diet might be feasible, which could accommodate cyclists with a cycle track (Option Two). This would help connect the neighborhoods south of I-90 with the north side of the City and its amenities, including the lakefront. Maintaining a connection on Babbitt Road through the I-90 slip lanes and overpass would help overcome a significant barrier to lakefront access.

2 Ibid.

Babbitt Road today, north of I-90 looking south

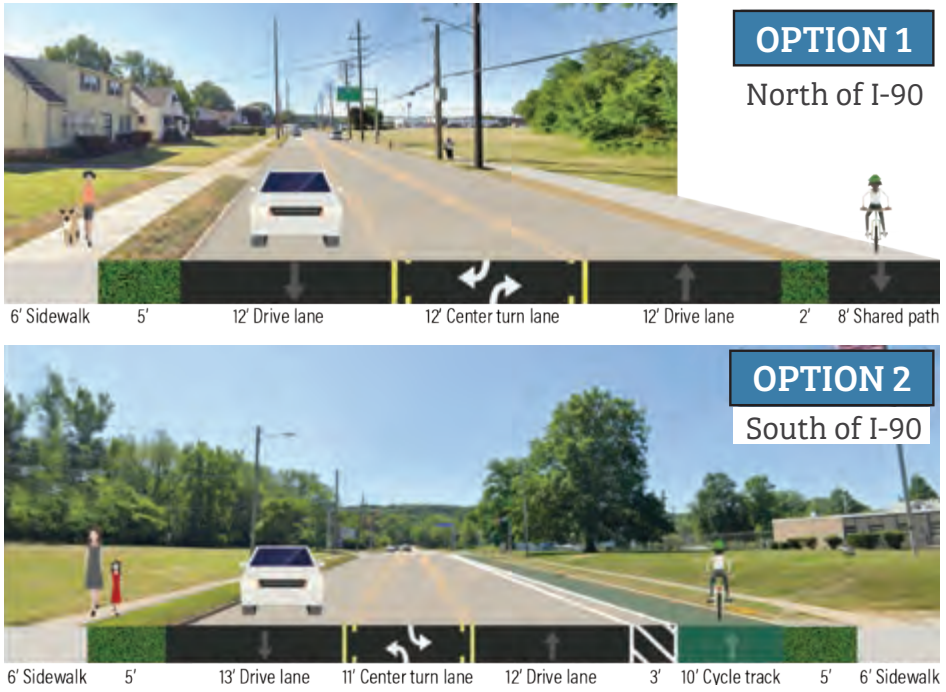


Figure 3.9 | Multimodal Options for Babbitt Road

TRANSFORMING THROUGH TRANSPORTATION

Reynolds Road in Lake County

Reynolds Road in Lake County is a north-south corridor surrounded by residential neighborhoods in the City of Mentor-on-the-Lake. Reynolds Road intersects US-20, Route 2, and Lakeshore Boulevard before terminating at Overlook Beach Park. The road is four lanes and carries relatively high traffic, with counts ranging from approximately 13,000 to 26,000 vehicles per day.[3]

[1]The project team used available data and today's right-of-way conditions to develop the two possible options shown in Figure 3.10. Option One preserves the existing travel lanes, widens the sidewalk on one side, and installs a bike trail on the other. While the road's current volumes are higher than typical road diet candidates, a full traffic study might determine a road diet is feasible. Option Two shows the outcome of a road diet, with a buffered cycle lane and the installation of a center turn lane. Both options improve multimodal connectivity to the lakefront.

3 Ibid.

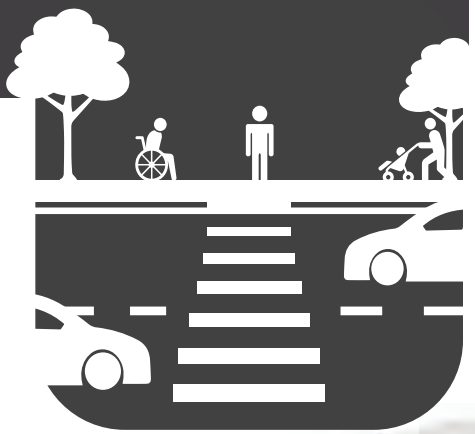
Reynolds Road today

Figure 3.10 | Multimodal Options for Reynolds Road

THE LAST MILE

In transportation planning, the "last mile" refers to the challenges connecting people from a transit stop, major roadway, or other transportation hub to their final destination. The last mile shapes a person's overall transportation experience regardless of mode. For people who are walking or biking, the last mile can be an insurmountable and even dangerous barrier. Across Northeast Ohio, there is a clear east-west route just south of the coastline (see "East-West Travel" earlier in this Chapter). This route provides vital access across lakefront communities, but also is a last mile barrier for those walking or biking. Nearly every lakefront trip includes crossing the east-west route. Comfortable and safe crossing opportunities are lacking in many places on the route today, which may be reducing park visitation. Lakefront parks that have bike facilities or low stress roads within a half mile of their entrance attract 32% of their trips by walking or biking. For parks lacking low-stress connections, only 26% of trips use non-motorized modes.

The following section explores the infrastructure on the east-west route today. Overall, there are sidewalks on at least one side of the road on 61% of the route, (Figure 3.11), while less than half (48%) of the route has bike infrastructure. Two-thirds of pedestrian crossings at uncontrolled locations lack basic safety countermeasures. Heavy traffic, high-crash locations, and long crossings are also prevalent, further restricting high-quality access.



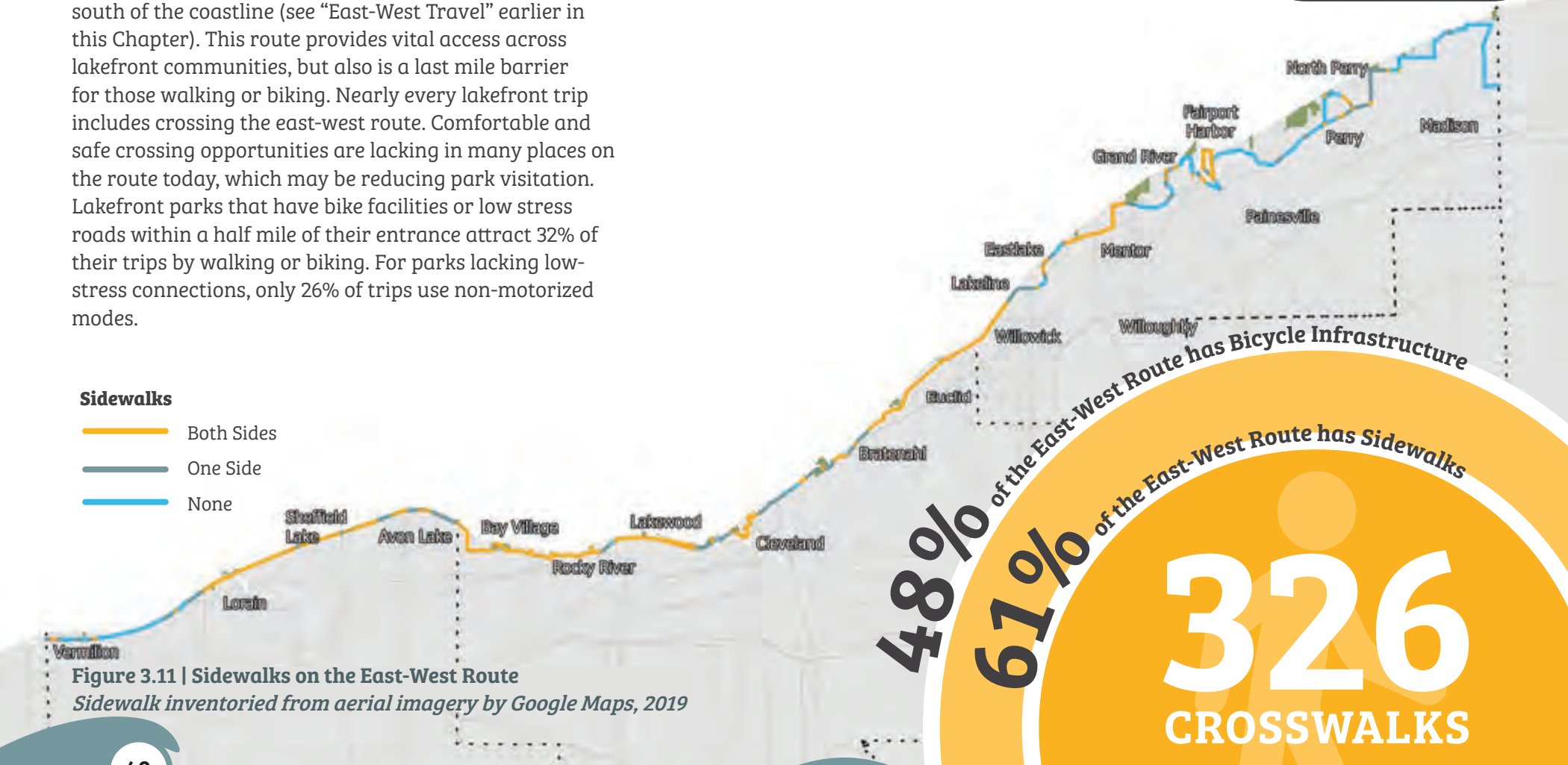


Figure 3.11 | Sidewalks on the East-West Route
Sidewalk inventoried from aerial imagery by Google Maps, 2019

REGIONAL TRANSIT ACCESS

Transit Coverage

Three transit operators provide service near the lakefront of the NOACA region: Lorain County Transit (LCT), the Greater Cleveland Regional Transit Authority (GCRTA), and Laketran. Each operator provides fixed-route and on-demand service. Figure 3.12 shows the fixed-route lines in the study area and summarizes the number of transit stops and population near the lakefront. In total, there are 375 transit stops on the east-west lakefront route. Around 142,000 people live within a one-half mile of at least one stop. In the long-term, more lakefront routes would be of benefit, especially in Lorain County where there is just one transit stop near the lakefront. In the short-term, improvements at existing transit stops will increase last mile connectivity.

Laketran has Ohio's largest fleet of battery-powered buses, many of which cross the lakefront; photo by Laketran.

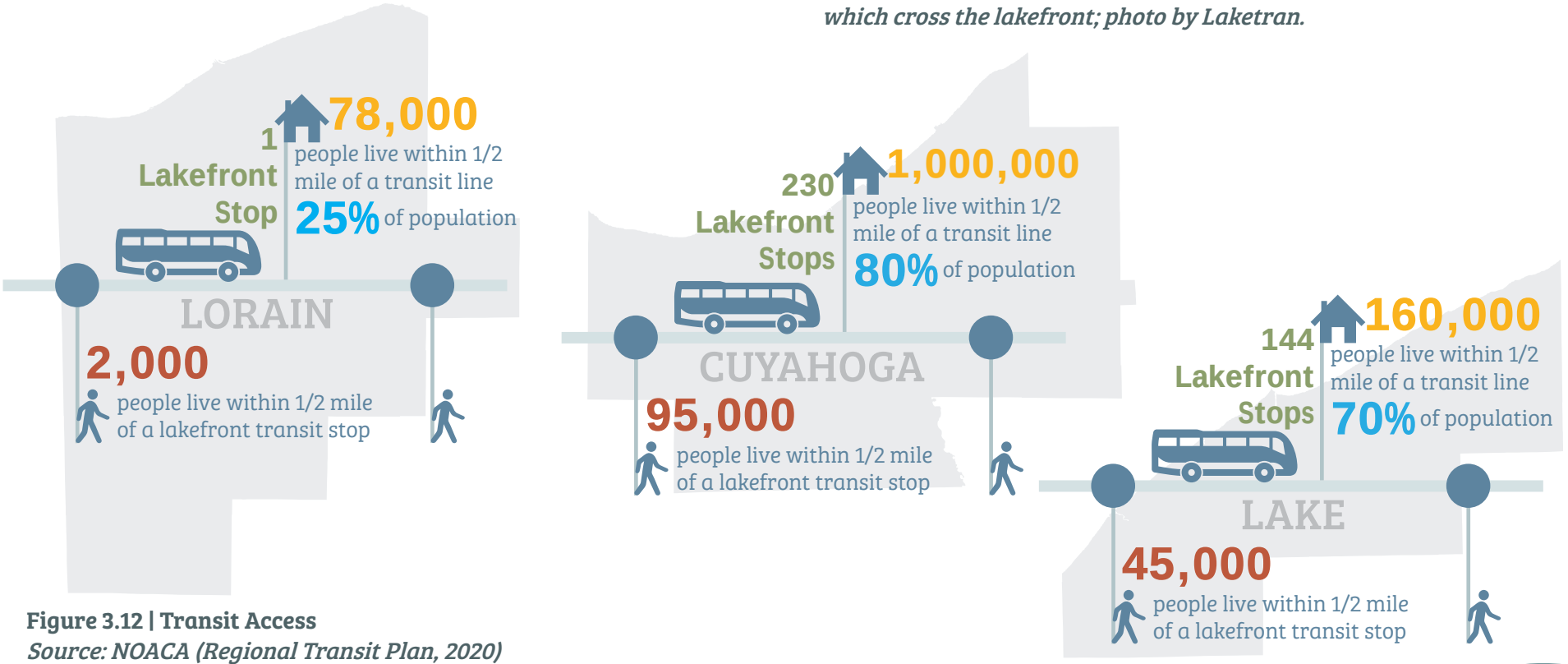


Figure 3.12 | Transit Access
Source: NOACA (Regional Transit Plan, 2020)

REGIONAL TRANSIT ACCESS

Transit Routes

The region's transit network includes three operators and over 1,500 miles of fixed-route transit service. Today, between these transit providers, there are 21 routes that have a stop within a quarter-mile of a lakefront park. Figure 3.13 shows the lakefront and non-lakefront routes by operator. Over 25 percent of the region's fixed routes connect to the lakefront, providing connections to jobs, neighborhoods, and recreation. In total, there are 375 transit stops along the east-west lakefront route. Ninety-five of them are within one-quarter mile of a lakefront park. In total, 140,000 residents live within one-half mile of a lakefront transit stop.

To assess last mile transit connectivity, the project team analyzed the presence of supportive infrastructure near the 95 transit stops within one-quarter mile of lakefront parks. The following data was collected to inform the analysis:

- The distance from each lakefront park to the closest transit stop
- The distance between each transit stop and the nearest crosswalk that leads to the lakefront
- The number of overhead shelters on lakefront transit stops

Transit-Oriented Development

Transit-oriented development (TOD) is an integrated approach to transportation and land use planning. TOD offers viable opportunities for increasing dense residential and mixed-use development and creates walkable, vibrant neighborhoods. TOD near the lakefront is limited today, but could be increased with stronger policies and priority investments along well-established transit routes. TOD work is in progress across the region. In Lake County for example, Painesville is working on a new lifestyle center that includes transit, while Willowick's new plan for their existing City Hall site includes mixed-use development and a transit station. Each of these were included in recent NOACA TLCI studies.

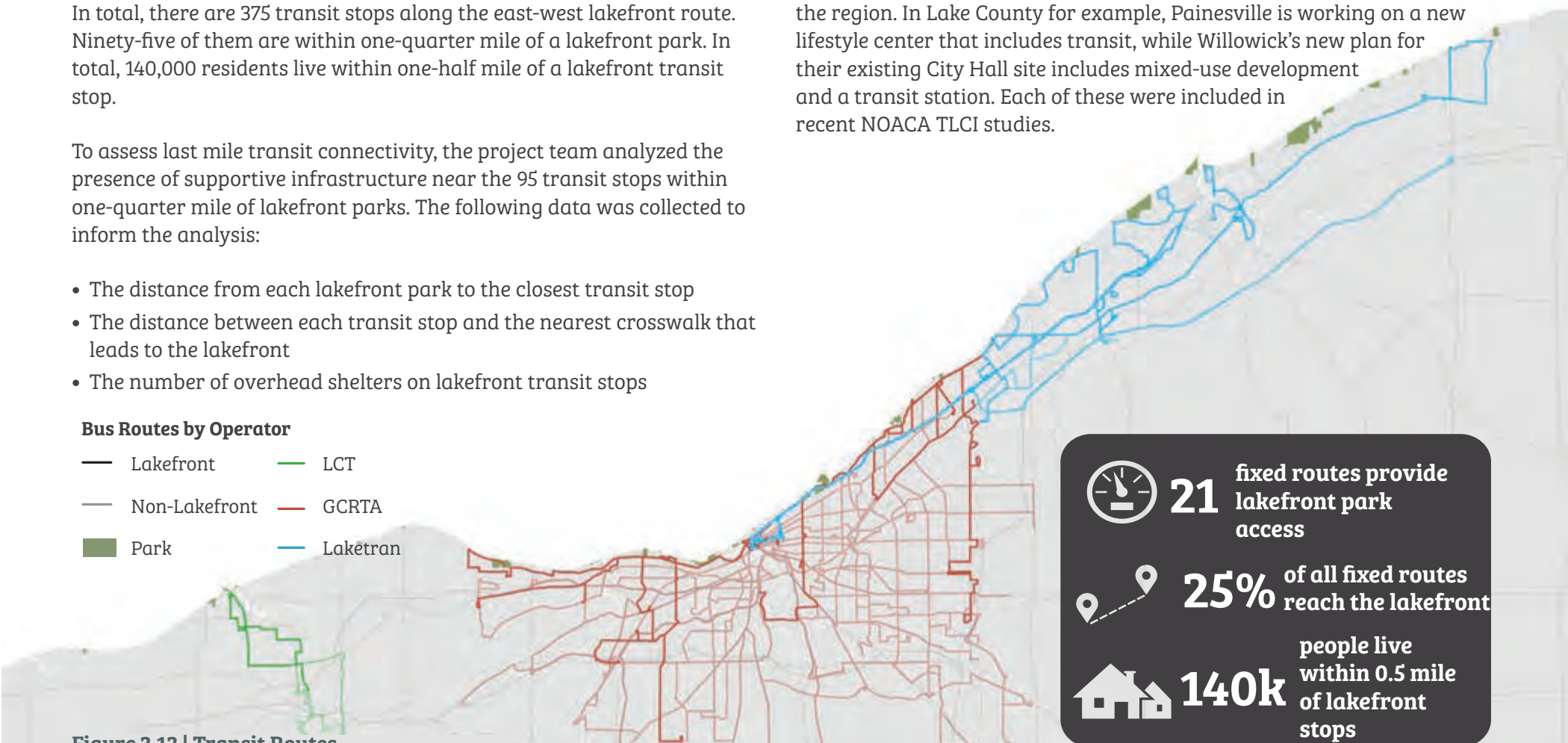


Figure 3.13 | Transit Routes
Source: NOACA (Regional Transit Plan, 2020)

REGIONAL TRANSIT ACCESS

Figure 3.14 shows lakefront transit stops according to the time it would take the average person to walk from the stop to the nearest crosswalk. Twenty eight percent of lakefront stops are 2.5 minutes or more from the nearest crosswalk. In these locations, there is a higher likelihood that a person will cross at an unmarked location or avoid taking transit entirely.

The project team categorized the east-west route as having or lacking transit access, as shown in Figure 3.15. Overall, 26 of the 59 lakefront parks are within a quarter-mile of a transit stop. There are large gaps in Lorain County (except for the City of Lorain) and eastern Lake County, and small gaps in several highly-populated areas of Lakewood and Cleveland.

Transit stops, sometimes called "waiting environments", provide comfort to people waiting for a bus. They may have an overhead shelter to protect from sun and rain, a bench, trash receptacle, and kiosks displaying maps and timetables. In Northeast Ohio, some transit waiting environments have all of these amenities, while many others simply have a sign indicating a bus stop. Along the east-west route today, 30 percent of stops near lakefront parks have an overhead shelter. As transit agencies and local communities pursue additional funding for lakefront improvements, transit waiting environments should be part of the planned upgrades for a well-connected lakefront.

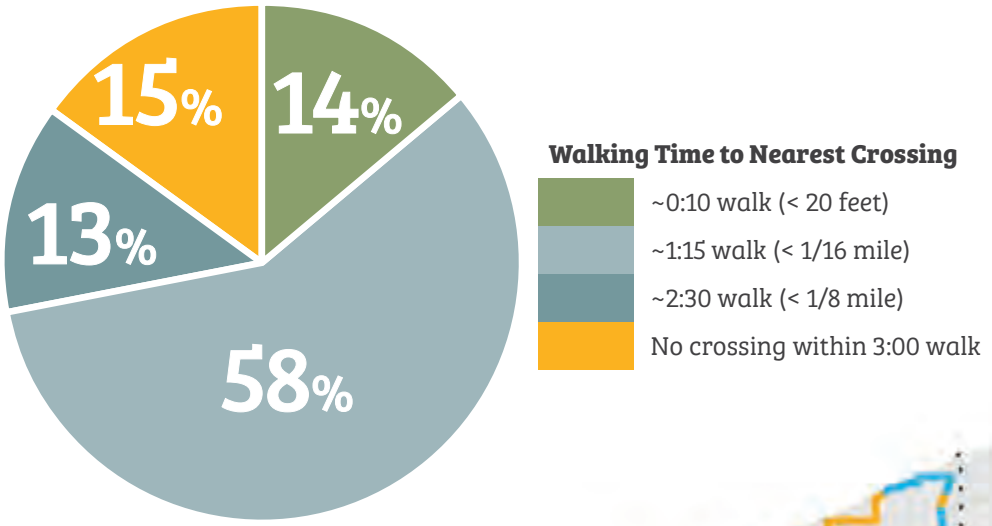


Figure 3.14 | Transit stops by Walking Time to Nearest Crosswalk

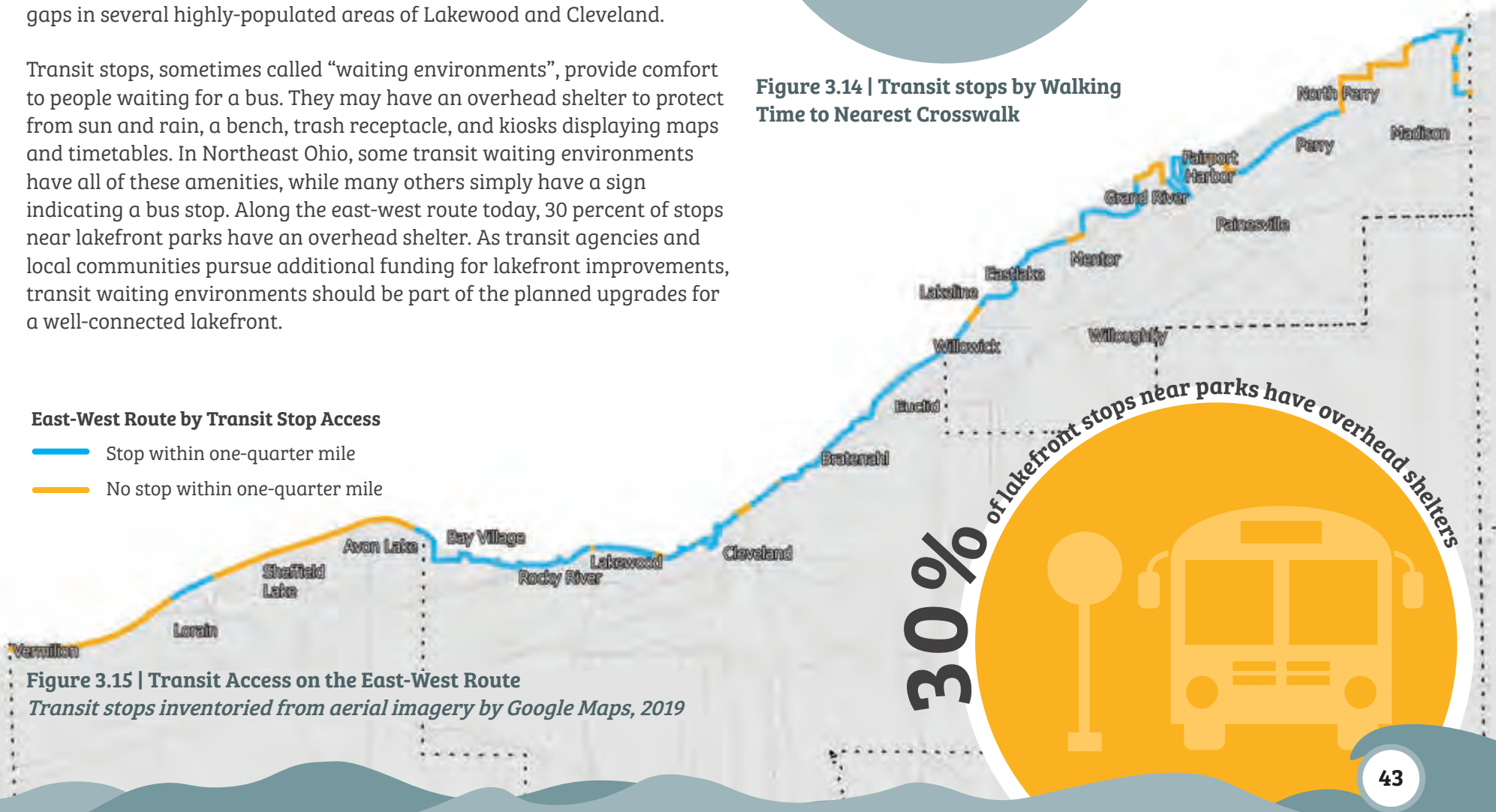


Figure 3.15 | Transit Access on the East-West Route
Transit stops inventoried from aerial imagery by Google Maps, 2019

PEDESTRIAN ACCESS

Last Mile Pedestrian Assessment

Chapter Two includes data on the large number of people who walk or bike to the lakefront in Northeast Ohio. The survey and public engagement efforts also gathered anecdotal comments about the personal satisfaction many find in living close enough to the lakefront to walk or bike there and watch the sunset. In fact, 84% of short trips ending at the lakefront are made by walking or biking (Figure 3.16). The pedestrian connections between the lakefront and surrounding neighborhoods provide transportation and quality-of-life benefits for many, but are not typically the focus of regional transportation studies.

Nearly everyone walking or biking to the lakefront must cross the east-west corridor to reach their destination. Given that this route is also a highly-traveled vehicle route with many intersecting highways and arterials, its intersections tend to be high-stress, large, and busy. To inform last mile recommendations for pedestrians, the project team gathered data on the east-west route including:

- The location of existing controlled and uncontrolled pedestrian crossings
- The road characteristics at each crossing including speed limit, number of lanes, and traffic volumes
- The type of infrastructure installed at each uncontrolled crossing like striping pattern, presence of curb ramps, and other infrastructure

This data allowed the project team to assess last mile connectivity for pedestrians in two key metrics:

- The size of gaps between crosswalks
- Adherence of each crosswalk to federal guidance for context-sensitive pedestrian infrastructure

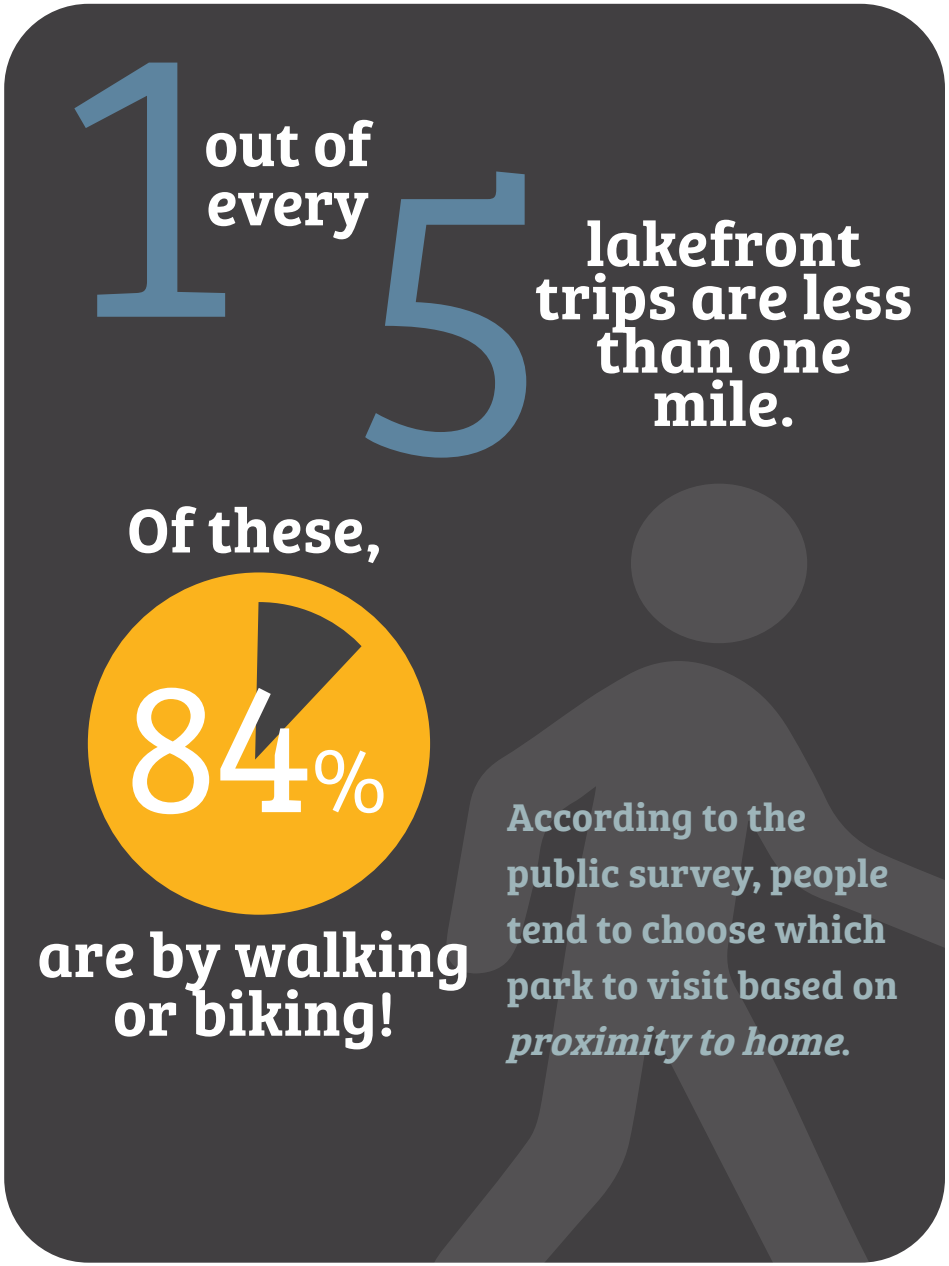


Figure 3.16 | Short Lakefront Trips
Source: StreetLight (Origin and Destination, 2019)

PEDESTRIAN ACCESS

Crosswalk Gaps

Figure 3.17 shows the distance between pedestrian crossings on the east-west route. In general, many of the urbanized areas along the route do have crosswalks at least every one-quarter mile, but even small gap s can restrict access, especially near parks and in areas with limited other crossings.

With consideration of local context, Figure 3.17 can help communities identify areas that may need additional crosswalks. In western Lorain County, for example, the largest crosswalk gap in the study area includes Showse Park. Other parks in Lorain County, like Lakewood Beach Park and West Shore Park, are in significantly smaller crosswalk gaps but still lack direct crosswalk access, and are in more populated areas. While it appears that there are crossing gaps in the urbanized areas of Cuyahoga County, the project team examined each gap and found that they are in locations where crossings are not practical, like near the gated perimeter of Burke Lakefront Airport and the Cleveland Memorial Shoreway, which now has several underpasses. In Lake County, the east-west route has large crosswalk gaps, though these areas are more rural.

Chapter Four includes recommendations for new crosswalks on the east-west route, prioritizing crossings near lakefront stops and transit stops.

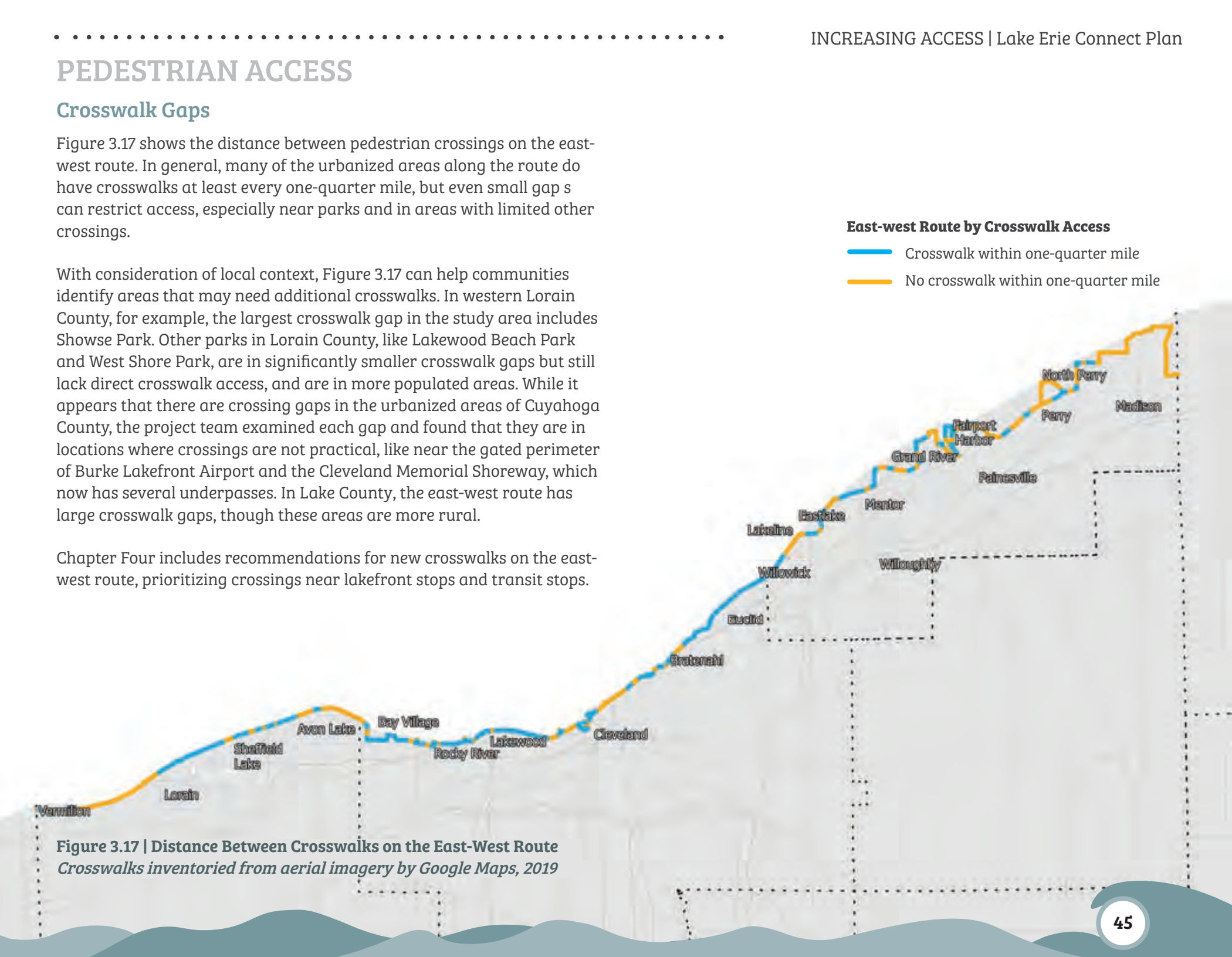


Figure 3.17 | Distance Between Crosswalks on the East-West Route
Crosswalks inventoried from aerial imagery by Google Maps, 2019

PEDESTRIAN ACCESS

Crosswalk Infrastructure

In total, there are 326 crosswalks on the east-west route. Of these, 128 are at uncontrolled locations, which means they lack a traffic signal or other means of stopping traffic. Uncontrolled crossings are especially risky for pedestrians as they must rely on vehicles to yield in order to safely cross. On slower roads with low traffic, basic infrastructure may be sufficient to provide access. As traffic and speed increase, more supportive infrastructure is needed to prioritize pedestrians at crosswalks and ensure that they are visible to vehicle traffic. To assess today's conditions, the project team inventoried the infrastructure present at each uncontrolled crossing. These results are summarized in Table 3.4.

COUNTY	% OF CROSSINGS			TOTAL CROSSINGS
	LACKING CURB RAMPS	LACKING ANY COUNTERMEASURE*	WITH AT LEAST ONE COUNTERMEASURE*	
Lorain	7	68	32	59
Cuyahoga	32	37	63	41
Lake	0	78	22	28
Total	**5**	**60**	**40**	**128**

Table 3.4 | Uncontrolled Crosswalks on the East-West Route

**Countermeasures included high-visibility striping, advanced warning signage, refuge islands, rectangular rapid-flashing beacons, and hybrid beacons.*

Over half (60%) of the uncontrolled crossings on the east-west route lack any of the countermeasures inventoried, like high-visibility striping, advanced signage, or more advanced features like rectangular rapid-flashing beacons and hybrid beacons. Curb ramps are present on nearly all (95%) of the crosswalks inventoried. A higher percentage of crosswalks in Cuyahoga County have at least one countermeasure (63%) compared to Lorain and Lake counties (32% and 22% respectively).

There are no mandatory standards in place, but the Federal Highway Administration's Safe Transportation for Every Pedestrian program offers some guidance on the type of basic and advanced safety countermeasures that should be considered at uncontrolled locations. This guidance is based on the context of a road and considers its speed, width, and traffic volumes. The project team assessed the 128 uncontrolled crossings on the east-west route and found that many need basic upgrades like high-visibility pavement markings or in-street pedestrian signs (see Figure 3.18 for examples). In locations with heavy traffic and high travel speeds, more advanced crossing options like pedestrian hybrid beacons or rectangular rapid flashing beacons should be considered. Chapter Four includes detailed recommendations for priority uncontrolled crossings.

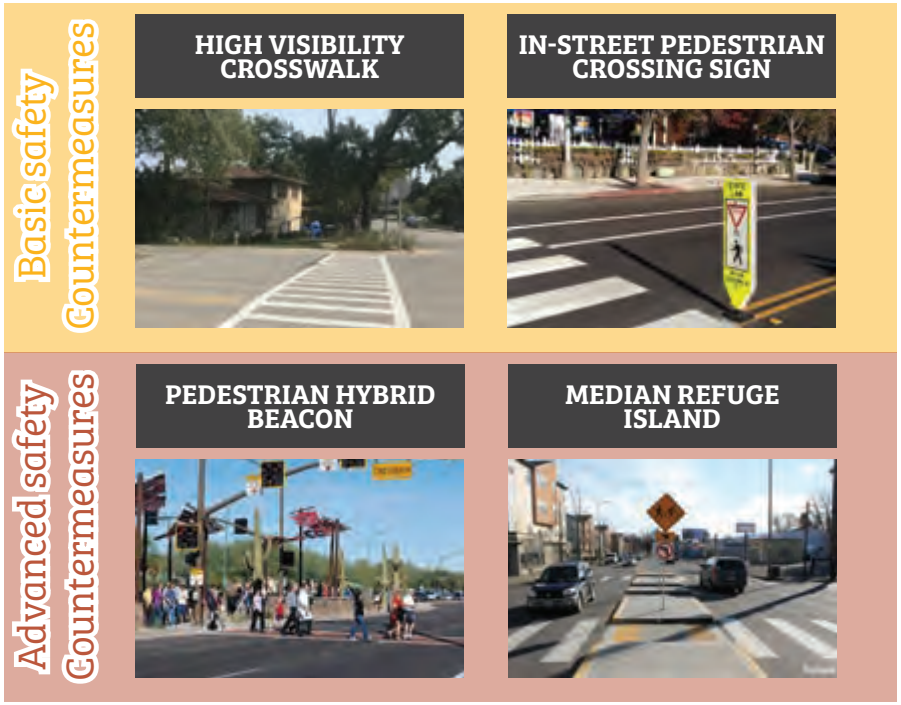


Figure 3.18 | Crosswalk Countermeasures

High-visibility striping by Chicago Tribute (top left); In-street pedestrian sign by Impact Recovery Systems (top right); Hybrid beacon by Maricopa Association of Governments (lower left); Median refuge islands by NACTO

SAFETY

Transportation safety is important for all road users. Increasing transportation safety near the lakefront is a key goal of Lake Erie Connect. For vulnerable road users like people biking, walking, or those with disabilities, safety is an especially critical concern that can impact last mile accessibility. Crashes that involve a pedestrian or bicyclist have a higher likelihood of causing severe injury or death compared to vehicle-only crashes.

Figure 3.19 shows the results of a hotspot analysis, which divides the area into thousands of individual cells and measures the number of crashes in and adjacent to each cell. A hotspot, shown by a white area in the map, indicates that the intensity of crashes in that location is much greater than region's average. This mapping technique visualizes crashes at a regional scale while still preserving local trends, such as crashes along a corridor or clustered at a particular intersection.

Figure 3.19 also displays NOACA's Safety Priority Intersections and Corridors. Across the region, areas with more bicycle and pedestrian crashes tend to be in urbanized communities. There are clusters of crashes in coastal areas and along the east-west route, especially in the cities of Lorain, Lakewood, Cleveland, Euclid, Willowick, and Mentor.

The recommendations in Chapter Four will increase safety throughout the study area with additional supportive infrastructure.

Figure 3.19 | Safety Priorities and Hotspots
Sources: NOACA (safety priority lists, 2015-2019, ODOT GCAT (crashes 2010-2020)

THE DESTINATION

After the trip and the last mile are completed, a person reaches their destination. The NOACA region is home to 59 public access points to Lake Erie, reaching across the three lakefront counties and 29 local communities. This section describes opportunities to enhance these destinations with wayfinding and placemaking. Specific park improvements and site plans are included in Chapter Four.

WAYFINDING

Wayfinding is a critical tool that the region can leverage to increase awareness of these destinations and promote them to the public. The term "wayfinding" refers to mechanisms that guide a person through the physical environment while teaching them about their location. Basic wayfinding schemes help people find their end destination, while the strongest schemes do so in a creative manner that helps to shape a person's experience. In Northeast Ohio, highways, arterials, bridges, and rivers converge at the lakefront.

Welcoming, consistent wayfinding in this complex environment is a critical tool that helps residents and visitors easily navigate all that the lakefront has to offer. Wayfinding elements with consistent branding, proper legibility, and adequate size maximize the security and safety of travel throughout the area, minimizing the risk of becoming lost. Despite this, wayfinding elements in the region are inconsistently branded and are sparse in some locations. Figure 3.20 includes examples of the different wayfinding systems found along the east-west corridor.

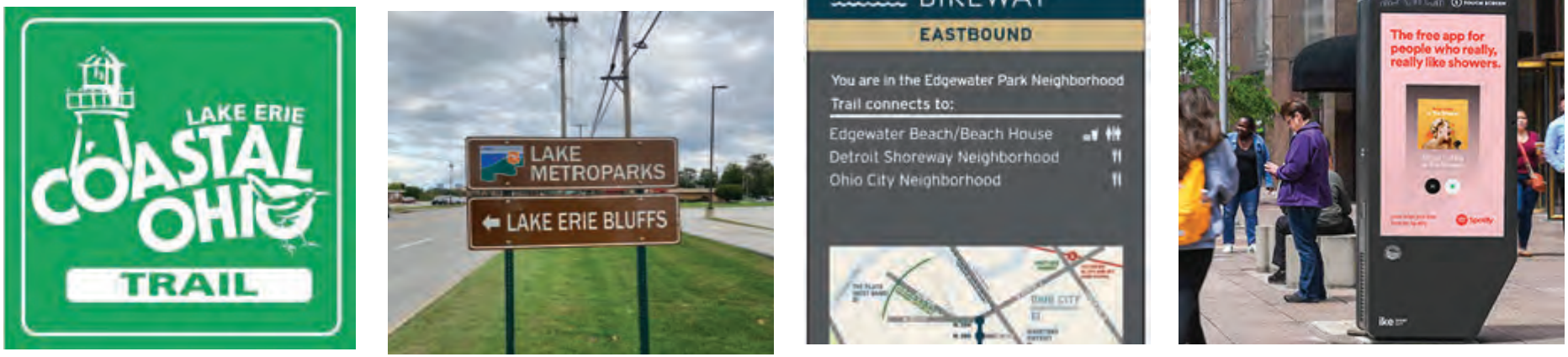


Figure 3.20 | Wayfinding Examples in Northeast Ohio

Lake Erie Coastal Ohio Trail signage (top left); Indicator signs branded by park owners (second from left); Wayfinding signs along the Cleveland Lakefront Bikeway by the Cuyahoga Greenway Partners (third from left); Digital kiosks with interactive maps by the Gateway District (right)

PLACEMAKING

Placemaking strategies promote public health, happiness, and livability through the creation of good public spaces. According to the Project for Public Spaces, a national organization focusing on placemaking, strong places embody the four elements shown in Figure 3.21 and described below:[3]

- Sociability- a friendly, diverse, and cooperative community
- Comfort and Image- a clean, safe, and walkable area
- Use and Activities- the presence of fun, active, and special things to do
- Access & Linkages- an easily navigable and connected area

Some of the region's lakefront parks offer placemaking that achieves one or more of the above characteristics. Local examples of placemaking in each of the three lakefront counties are shown in Figure 3.22. Many other parks would benefit from additional placemaking, especially in Environmental Justice areas.

Figure 3.21 | Placemaking Elements
Based on the definition of placemaking by the Project for Public Spaces

4 Project for Public Spaces, "What Makes a Successful Space?" https://www.pps.org/article/grplacefeat, Access Feb. 2023

Figure 3.22 | Examples of Placemaking in Northeast Ohio
Pedestrian lighting at Shell Cove Park (left); Cleveland script sign at Euclid Beach Park (second from left); Pier and trail at Sims Park (third from left); Oversized chairs at Fairport Harbor Lakefront Park (right)

Inspirational Strategies

Wayfinding and placemaking strategies can improve access to the region's lakefront parks. They can also support a multimodal transportation experience by offering unique things to look at and do along the way, while accentuating the personality of a community.

Figures 3.23 and 3.24 summarize other initiatives in the country that can inspire lakefront wayfinding and placemaking in Northeast Ohio.

The Oak Leaf Trail Park Explorer Milwaukee, Wisconsin

The park explorer is a wayfinding scheme that includes 125 miles of paved trails, park drives, and municipal streets. The program was developed in 2019 by Milwaukee County Parks. It features color-coded "branch lines" for each segment, similar to a public transportation map. Areas with amenities and parks are highlighted on the mapping tools. The program offers easy ways to navigate the region and explore things to do.

Figure 3.23 | Oak Leaf Trail Park Explorer

Trail Towns in Northern Michigan

The Northeast Michigan Council of Governments and the Land Information Access Association, a non-profit in Northern Michigan, released a handbook to support trail town planning in 2013. The handbook offers placemaking strategies for communities with access to long-distance trails. In turn, these strategies can foster trail-based tourism. The handbook identifies key actions communities can take to become "trail towns", including:

- Establish a trail brand
- Integrate the trail on local wayfinding signs
- Promote "gateway" moments
- Create key experiences and a "sense of place"
- Connect to a mix of supporting services
- Develop a safe and pedestrian friendly atmosphere
- Promote trail-oriented events
- Provide trail maps for orientation and destination
- Provide opportunities for food and beverages

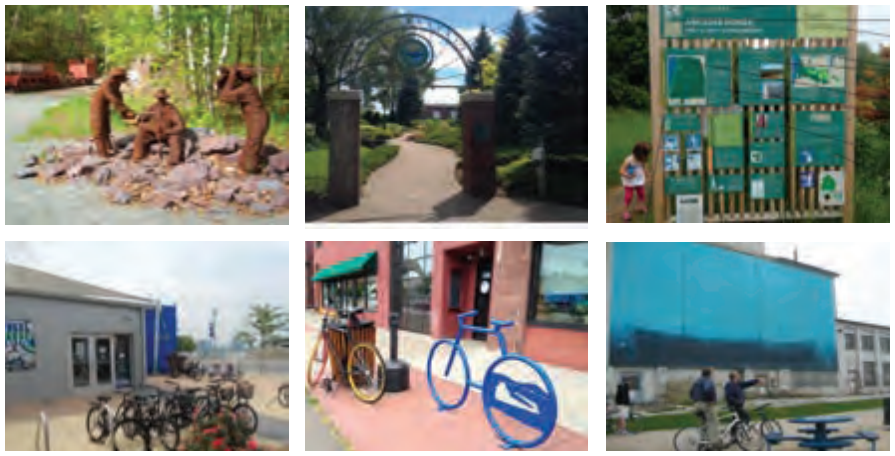


Figure 3.24 | Trail Towns in Northern Michigan Handbook

CONGESTION AND PARKING

Lake Erie Connect recommends a number of improvements to lakefront parks, which may in turn attract more visitors and spur additional development. The project team considered the long-term impacts of an increasingly-popular Lake Erie coastline on traffic congestion and parking demand. In short, the analysis summarized on this page determines that widespread congestion is unlikely to be caused in the future by this plan's recommendations, although parking demand may exceed current parking supply at some parks. **Not only is future widespread congestion unlikely, this plan's recommendations may help to reduce congestion by encouraging more people to bike and walk instead of drive**. See Appendix D for more information on this analysis.

Impacts on Congestion

The project team forecasted future trips at the regional scale to determine the impact that planned new park openings might have on traffic. Overall, the forecast included 15,000 new visitors per day, inclusive of the region's expected growth and the creation of new lakefront parks. About 10,000 of the forecasted trips can be expected in Cuyahoga County. In general, trips to the lakefront parks are more evenly distributed across the day and contribute less to the traditional AM and PM peaks than other trip types (Figure 2.6). Forecasted trips can be expected to follow this pattern. Across the region, the impact of growth is unlikely to result in widespread congestion at lakefront parks. Nearly half of the region's lakefront parks today attract less than 100 trips per day by vehicle. It is possible that some popular parks could experience increased congestion in the future, but these localized issues are not explored in detail in this study.

Impacts on Parking

The project team assessed the impact increased visitation might have on parking at today's 59 public parks. The team reviewed aerial imagery and site visit notes to determine that 44 of the current 59 parks have at least one surface parking lot on site. Similar to other forms of development, parks have historically included, if not prioritized, vehicle parking.

The project team reviewed peak hour park visitation to estimate how full parking lots are at the busiest times of day. Today, 25 lakefront parks have parking lots containing at least 50 parking spaces, yet only seven parks have visitation that might require 50 spaces. When accounting for an increase in park visitors, just four parks are expected to reach parking capacity (defined as lots more than 70 percent occupied). In other words, currently and in the future, a parking shortage is not a significant regional concern at lakefront parks.

Rather than a parking shortage, some parks likely have an over-abundant parking supply that can be repurposed for other uses. At a minimum, park operators should consider installing secure bike parking in surface lots. One bike corral, for example, can store up to eight bicycles and fit within a single vehicle parking space (see Figure 3.25). In the long-term, parking lots could be retrofitted to include more greenspace and public amenities.

Figure 3.25 | Bike Corral
Source: District Department of Transportation in Washington, DC

EQUITABLE ACCESS

Equitable access is a primary goal of Lake Erie Connect. To understand today's access conditions, the team analyzed travel patterns between Environmental Justice (EJ) areas and lakefront parks. The result, shown in Tables 3.5 and 3.6, is a subset of the region's lakefront parks divided into two groups: Parks to Enhance and Parks to Support. Appendix D describes the methodology to gather the trip data that informed this section.

Parks to Enhance

Parks to Enhance are located within one-half mile of an EJ area, but have relatively low visitation from the nearest EJ area. In other words, the Parks to Enhance have relatively low visitation compared to other parks and are in or near an EJ area. These parks might need more amenities, improvements, or better transportation access to serve the neighborhoods around them and attract more visitors. Enhancements would provide EJ areas with more attractive and accessible lakefront parks nearby, increasing regional equitable access.

Parks to Support

Parks to Support are already visited by a large number of people from EJ areas. The project team selected parks with a relatively high share and volume of trips from EJ areas. The Parks to Support are gathering places and high-quality recreational destinations for many EJ areas, so much so that people are willing to travel outside of their immediate neighborhood to visit.

Recognizing these parks for their role in providing recreational benefits to EJ areas is one important step towards supporting equitable access, especially as some of these parks are not in EJ areas. These parks are community anchors and should continue to be supported with investments and improvements.

	PARKS TO ENHANCE	COMMUNITY
Lorain	Brownhelm Township Lakefront Park	Vermilion
	Century Park	Lorain
	Lakeside Landing	Lorain
	Lorain Public Pier and Boat Ramp	Lorain
	Waverly Place Park	Lorain
Cuyahoga	Cliff Drive Scenic Access	Lakewood
	East 55th Street Marina	Cleveland
	Euclid Park	Cleveland
Lake	Mentor Beach Park	Mentor-on-the-Lake
	Mentor Lagoons Nature Preserve	Mentor
	Quentin Road Park	Eastlake
	Sunset Park	Willoughby
	Beachview Road Scenic Access	Willoughby

Table 3.5 | Parks to Enhance (in EJ Areas with Low Visitation)

	PARKS TO SUPPORT	COMMUNITY
Lorain	Lakeview Park	Lorain
	Showse Park	Vermilion
Cuyahoga	Cahoon Memorial Park	Bay Village
	Edgewater Park	Cleveland
	Euclid Beach	Cleveland
	Gordon Park/Lakefront Nature Preserve	Cleveland
	Lakewood Park	Lakewood
	North Coast Harbor/Voinovich/E. 9th	Cleveland
	Sims Park	Euclid
	Villa Angela and Wildwood	Cleveland
Lake	Fairport Harbor Lakefront Park	Fairport Harbor
	Headlands Beach State Park	Painesville Township
	Madison Township Park	Madison Twp.
	Osborne Park	Willoughby
	Willowick City Hall/Lakefront Lodge	Willowick

Table 3.6 | Parks to Support (High Visitation from EJ Areas)

EQUITABLE ACCESS

The Parks to Enhance and Parks to Support are shown together in Figure 3.26 along with the east-west route. The blue, green, and yellow areas in the map form the Equity Priority Areas discussed more in Chapter Four. They represent:

- Parks and surrounding areas with high visitation from Environmental Justice (EJ) areas today.
- Parks and surrounding areas with high potential for nearby access from EJ areas.
- The east-west route, which is used for transportation between EJ areas and the lakefront (see Figure 3.4 for more information).

Chapter Four uses the Equity Priority Areas to prioritize past planning efforts and clarify the Unified Vision.

The Lorain Public Pier and Boat Ramp in the City of Lorain is a "Park to Enhance". This means it has relatively low visitation compared to other parks, and is in an EJ area.

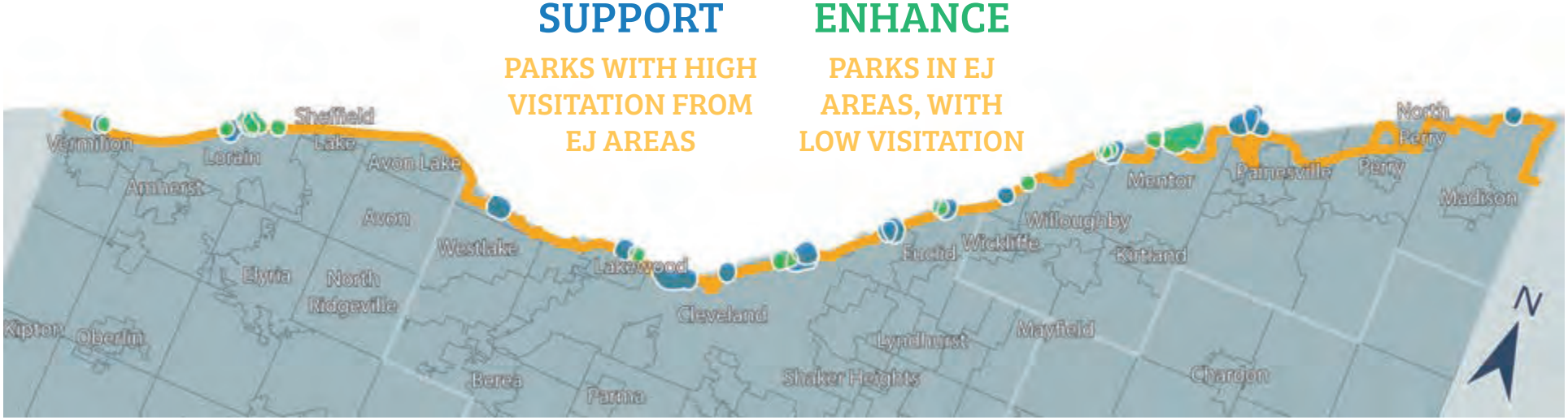


Figure 3.26 | Parks to Support and Enhance

4.

The Lakefront TOMORROW

- Unified Vision
- Transformative Corridors
- Supportive Multimodal Infrastructure
- Enhanced Public Spaces
- Implementation Matrix

THE LAKEFRONT TOMORROW

The categories of recommendations of Lake Erie Connect are defined in the components shown in Figure 4.1 and explained throughout the Chapter.

UNIFIED VISION

A series of maps and tables compile local initiatives and past regional recommendations, creating a cohesive lakefront project list and a region that can compete for funding with one voice.

SUPPORTIVE MULTIMODAL INFRASTRUCTURE

Recommendations will close gaps and improve transit stops, improving the user experience and "last mile" connections.

TRANSFORMATIVE CORRIDORS

Corridors leading to the lake can better serve all people and trips with multimodal designs. Multimodal options for three corridors are identified as a model for the region.

FUTURE INITIATIVES & ACTIVITIES

Designs for three lakefront parks in the NOACA region can spark creativity and additional investment in public land reclamation and urban design.

ENVIRONMENTAL CONSIDERATIONS

To avoid environmental degradation, Best Management Practices for managing sensitive coastal areas are summarized in this Chapter.

PRIORITIZATION CRITERIA

Recommended projects can be organized by whether they most align with equity, recreation, or multimodal goals using the prioritization criteria in this Chapter.

Figure 4.1 | Recommendation Categories

UNIFIED VISION

The Unified Vision is a project inventory, capturing existing, funded, and planned multimodal and streetscaping projects within two miles of the lakefront in the NOACA region. The maps and tables on the following pages provide local and regional partners with a cohesive vision of lakefront connectivity, detailed information on possible alignment options, and the opportunity to track the status of projects as funding is obtained.

Many Plans, One Lakefront

The basis of the unified vision is NOACA's 2019 Regional Bike Network. This data layer categorizes bike infrastructure facility type (bike route, lane, trail, etc.) and phase (planned, funded, or existing). The project team added many projects to this data layer based on the Focus Groups and Strategy Committee input.

Funded projects (shown in Figure 4.2) are integrated into the existing network in Figures 4.4 and beyond, as it is likely the projects will be constructed soon if not already. The planned projects include streetscaping, bike, and pedestrian infrastructure projects. In some instances, multiple recommendations overlap, such as plans for an off-street bike trail and an on-street bike lane. Overlapping projects were generally included.

Regional and local leaders from across Northeast Ohio in Painesville Township Park, Lake County

Figure 4.2 | Funded Bike Infrastructure
Source: NOACA (bike infrastructure, 2020)

UNIFIED VISION

As a region, Northeast Ohio has plans for over 500 miles of bicycle, pedestrian, and streetscaping projects within two miles of the lakefront. Figure 4.3 shows that over half of these are in Cuyahoga County (329 miles), with an additional 62 and 109 miles of projects recommended in Lorain and Lake counties, respectively. The majority of these recommendations are for bike lanes or bike routes, which are on-street and tend to be higher stress than trails. Higher-stress recommendations serve an important purpose in a regional bike network, providing less costly connections, especially in constrained or urbanized areas. Low stress recommendations are the priority for the region, as they are the most inclusive of all ages and abilities, and would provide the most recreational benefit to the lakefront. There are over 100 miles of lakefront trails and other low stress facilities included in the unified vision. Regional greenways are included as low-stress facilities, which are general recommendations from plans like the Cuyahoga Greenways that call for a low stress facility but do not specify a design. Figure 4.4 maps the unified regional vision and highlights planned bike trails in green.

Most of the projects in the unified vision are conceptual and have not been designed in detail yet. Figures 4.5-9 map the unified vision in more detail and provide numbers with corresponding labels for low stress facilities. These include sidewalks, separated bike lanes, greenways, and trails.

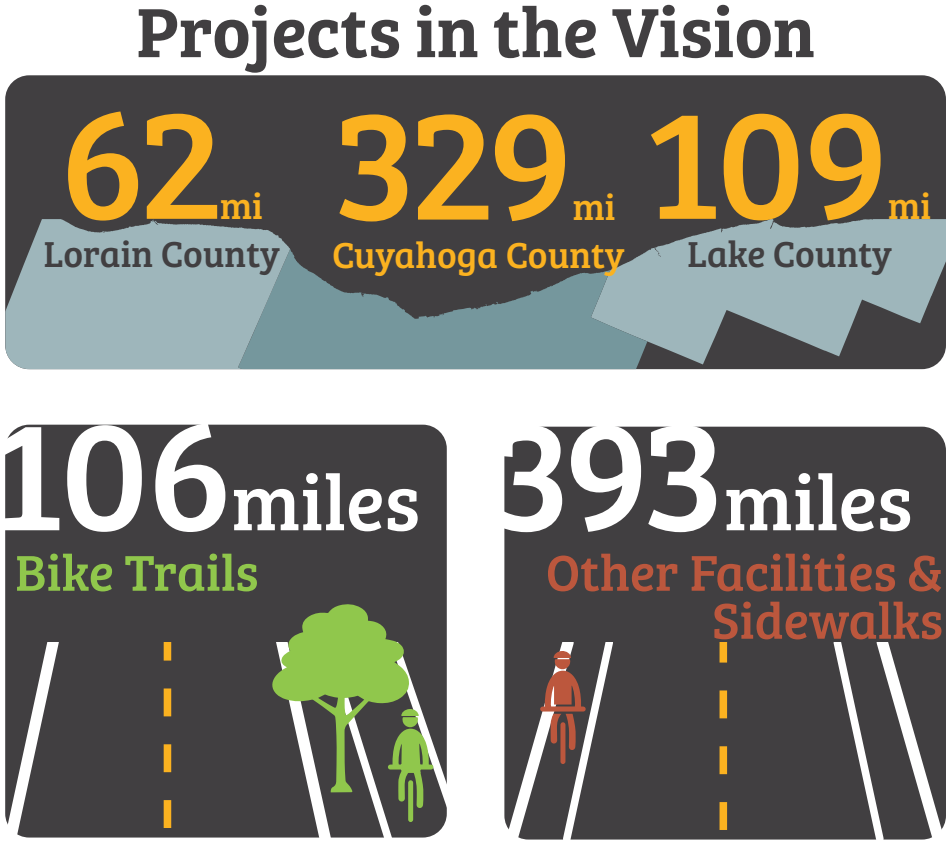


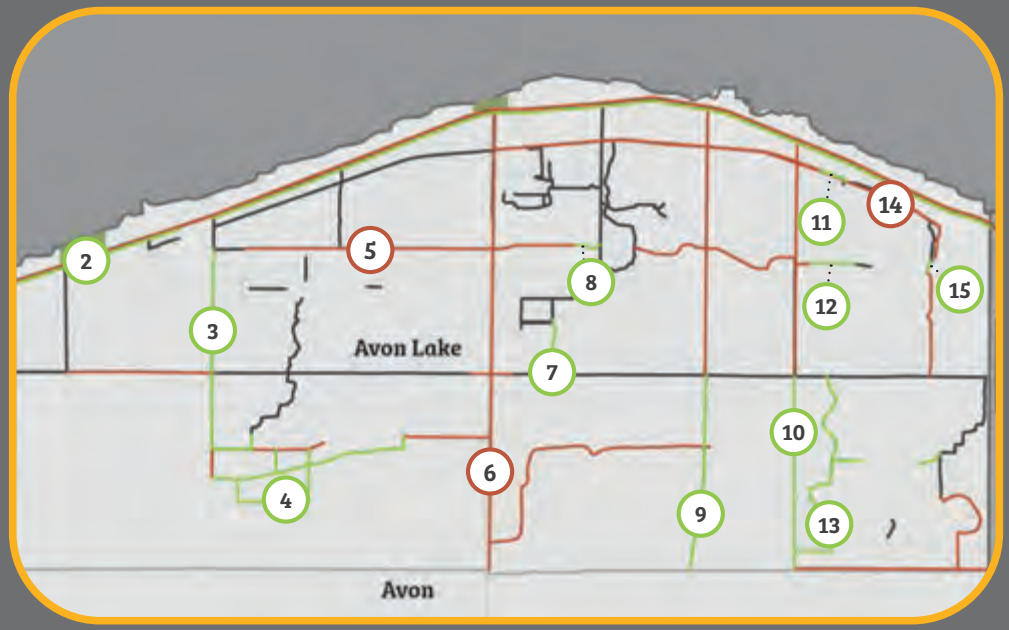
Figure 4.3 | Unified Vision Summary

Figure 4.4 | Unified Vision

LORAIN COUNTY

Planned Low-Stress Bike & Pedestrian Infrastructure

1. Trail - Erie Ave
2. Trail - Lake Rd
3. Trail - Moore Rd
4. Trails - Weiss Field
5. Sidewalks - Redwood Blvd
6. Sidewalks - Weber Rd
7. Trail - Kopf Family Reservation
8. Trail - Redwood Blvd
9. Trail - Jaycox Rd
10. Trail - Lear Rd
11. Trail - Electric Blvd
12. Trail - Grove St
13. Trails - Walker Rd Park
14. Sidewalks - Electric Blvd
15. Trail - Restar Park
16. Separated Lane/Trail - Chester Rd



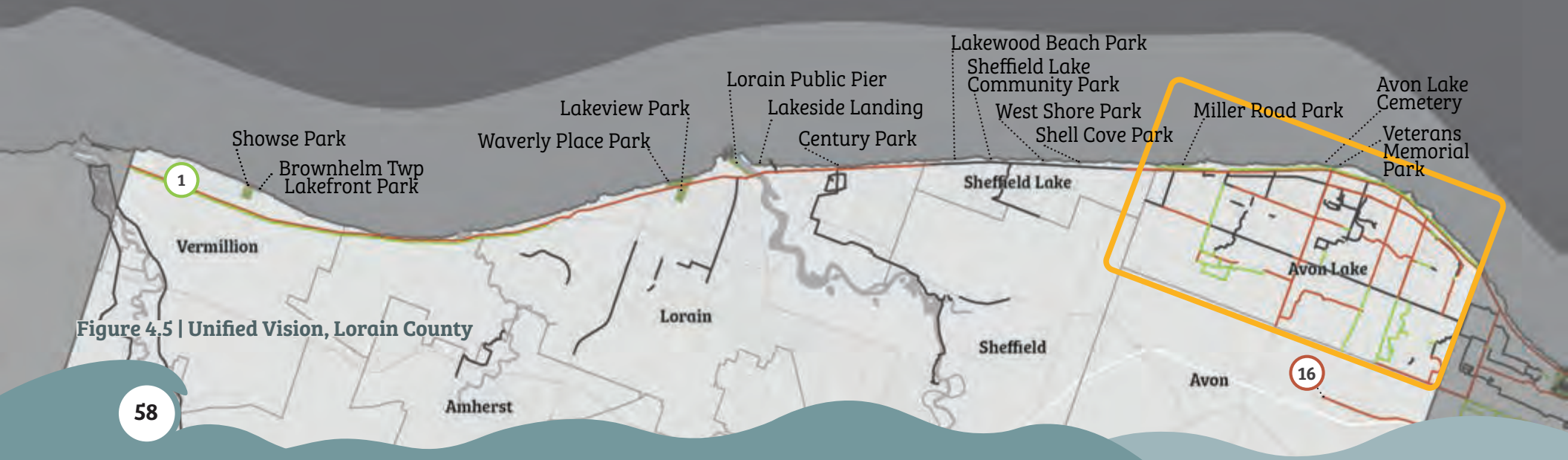


Figure 4.5 | Unified Vision, Lorain County

CUYAHOGA COUNTY

Planned Low-Stress Bike & Pedestrian Infrastructure

17 Bike Trail - N Marginal Dr
18 Separated Bike Lane - St Clair Ave
19 Bike Trail - Windsor Ln
20 Bike Trails - Bradley Rd & Along Railroad
21 Bike Trail - Westwood Rd
22 Bike Trail - Windsor Ln
23 Bike Trail - Wolf Rd
24 Bike Trails - 1st St
25 Bike Trail - Detroit Rd
26 Bike Trail - Colombia Rd
27 Bike Trail - Sperry Dr
28 Bike Trail - Walter Rd
29 Bike Trail - St Bernadette Campus
30 Bike Trail - Tri-City Park
31 Greenway - Hilliard Blvd
32 Greenway - Center Ridge Rd
33 Bike Trail - Lake Rd
34 Bike Trail - Riverside Dr
35 Bike Trail - S Marginal Dr
36 Bike Trails - Impett Park
37 Bike Trail - Windsor Ln
38 Greenway - Belle Ave
39 Separated Bike Lane - Lorain Ave
40 Greenway - Detroit Rd/Ave
41 Greenway - Madison Ave
42 Greenway - Triskett Ave
43 Greenway - Denison Ave
44 Greenway - Railroad
45 Bike Trail - Train Ave
46 Greenway - Fulton Rd
47 Separated Bike Lane - W 25th St
48 Bike Trail - Irishtown Bend

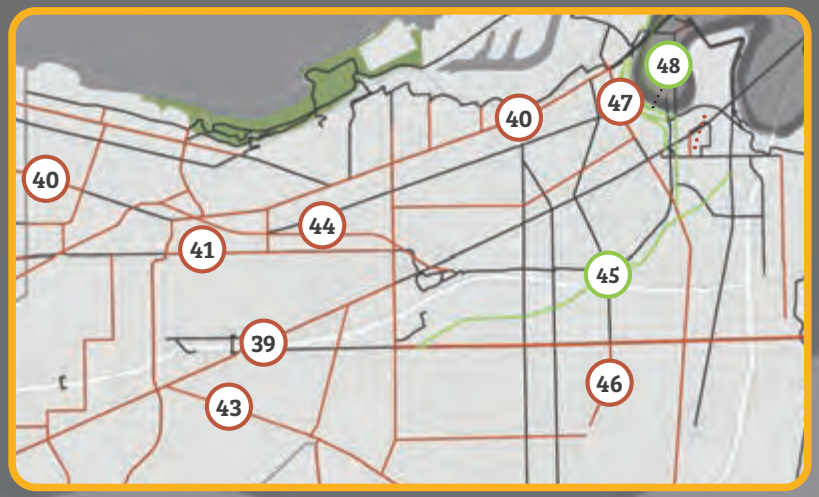


Figure 4.6 | Unified Vision, Western Cuyahoga County

DOWNTOWN CLEVELAND

Planned Low-Stress Bike & Pedestrian Infrastructure

39 Separated Bike Lane - Lorain Ave
40 Greenway - Detroit Ave
41 Greenway- Madison Ave
44 Greenway - Railroad
47 Separated Bike Lane - W 25th St
48 Bike Trail - Irishtown Bend
49 Greenway - W Huron Rd
50 Separated Bike Lane - St Clair Ave
51 Bike Trails - W 3rd St
52 Bike Trails - North Coast Harbor
53 Separated Bike Lane - W Lakeside Ave
54 Greenway - E 9th St
55 Separated Bike Lane - E 12th St
56 Separated Bike Lane - Chester Ave
57 Separated Bike Lane - Payne Ave
58 Bike Trail - N Marginal Rd
59 Bike Trail - S Marginal Rd
60 Bike Lane/Greenway - E 40th St

Figure 4.7 | Unified Vision, Downtown Cleveland

Planned Low-Stress Bike & Pedestrian Infrastructure

- 50 Separated Bike Lane - St Clair Ave
- 56 Separated Bike Lane - Chester Ave
- 57 Separated Bike Lane - Payne Ave
- 58 Bike Trail - N Marginal Rd
- 59 Bike Trail - S Marginal Rd
- 61 Greenway - E 14th St
- 62 Bike Trail - Orange Ave
- 63 Bike Trail - Railroad
- 64 Separated Bike Lane - Woodland Ave
- 65 Separated Bike Lane - Quincy Ave
- 66 Separated Bike Lane - E 55th St
- 67 Bike Trail - Lakefront Trail
- 68 Buffered Bike Lane - E 72nd St
- 69 Bike Trails - Cleveland Lakefront Nature Preserve
- 70 Trail - East Blvd
- 71 Trail - E 105th St
- 72 Bike Trail - Thornhill Dr & Eddy Rd
- 73 Separated Bike Lane - Euclid Ave
- 74 Greenway - Woodworth Ave & Noble Rd
- 75 Bike Trail - N Marginal Dr
- 76 Greenway - E 152nd St
- 77 Bike Trail - London Rd
- 78 Greenway - Lakeshore Blvd
- 79 Bike Trail - Nottingham Rd & Chardon Rd
- 80 Greenway - Along Lakefront
- 81 Bike Trail - E 222nd St
- 82 Greenway - E 260th St/Richmond Rd
- 83 Greenway - Euclid Ave

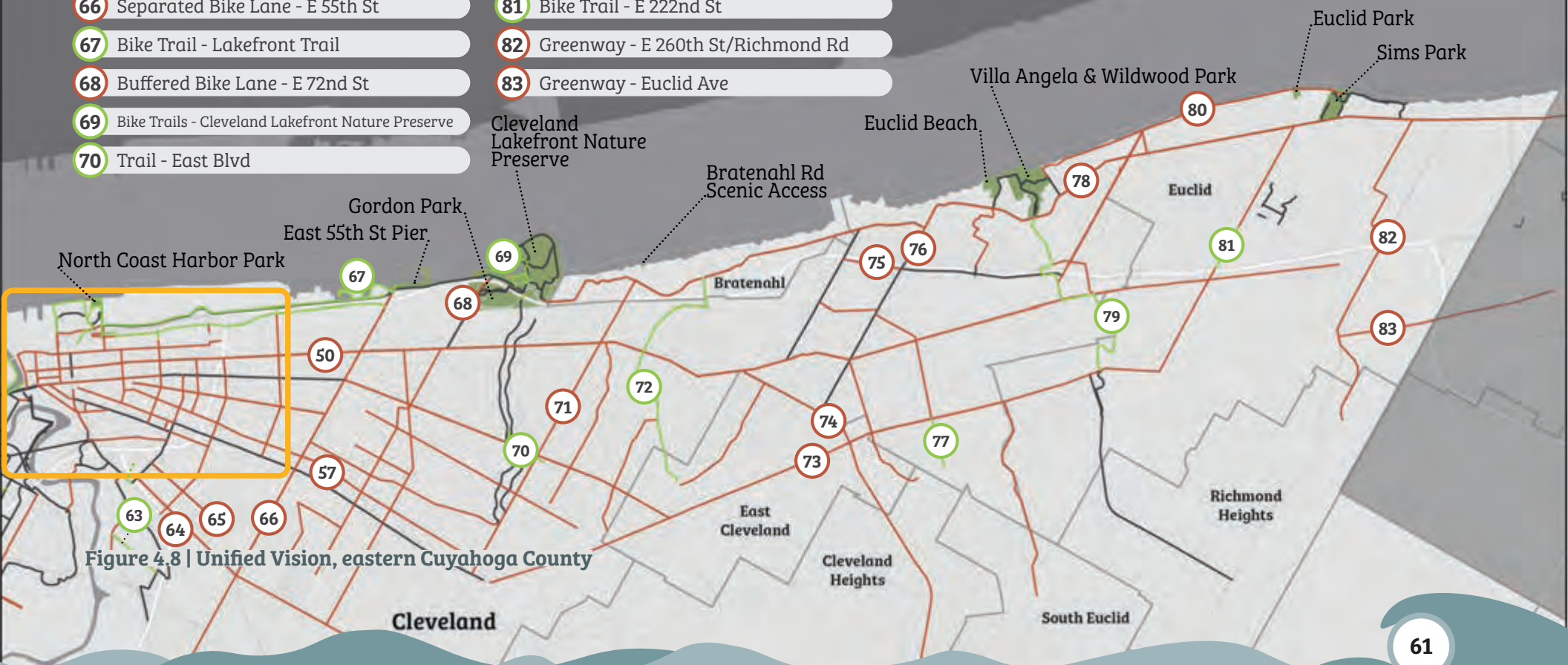
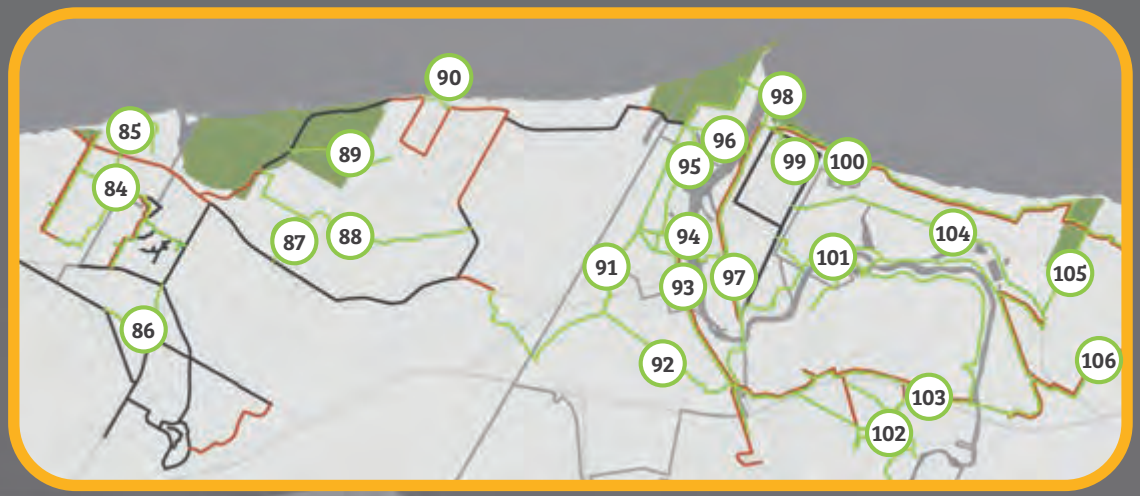


Figure 4.8 | Unified Vision, eastern Cuyahoga County

Planned Low-Stress Bike & Pedestrian Infrastructure

- 78 Greenway - Lakeshore Blvd
- 83 Greenway - Euclid Ave
- 84 Bike Trails - Veterans Park
- 85 Boardwalk Trail - Along Lakefront
- 86 Bike Trail - Hendricks Rd & Center St
- 87 Bike Trail - Becker Ave
- 88 Bike Trail - Lakeshore Blvd Connector
- 89 Bike Trail - Mentor Lagoons
- 90 Bike Trail - Headlands Rd
- 91 Bike Trail - Heisley Rd & Coast Guard Dr
- 92 Bike Trail - Blackbrook Rd
- 93 Bike Trail - River St
- 94 Bike Trail - Olive Street & Off Street
- 95 Bike Trail - Williams St
- 96 Bike Trail - Headlands Rd Extension
- 97 Bike Trail - Water St & High St
- 98 Bike Trail - Water St
- 99 Bike Trail - 2nd St & 3rd St
- 100 Bike Trail - Fairport Harbor
- 101 Bike Trail - Fairport Nursery Rd
- 102 Bike Trails - Painesville
- 103 Bike Trail - Lakeland Pkwy
- 104 Bike Trails - Along Grand River
- 105 Bike Trail - Hardy Rd
- 106 Bike Trail - Painesville to Lake Erie Bluffs
- 107 Greenway - Lake Rd
- 108 Bike Trail - Bacon Rd
- 109 Bike Trail - Lane Rd



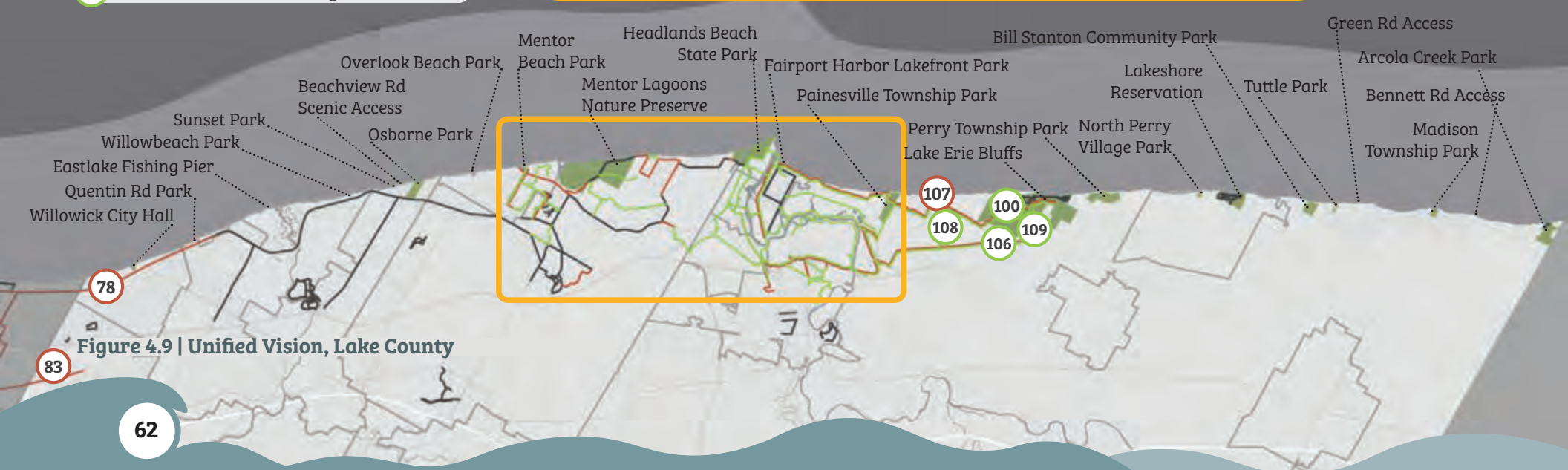


Figure 4.9 | Unified Vision, Lake County

UNIFIED VISION

Table 4.1 on this and the next page summarizes the low stress recommendations in the unified vision that are within a half-mile of a lakefront park. In total, 43 projects identified in previous plans or local initiatives meet this criteria. Equity Priority Areas are defined following the table on page 65. Nearly all of the priority projects from the Unified Vision are in an Equity Priority Area.

	MAP #	STREET NAME OR LOCATION	PROJECT TYPE	EQUITY PRIORITY AREA	RECOMMENDATION SOURCE
Lorain	1	Erie Avenue	Trail	●	Lorain County Lakefront Connectivity TLCI Plan
	2	Lake Road	Trail	●	Avon Lake Active Transportation TLCI Plan
	3	Moore Road	Trail	●	Avon Lake Active Transportation TLCI Plan
Cuyahoga	21	Westwood Road	Trail	●	Westlake Bikeway TLCI Plan
	23	Wolf Road	Trail	●	Cahoon Park Area Connectivity TLCI Plan
	33	Lake Road	Trail	●	Detroit Road Traffic and Parking TLCI Study
	38	Belle Avenue	Greenway	●	Cuyahoga Greenways TLCI Plan
	40	Detroit Road	Greenway	●	Cuyahoga Greenways TLCI Plan
	50	St. Clair Avenue	Separated Bike Lane	●	Cleveland's Midway Cycle Track TLCI Plan
	51	West 3rd Street	Trail	●	Lakefront Greenway and Downtown Connector TLCI Plan
	52	North Coast Harbor	Trail	●	Lakefront Greenway and Downtown Connector TLCI Plan
	53	West Lakeside Avenue	Separated Bike Lane	●	Cleveland's Midway Cycle Track TLCI Plan
	54	East 9th Street	Greenway	●	Cuyahoga Greenways TLCI Plan
	55	East 12th Street	Separated Bike Lane	●	Cleveland's Midway Cycle Track TLCI Plan
	58	North Marginal Road	Trail	●	Lakefront Greenway and Downtown Connector TLCI Plan
	59	South Marginal Road	Trail	●	Cuyahoga Greenways TLCI Plan
	66	East 55th Street	Separated Bike Lane	●	Cleveland's Midway Cycle Track TLCI Plan
	67	Lakefront Trail	Trail	●	Lakefront Greenway and Downtown Connector TLCI Plan
	69	Cleveland Lakefront Nature Preserve	Trail	●	Lakefront Greenway and Downtown Connector TLCI Plan
	70	East Blvd	Trail	○	University Circle District Transportation and Mobility TLCI
	71	East 105th Street	Trail	●	Cuyahoga Greenways TLCI Plan
	78	Lakeshore Boulevard	Greenway	●	Cuyahoga Greenways TLCI Plan
	79	Nottingham Road & Chardon Road	Trail	●	Cuyahoga Greenways TLCI Plan
	80	Along Lakefront	Greenway	●	Cuyahoga Greenways TLCI Plan

Table 4.1 | Unified Vision Priorities

● In an Equity Priority Area ○ Not in an Equity Priority Area

	MAP #	STREET NAME OR LOCATION	PROJECT TYPE	EQUITY PRIORITY AREA	RECOMMENDATION SOURCE
Lake	84	Veterans Park	Trail	●	Central Lake County Lakefront Connectivity Plan
	85	Along Lakefront	Trail	●	
	87	Becker Avenue	Trail	●	
	88	Lakeshore Boulevard Connector	Trail	●	
	89	Mentor Lagoons	Trail	○	
	90	Headlands Road	Trail	○	
	91	Heisley Road & Coast Guard Drive	Trail	●	
	96	Headlands Road Extension	Trail	●	
	97	Water Street & High Street	Trail	●	
	98	Water Street	Trail	●	
	99	2nd Street & 3rd Street	Trail	●	
	100	Fairport Harbor	Trail	●	
	101	Fairport Nursery Road	Trail	●	
	104	Along Grand River	Trail	●	
	105	Hardy Road	Trail	●	
	106	Painesville to Lake Erie Bluffs	Trail	●	
	107	Lake Road	Greenway	○	
	108	Bacon Road	Trail	○	
	109	Lane Road	Trail	○	

Table 4.1 (Continued) | Unified Vision Priorities

● In an Equity Priority Area ○ Not in an Equity Priority Area

In general, the projects on Table 4.1 should be prioritized for additional consideration, and would be good candidates for implementation grant programs that require a previous planning effort. Plans are constantly changing and the lakefront is a dynamic area of attention for many local communities, so the Unified Vision may not capture every known initiative or priority for local communities. Rather, Table 4.1 represents the summary of low stress recommendations from previous plans and local efforts that connect to an existing lakefront park. As conditions change and new considerations emerge, alternative routes may be considered or prioritized instead.

All of the projects in Lake County are from the Central Lake County Lakefront Connectivity Plan. Because there are few recommendations outside of this plan's study area near the lakefront parks, the project developed new recommendations for Lake County trails with the Strategy Committee and local partners, as discussed later in this Chapter.

EQUITY PRIORITY AREAS

The Equity Priority Areas in Figure 4.10 represent locations where access for all modes should be most improved to increase lakefront equity in Northeast Ohio. Areas were selected that met one of two criteria:

- Within 500 feet of the east-west route
- Within a half-mile of a lakefront Park to Enhance or Park to Improve

See Chapter Three for more detail on the analysis that informed Figure 4.10. In general throughout Chapter Four, projects that are directly in an Environmental Justice (EJ) area are defined with the ⚖ symbol. The Equity Priority Area is a broader geography that also captures the east-west route those traveling from EJ areas are likely to use, and parks that already have high visitation from EJ areas. The Equity Priority Areas can be used to have meaningful discussions about lakefront equity in Northeast Ohio, and was used to prioritize the Unified Vision in Table 4.1.

Prioritization Criteria

The Equity Priority Areas are one example of a prioritization criteria used throughout this Chapter. In total, this plan identifies 109 individual bike projects, 30 roadway access corridors, 43 transit stops, and 78 crosswalks that should be studied further and improved. Each local community and road owner has their own time frame and process for implementation. Assigning an arbitrary time frame to each of these local projects would not be useful to local communities. Instead, the Equity Priority Areas and other prioritization criteria (like Level of Traffic Stress, proximity to lakefront parks and transit stops, and in an Environmental Justice area) are provided as a tool communities can use in choosing short-term priorities. These same criteria can help NOACA select projects for inclusion in future Long Range Transportation Plans as appropriate.

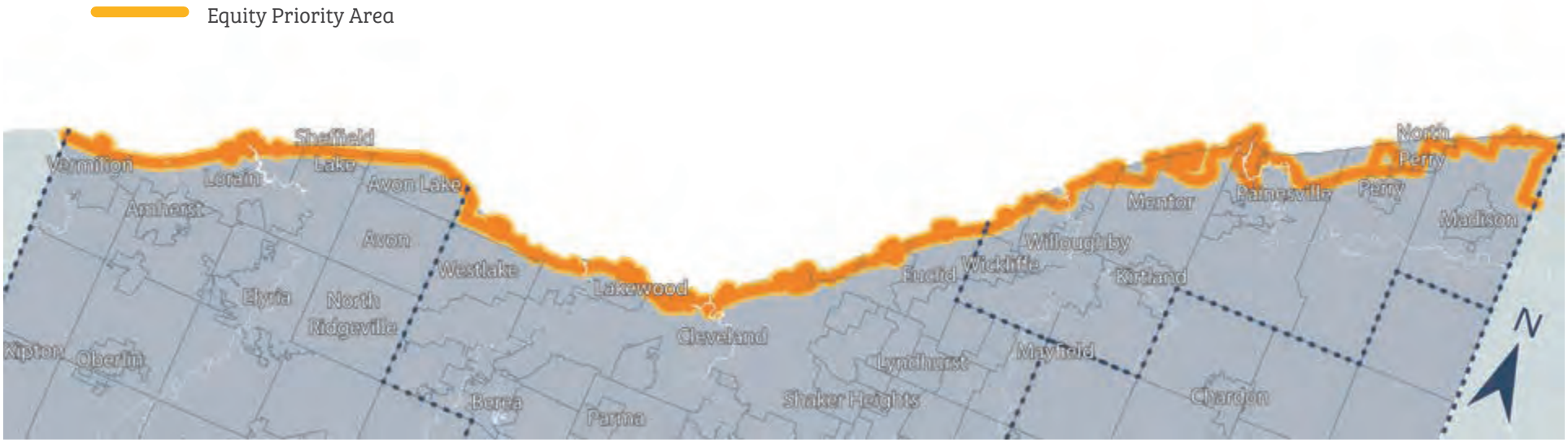


Figure 4.10 | Equity Priority Areas

TRANSFORMATIVE CORRIDORS

The transportation analysis in Chapter Three focuses on the east-west and north-south routes in Figure 4.11. Each corridor is recommended for future study to prioritize safety, integrate bicycle facilities, and improve pedestrian infrastructure. Some of the north-south roads already have proposed facility types based on previous planning efforts (see Table 3.3). To improve the experience of lakefront travel, public art, urban design enhancements, streetscaping, and wayfinding should also be considered on these corridors.

There are other north-south corridors that were not included in Figure 4.11, either because the transportation analysis did not warrant them as high-use routes or the Strategy Committee determined that they had momentum for implementation already, and other roads needed study instead. Conditions may change, resulting in new priority corridors that should be added to Figure 4.11 and prioritized for future study.

Multimodal options for several sample north-south routes are shown in Chapter Three, and can serve as examples that can be applied to other corridors with future study.

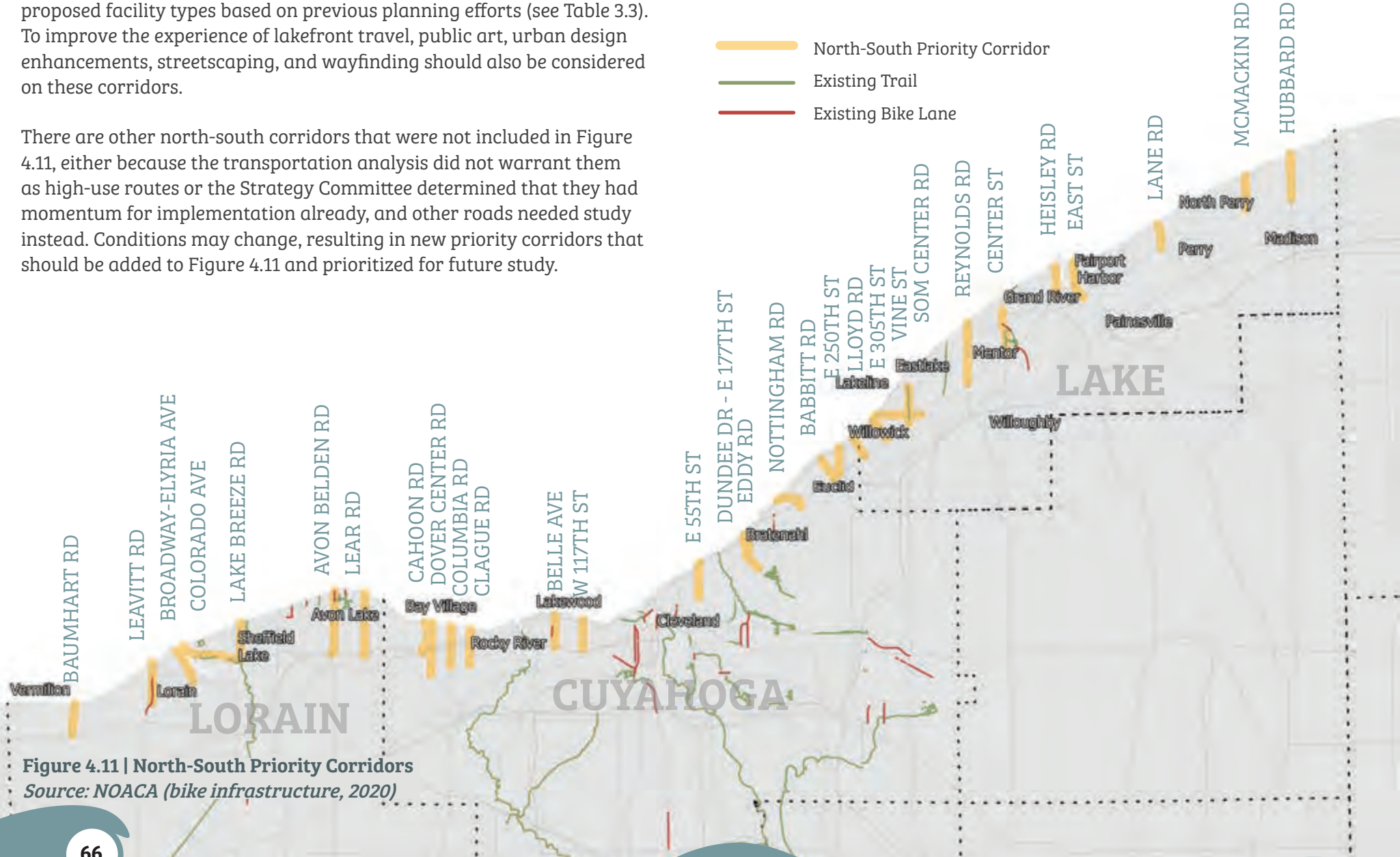


Figure 4.11 | North-South Priority Corridors
Source: NOACA (bike infrastructure, 2020)

TRANSFORMATIVE CORRIDORS

Table 4.2 lists the north-south priority corridors by community from west to east. The columns display the corridor's current LTS level and indicate whether it meets four prioritization criteria used throughout this Chapter and described below.

Prioritization Criteria

Location-specific recommendations are summarized on the recommendation tables throughout this Chapter by prioritization criteria, like those shown on Table 4.2. Whether a project is near a lakefront park, transit stop, EJ area, or included in past plans are all means to evaluate a project's benefits against planning goals.

Level of Traffic Stress

- High (at least 3.6)
- Moderate (2.5 - 3.5)
- Low (below 2.5)

Prioritization Criteria

- Close to a lakefront park*
- Close to a transit stop**
- In an EJ Area***
- Included in a past plan
- ● Yes, meets criteria
- ○ No, does not meet criteria

*within .25 miles
**within .25 of a transit stop on the east-west route
***in a TAZ that meets EJ definitions

	COMMUNITY	NORTH-SOUTH PRIORITY CORRIDOR	LTS				
Lorain County	Lorain	Baumhart Road	●	●	○	●	○
		Leavitt Road	●	●	○	●	○
		Broadway-Elyria Avenue	●	●	●	●	○
		Colorado Avenue	●	●	○	●	○
	Sheffield Lake	Lake Breeze Road	●	●	○	●	○
	Avon Lake	Avon Belden Road	●	●	○	●	○
		Lear Road	●	○	○	○	●
Cuyahoga County	Bay Village	Cahoon Road	●	●	○	●	●
		Dover Center Road	●	●	●	○	●
		Columbia Road	●	●	●	●	●
		Clague Road	●	●	○	●	●
	Lakewood	Belle Avenue	●	●	○	●	●
	Cleveland	West 117th Street	●	●	●	●	○
		East 55th Street	●	●	●	●	●
		Dundee Road/East 177th Street	●	○	●	●	○
	Bratenahl	Eddy Road	●	○	●	●	○
	Cleveland	Nottingham Road	●	●	●	●	●
	Euclid	Babbitt Road	●	●	●	●	○
		East 250th Street	●	○	○	●	●
		Lloyd Road	●	○	●	●	○
Lake County	Willowick	East 305th Street	●	●	●	●	○
		Vine Street	●	●	●	●	○
	Eastlake	Som Center Road	●	○	●	●	○
	Mentor	Reynolds Road	●	●	●	○	○
		Center Street	●	●	●	●	●
	Painesville Township	Heisley Road	●	●	●	○	●
	Fairport Harbor	East Street	●	●	●	●	●
	Perry Township	Lane Road	●	●	○	●	●
	Madison Township	McMackin Road	●	●	○	○	○
		Hubbard Road	●	●	●	○	○

Table 4.2 | North-South Priority Corridors
Sources: NOACA (LTS, EJ areas)

SUPPORTIVE MULTIMODAL INFRASTRUCTURE

Regional Transit Access

Today in Northeast Ohio, there are 21 transit routes that make over 370 stops along the east-west route. Ninety-five stops are within a quarter-mile of a lakefront park. Of these, 30 percent have an overhead shelter today. The remaining 70 percent of stops (about 66 transit stops) lack this particular amenity and, as a result, are recommended for assessment and improvement.

The transit stops in Table 4.3 on this and the next page are organized by intersection, and some may include more than one stop. While every stop may not need or be appropriate for an overhead shelter, enhancements like benches, trash bins, and kiosks should be considered to improve transit access to lakefront parks.

Walking Time to Nearest Crossing*

- Very High (More than 180 seconds/3 minutes)
- High (76 - 150 seconds)
- Moderate (11 - 75 seconds)
- Low (10 seconds or less)

Prioritization Criteria

- Close to a lakefront park**
- In an EJ Area***
- NS — On a priority north-south corridor
- ● Yes, meets criteria
- ○ No, does not meet criteria

**assumes an average walking speed*
***within .25 miles*
****in a TAZ that meets EJ definitions*

	COMMUNITY	CORRIDOR	STOP LOCATION	WALK TIME			NS
LCT	Lorain	Erie Avenue	Washington Avenue	🟢	●	○	○
GCRTA	Bay Village	Wolf Road	Clague Road	🟢	●	●	○
		Lake Road	Clague Road	🟢	●	●	○
	Rocky River	Lake Road	Bradstreet's Landing	🟠	●	○	○
			Morewood Parkway	🟢	●	○	○
			South Kensington Road	🟢	●	○	○
	Cleveland	Lake Avenue	West 117th Street	🟢	●	●	●
		Shoreway	Edgewater Park	🟢	●	○	○
			East 9th Street*	🟢	●	○	○
		South Marginal Road	East 55th Street	🟠	●	●	○
		North Marginal Road	East 72nd Street	🟢	●	○	○
			Gordon Park	🟡	●	○	○
		Lakeshore Boulevard	MLK Jr Boulevard	🟢	●	○	○
			Lakefront Nature Preserve	🟡	●	○	○
			East 169th Street	🟢	●	●	●
			East 171st Street	🟢	●	●	●
			Wildwood Lane	🟠	●	○	●
	Euclid	Lakeshore Boulevard	East 232nd Street	🟢	●	○	●
			Lloyd Road	🟢	○	●	●

Table 4.3 | Transit Stops for Future Assessment and Improvement
Stop shared by multiple operators

SUPPORTIVE MULTIMODAL INFRASTRUCTURE

	COMMUNITY	CORRIDOR	STOP LOCATION	WALK TIME			NS
Laketran	Willowick	Lakeshore Boulevard	East 305th Street	🟡	●	●	●
			Willowick City Hall*	🟢	●	●	●
			Shoregate Towers Apartments	🟢	●	●	●
	Eastlake	Lakeshore Boulevard	Som Center Road	🟢	●	●	●
			Traymore Boulevard	🔴	●	○	○
	Willoughby	Lakeshore Boulevard	Peach Road	🟡	●	●	○
			Eaglewood Road	🟡	●	●	○
			Osborne Park	🟢	●	●	○
			Garden Road	🟡	●	○	○
	Mentor-on-the-Lake	Andrews Road	Salida Drive	🟢	●	○	○
			Linden Street	🟢	●	●	○
	Mentor	Lakeshore Boulevard	Hopkins Road	🟢	●	○	●
	Fairport Harbor	2nd Street	Eagle Street	🟢	●	○	○
			Plum Street	🟢	●	○	○
			East Street	🟢	●	○	●
		East Street	New Street	🔴	○	○	●
			4th Street	🟢	○	○	●
			Independence Street	🟢	●	○	●
			Fairport Road	🔴	○	○	●
	Perry Township	Ridge Road	Blackmore Road	🟢	●	○	●
	Madison Township	Lake Road	Park Avenue	🔴	●	○	●
			Mohawk Road	🔴	●	○	●
			Bennett Road	🔴	●	○	○
			Arthur Street	🔴	●	○	○

Walking Time to Nearest Crossing*

- 🔴 Very High (More than 180 seconds/3 minutes)
- 🟠 High (76 - 150 seconds)
- 🟡 Moderate (11 - 75 seconds)
- 🟢 Low (10 seconds or less)

Prioritization Criteria

- Close to a lakefront park**
- In an EJ Area***
- NS — Serves a priority north-south corridor
- ● Yes, meets criteria
- ○ No, does not meet criteria

**assumes an average walking speed*
***within .25 miles*
****in a TAZ that meets EJ definitions*

Table 4.3 (Continued) | Transit Stops for Future Assessment and Improvement
Stop shared by multiple operators

Table 4.3 includes whether the transit stop is within a quarter-mile of a lakefront park or in an EJ area. It also indicates which transit stops service a priority north-south corridor, and categorizes the walking time to the nearest location a pedestrian can cross the east-west route.

As transit agencies and local communities pursue additional funding for lakefront improvements, transit waiting environments should be part of the planned upgrades for a well-connected lakefront.

SUPPORTIVE MULTIMODAL INFRASTRUCTURE

Pedestrian Access

Chapter Three analyzes the conditions of pedestrian crossings along the east-west route. Importantly, nearly all trips ending at a lakefront park involve crossing this route, and the majority of the crosswalks today do not meet basic safety and visibility standards established by the Federal Highway Administration (FHWA).

Table 4.4 on this and the next page displays the 35 existing uncontrolled crossings within one-half mile of a lakefront park that currently lack at least some of the enhancements recommended by the FHWA. There are many ways to prioritize crosswalks for improvement, and a large-scale, regional effort to upgrade them could be pursued, which could include more than the priority locations in Table 4.4.

Level of Traffic Stress

- High (at least 3.6)
- Moderate (2.5 - 3.5)
- Low (below 2.5)

Prioritization Criteria

- May lack basic safety elements*
- Close to a transit stop**
- In an EJ Area***
- Included in a past plan
- ● Yes, meets criteria
- ○ No, does not meet criteria

**See Chapter Three for methodology*
***within .25 of a transit stop on the east-west route*
****in a TAZ that meets EJ definitions*

	COMMUNITY	CORRIDOR	CROSSING LOCATION	LTS	⚠	🚌	⚖	☑
Lorain County	Lorain	Erie Avenue	Hawthorn Avenue	●	●	○	●	●
			King Avenue	●	○	○	●	●
			Lakeview Drive	●	○	○	●	●
			Parkview Drive	●	○	○	●	●
			North Lakeview Boulevard	●	●	○	●	●
			West 5th Street	●	●	○	●	●
			Hamilton Avenue	●	●	●	●	●
			Washington Avenue	●	●	●	●	●
			Wickens Place	●	○	●	●	●
			Arizona Avenue	●	●	○	●	●
			California Avenue	●	●	○	●	●
			Connecticut Avenue	●	●	○	●	●
			Delaware Avenue	●	●	○	●	●
			Florida Avenue	●	●	○	●	●
			Kentucky Avenue	●	●	○	●	●
			Louisiana Avenue	●	●	○	●	●
			Maine Avenue	●	●	○	●	●
			Massachusetts Avenue	●	○	○	●	●
	Sheffield Lake	Lake Road	Lake Breeze Road	●	○	○	○	●
			Kenilworth Avenue	●	○	○	○	●
			Irving Park Boulevard	●	○	○	○	●
	Avon Lake	Lake Road	Miller Road	●	●	○	○	●

Table 4.4 | Uncontrolled Crossings for Improvement
Source: NOACA (LTS)

SUPPORTIVE MULTIMODAL INFRASTRUCTURE

	COMMUNITY	CORRIDOR	CROSSING LOCATION	LTS	⚠	🚌	⚖	✓
Cuyahoga County	Rocky River	Lake Road	Avalon Drive	🟡	●	●	○	●
	Cleveland	Lake Avenue	West 110th Street	🟡	●	○	●	●
		Erieside Avenue	Key Plaza	🟢	○	●	●	○
		Lakeshore Boulevard	East 159th Street	🔴	○	●	●	●
			Nottingham Road	🟢	○	●	●	●
			Schenely Avenue	🟢	●	●	●	●
Lake County	Fairport Harbor	East Street	3rd Street	🟡	●	●	●	○
			2nd Street	🟡	●	●	●	○
		2nd Street	East Street	🟡	●	●	●	○
			Vine Street	🟢	●	●	●	○
			Plum Street	🟢	●	●	●	○
			Eagle Street	🟢	●	●	●	●
		High Street	4th Street	🟡	●	●	●	○

Table 4.4 (Continued) | Uncontrolled Crossings for Improvement
Source: NOACA (LTS)

Uncontrolled crossings at Erie Avenue and Hamilton avenues in Lorain (left), East Street and 3rd streets in Fairport Harbor (right)

Level of Traffic Stress

- 🔴 High (at least 3.6)
- 🟡 Moderate (2.5 - 3.5)
- 🟢 Low (below 2.5)

Prioritization Criteria

- ⚠ May lack basic safety elements*
- 🚌 Close to a transit stop**
- ⚖ In an EJ Area***
- ✓ Included in a past plan
- ● Yes, meets criteria
- ○ No, does not meet criteria

**See Chapter Three for methodology*
***within .25 of a transit stop on the east-west route*
****in a TAZ that meets EJ definitions*

SUPPORTIVE MULTIMODAL INFRASTRUCTURE

Closing Crosswalk Gaps

Chapter Three analyzed the options pedestrians have to cross the east-west route and identified areas where no crossing is available within a quarter-mile. These gaps can be a frustrating and unsafe barrier to lakefront access, especially where the road has multiple lanes, high speeds, and busy traffic. The largest crosswalk gaps are in Lorain and Lake counties, while areas in Cuyahoga County are generally covered where practical. This does not mean additional crossings shouldn't be considered in Cuyahoga County, especially as new businesses and parks north of the east-west route emerge. There may also be areas of especially high activity where crossings at a more frequent interval are desired.

The locations shown in Table 4.5 on this and the next page are intersections on the east-west route that are within a crosswalk gap and could be a good location for a new pedestrian crosswalk. Local communities and regional partners can improve lakefront access by identifying precise locations for new crossings at or near the intersections in Table 4.5. Design of any crosswalk, including whether it is controlled or uncontrolled, are local decisions. Locations on high stress roads should be considered for more advanced countermeasures that provide pedestrian priority and increase safety.

Level of Traffic Stress

- High (at least 3.6)
- Moderate (2.5 - 3.5)
- Low (below 2.5)

Prioritization Criteria

- Close to a lakefront park*
- Close to a transit stop**
- In an EJ Area***
- Included in a past plan
- ● Yes, meets criteria
- ○ No, does not meet criteria

**within .25 miles*
***within .25 of a transit stop on the east-west route*
****in a TAZ that meets EJ definitions*

	COMMUNITY	CORRIDOR	CROSSING LOCATION	LTS				
Lorain County	Vermilion	Liberty Avenue	Woodside Avenue	●	●	○	●	●
		Lake Road	Lakewood Beach Road	●	●	○	○	○
			Harris Road	●	○	○	○	○
			Buckeye Drive	●	○	○	○	○
	Avon Lake	Lake Road	Curtis Drive	●	○	○	○	●
			Moorewood Avenue	●	○	○	○	●
			Jaycox Road	●	○	○	○	●
			Lear Road	●	○	○	○	●
Cuyahoga County	Bay Village	Bradley Road	Walker Road	●	○	●	○	●
		Wolf Road	Elmwood Road	●	○	●	○	●
			Huntmere Drive	●	○	●	○	●
			Upland Road	●	○	○	○	●
			Sandalwood Drive	●	○	●	○	●
	Bratenahl	Lakeshore Boulevard	Burton Avenue	●	○	●	○	●
			Corning Drive	●	○	●	○	●
			Oakshore Green	●	○	●	○	●
			Lakeshore Drive	●	○	●	○	●

Table 4.5 | Considerations for New Crossing Locations
Source: NOACA (LTS)

SUPPORTIVE MULTIMODAL INFRASTRUCTURE

	COMMUNITY	CORRIDOR	CROSSING LOCATION	LTS				
Lake County	Willowick	Lakeshore Boulevard	East 324th Street	●	○	○	○	●
			East 329th Street	●	○	○	○	●
	Eastlake	Lakeshore Boulevard	East 335th Street	●	●	○	●	●
			Gilbert Drive	●	○	●	○	○
			Traymore Boulevard	●	●	○	○	○
	Lakeline	Lakeshore Boulevard	Beach Park Drive	●	○	●	●	●
	Timberlake	Lakeshore Boulevard	Minnewawa Road	●	○	●	●	○
	Willoughby	Lakeshore Boulevard	Tarmac Boulevard	●	○	●	●	○
	Mentor-on-the-Lake	Lakeshore Boulevard	Marine Parkway	●	○	●	○	●
	Mentor	Lakeshore Boulevard	Cedarwood Road	●	○	●	○	○
			Thistlewood Drive	●	○	○	○	○
			French Boulevard	●	○	●	○	●
		Corduroy Road	Woodridge Lane	●	○	●	○	●
	Grand River	River Street	Singer Avenue	●	○	○	○	●
	Fairport Harbor	Water Street	High Street	●	○	○	○	○
		East Street	North St Clair Street	●	○	○	○	○
	Perry Township	Perry Park Road	Parmly Road	●	●	○	○	○
			North Ridge Road	●	○	●	●	○
		North Ridge Road	Call Road	●	○	●	○	○
	Madison Township	Chapel Road	McMackin Road	●	●	○	○	○
		Red Bird Road	Madison Local School	●	○	○	○	○
		Lake Road	Hubbard Road	●	●	●	●	○
			Davista Avenue	●	○	●	○	○
			Bennett Road	●	○	●	○	○
			Erieview Drive	●	○	●	○	○
			Arcola Road	●	○	●	●	○

Level of Traffic Stress

- ● High (at least 3.6)
- ● Moderate (2.5 - 3.5)
- ● Low (below 2.5)

Prioritization Criteria

- Close to a lakefront park*
- Close to a transit stop**
- In an EJ Area***
- Included in a past plan
- ● Yes, meets criteria
- ○ No, does not meet criteria

**within .25 miles*
***within .25 of a transit stop on the east-west route*
****in a TAZ that meets EJ definitions*

Table 4.5 (Continued) | Considerations for New Crossing Locations
Source: NOACA (LTS)

SUPPORTIVE MULTIMODAL INFRASTRUCTURE

New Trail Connections in Lake County

Lake County is the only lakefront county that has not created a countywide lakefront trail plan. In 2014, the Central Lake County Connectivity TLCI Plan created a visionary trail network for Mentor, Mentor-on-the-Lake, and surrounding communities, but did not study connections in eastern or western Lake County.

Lake Erie Connect facilitated discussions with local and county leaders in Lake County to solidify the County's vision for lakefront connectivity with two new proposed trail networks shown in Figures 4.12 and 4.13.

Chagrin River Trail

The Chagrin River Trail is a new proposed trail in western Lake County that will connect key points along the Chagrin River. The project, called Chagrin Connect, was developed concurrently with Lake Erie Connect and focused on north-south connections along the Chagrin River. The resulting trail will fill a gap in the Emerald Necklace Trail network by advancing the connection between the North Chagrin Reservation and the larger network. The Chagrin River Trail also adds a north-south route between Euclid and Mentor where there is a sizable gap in bike infrastructure.

The trail will provide lakefront access at its terminus (or origin) at the First Energy Site in Eastlake. The trail's five major sections that link seven of the eight existing public access sites along the Chagrin River are from:

- First Energy Park to Boracs Landing
- Boracs Landing, to Chagrin River Park
- Chagrin River Park to Todd Field
- Todd Field to Daniels Park
- Daniels Park to North Chagrin Reservation

The full Chagrin River Trail Plan will be released in early 2023 and will be available from NOACA and the Chagrin River Watershed Partners.

Figure 4.12 | Chagrin River Trail
Source: NOACA, Chagrin River Watershed Partners, (Chagrin Connect Trail Plan)

SUPPORTIVE MULTIMODAL INFRASTRUCTURE

Diamond Shamrock Trail

The Diamond Shamrock is a former chemical manufacturing site that is privately-owned today. It is situated between Fairport Harbor and Painesville Township Park, making it an ideal location for a new trail connection. Lake Metroparks and its partners are working to acquire portions of this brownfield property that was once proposed for private home development.

The proposed vision, shown in Figure 4.13 (provided by Lake Metroparks) is flexible but does indicate where a lakefront trail could be created. This trail would offer the public access to the area currently known to locals as the "secret beach", as it is only accessible today by boat. On-street bike facilities or side-paths are needed on Bacon and Hardy roads to help complete the network, and would connect Fairport Harbor to the Lake Erie Bluffs.

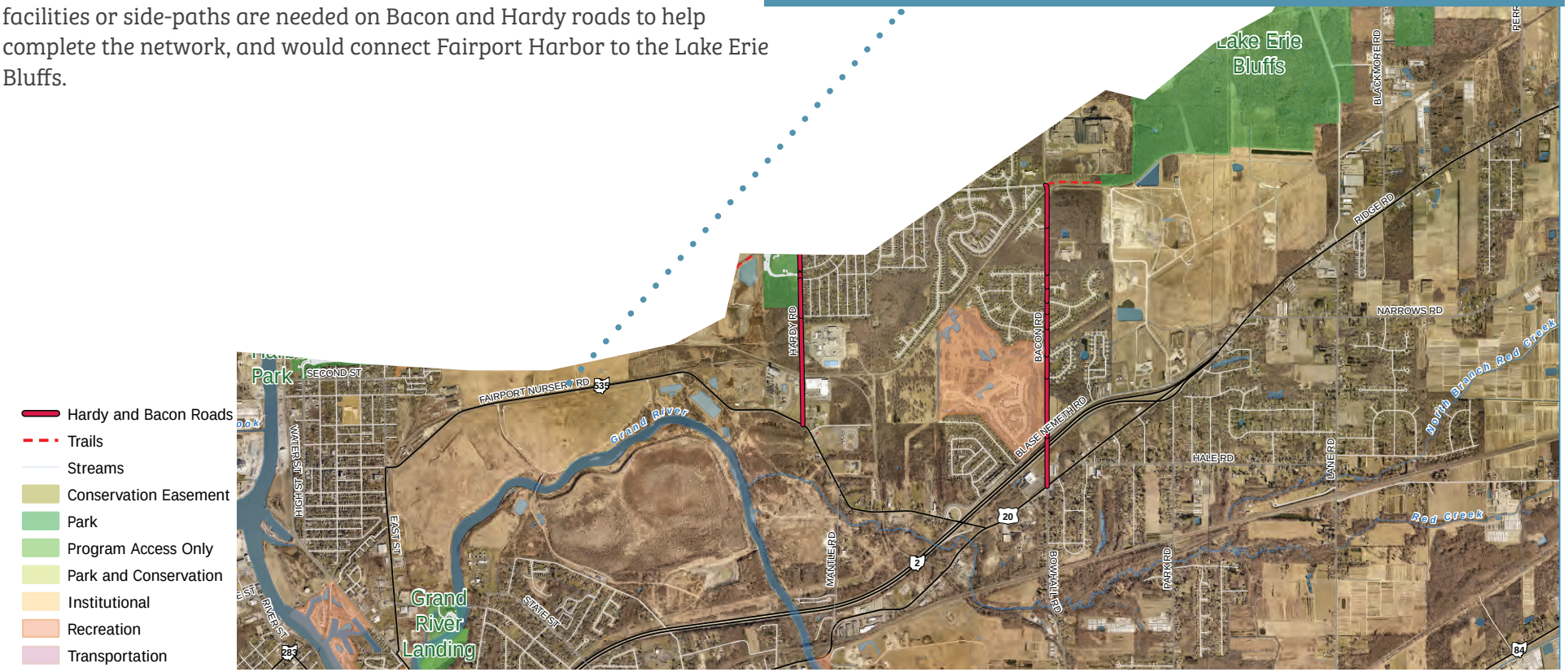


Figure 4.13 | Eastern Lake County Trail Connections
Source: Lake Metroparks

FUTURE INITIATIVES & ACTIVITIES

Parks for Tomorrow

Nearly 60 existing lakefront parks in Northeast Ohio provide tremendous economic, recreational, and environmental benefit. There are also regional and local plans in place to acquire and convert new areas of privatized lakefront land into new public park space, as shown in Figure 4.14. Lake Erie Connect assessed the impacts new and improved parks may have on roadway congestion and parking availability in the future. See Chapter Three for more details on this analysis. This section serves as a future land use plan for the region's lakefront parks.

Figure 4.14 also highlights where plans are in place for major park improvements. Trails and transportation projects, like efforts to reconnect Downtown Cleveland to the North Coast Harbor, are discussed in Chapter One. The Strategy Committee and site visits informed Figure 4.14 and the associated descriptions on the following pages. Lake Erie Connect also resulted in three new site plans, one per county: Pellet Terminal Park in Lorain, Columbia Road Park in Bay Village, and the First Energy Plant in Eastlake.

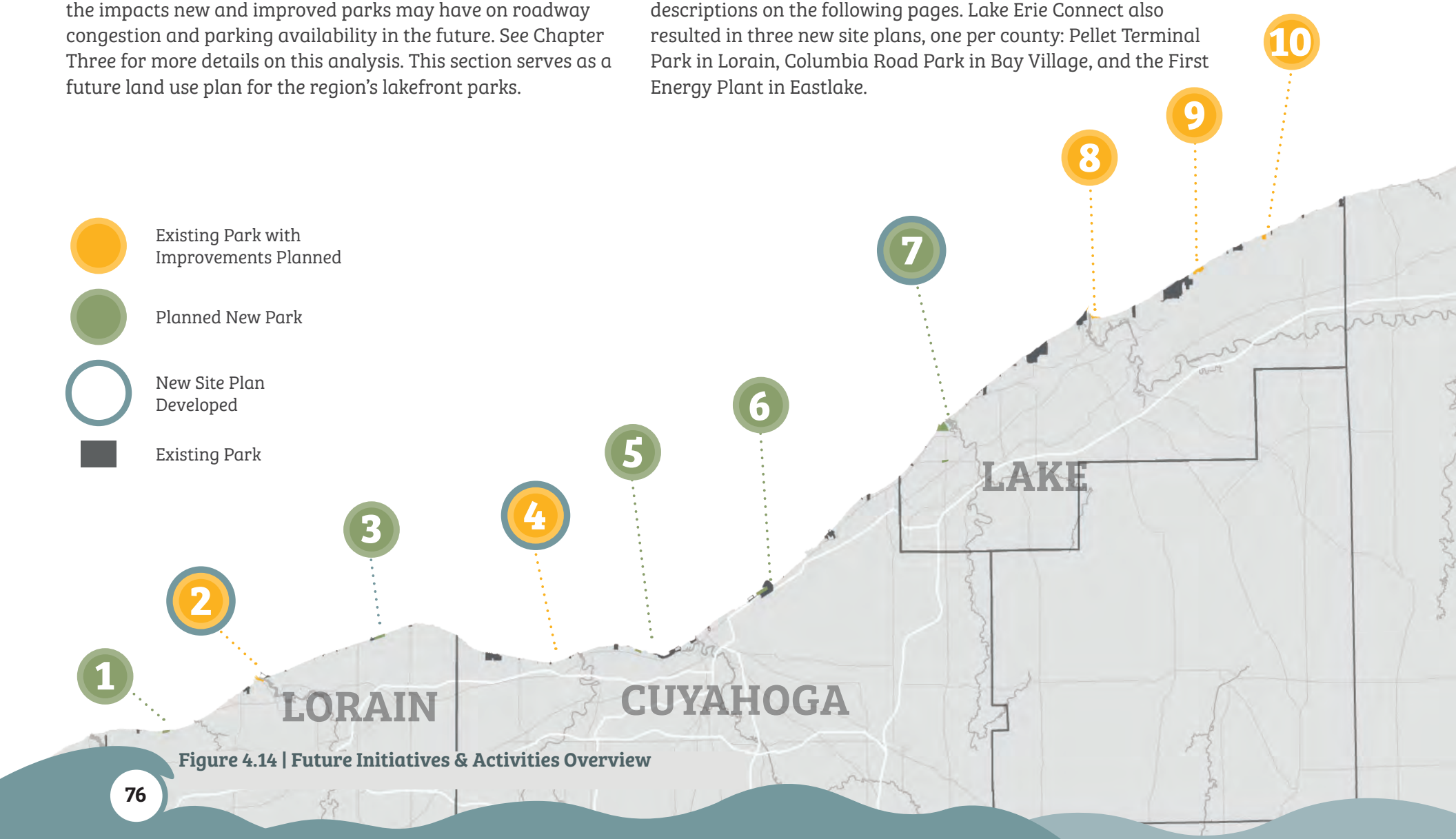


Figure 4.14 | Future Initiatives & Activities Overview

FUTURE INITIATIVES & ACTIVITIES IN LORAIN COUNTY

1 VERMILION/LORAIN TLCI SITE

This privately-owned site is in both the cities of Vermilion and Lorain and was proposed as a future park in the Lorain County Lakefront Connectivity TLCI Plan in 2016. Part of the land is currently used as a privately-owned storage area for cars. The remainder is a vacant brownfield. County and local leaders have been working to acquire and redevelop the site, which offers stunning lakefront views. Plans include a nature center, trails, and restored wetlands and forests.

The Lorain County Lakefront Connectivity Plan produced concepts (top) and renderings (right) for this important site in western Lorain County.

2 PELLET TERMINAL

This area in the City of Lorain's public harbor is a priority area for reinvestment. The Lake Erie Connect Strategy Committee selected this site for a new conceptual design, shown in detail later in this Chapter.

3 NRG SITE

Lorain County leaders are pursuing options to acquire and remediate the former NRG Energy site in Avon Lake. The City of Avon Lake completed a conceptual plan for the site in 2022, which is included in its Master Plan. The proposed concept includes boating areas, significant new public right of way, and park space.

The NRG Energy site today (top) and proposed concept plan as in the Avon Lake Master Plan

FUTURE INITIATIVES & ACTIVITIES IN CUYAHOGA COUNTY

4 COLUMBIA ROAD PARK

This existing park in Bay Village is a priority area for reinvestment. The Lake Erie Connect Strategy Committee selected this site for a new conceptual design, shown in detail later in this Chapter.

5 GOLD COAST

Lakewood's Gold Coast is about 4,000 feet of privately-owned shoreline and a 50-60 foot bluff. Significant erosion has created an opportunity for a private-public partnership with Cuyahoga County leaders and property owners to stabilize the shoreline and add public access. This is a primary recommendation of the Cuyahoga Public Access Plan released in 2022.

Site conditions today and proposed concept plan as found in the Cuyahoga County Lakefront Public Access Plan

6 THE CLEVELAND HARBOR EASTERN EMBAYMENT RESILIENCY STUDY (CHEERS)

CHEERS is a partnership between the City of Cleveland, Cleveland Metroparks, and many local and regional partners to transform the eastern shoreline of the City of Cleveland into a world-class public space and environmental sanctuary. The project proposes reusing dredge materials to create new habitat and park space with an embayment. Transportation connections in and around the new park will be needed to support the project, including updating the overpass that currently connects Gordon Park to the lakefront.

Site conditions near the CHEERS project today; the conceptual plan as shown in the CHEERS report

FUTURE INITIATIVES & ACTIVITIES IN LAKE COUNTY

7 FIRST ENERGY SITE

The partially-closed First Energy Plant in Eastlake is at the mouth of the Chagrin River and could become a new public park and beach. The Lake Erie Connect Strategy Committee selected this site for a new conceptual design, shown in detail later in this Chapter.

8 FAIRPORT HARBOR PARK

The Lake County Port Authority and other local and regional partners are working to improve Fairport Harbor Park with marina upgrades and a new pier and breakwall. The project team is currently seeking funding and planning the implementation of docks, which will provide economic and recreational benefits to the area. A dredging facility is also included to make maintenance easier in the future. Trail connections to Downtown Fairport Harbor are included in the plans to renovate the area.

9 PERRY TOWNSHIP PARK

Erosion control in Perry Township Park is ongoing. Most recently, armor stone revetments were installed to support the eroded bluff near Parmly Mansion.

Parmly Mansion and the Perry Township shoreline by KS Associates.

10 BILL STANTON PARK

Bluff stabilization work at this Madison Township park continues. The most recent plans include a new hillside with landscaping that would allow for public access and views of the lake.

Bluff stabilization in progress in August 2022 by Bill Debus of the News-Herald

FUTURE INITIATIVES & ACTIVITIES

Pellet Terminal Park in the City of Lorain

The Strategy Committee chose Pellet Terminal Park near Lorain's public pier to be studied in detail in this planning effort. The urban design concept shown in Figure 4.15 and defined with descriptions on this page are meant to inspire new interest in the site and solidify the community's vision for the area. The site plan features new mixed-use development, including a hotel.

Lorain Harbor today

Featured Site Elements

1. Sunset pier park and promenade
2. Limited-mobility and ADA Accessible parking
3. Boat and passenger parking area
4. Promenade along mixed-use development
5. Mixed-use development with amenity deck over podium level parking
6. Activated ground level on waterfront promenade
7. Parking and plaza drop-off
8. Hotel
9. Drop-off

Example Images

Figure 4.15 | Pellet Terminal Site Plan

FUTURE INITIATIVES & ACTIVITIES

Columbia Road Park in the City of Bay Village

The Strategy Committee selected Columbia Road Park in the City of Bay Village to be studied in detail in this planning effort. The urban design concept shown in Figure 4.16 and defined with descriptions on this page are meant to inspire new interest in the site and solidify the community's vision for the area. The site plan features an upgraded staircase for lake access and a low-maintenance landscaped design for informal play and activities.

Columbia Road Park's waterfall, by Joseph Oteng, Google Images

Featured Site Elements

1. Upgraded staircase for safer access to the shore
2. Overhead pergola and seating at upper falls overlook
3. Paved walkway and seating along the creek
4. New "art" railing along creek
5. Low maintenance native plantings and butterfly garden
6. Informal lawn for play areas and picnics
7. Fence and "Green" edge extended along Lake Road
8. Paved entrance plaza with park signage
9. New bicycle racks and repair station
10. Re-vamped surface parking to support the park

Example Images

Example Images

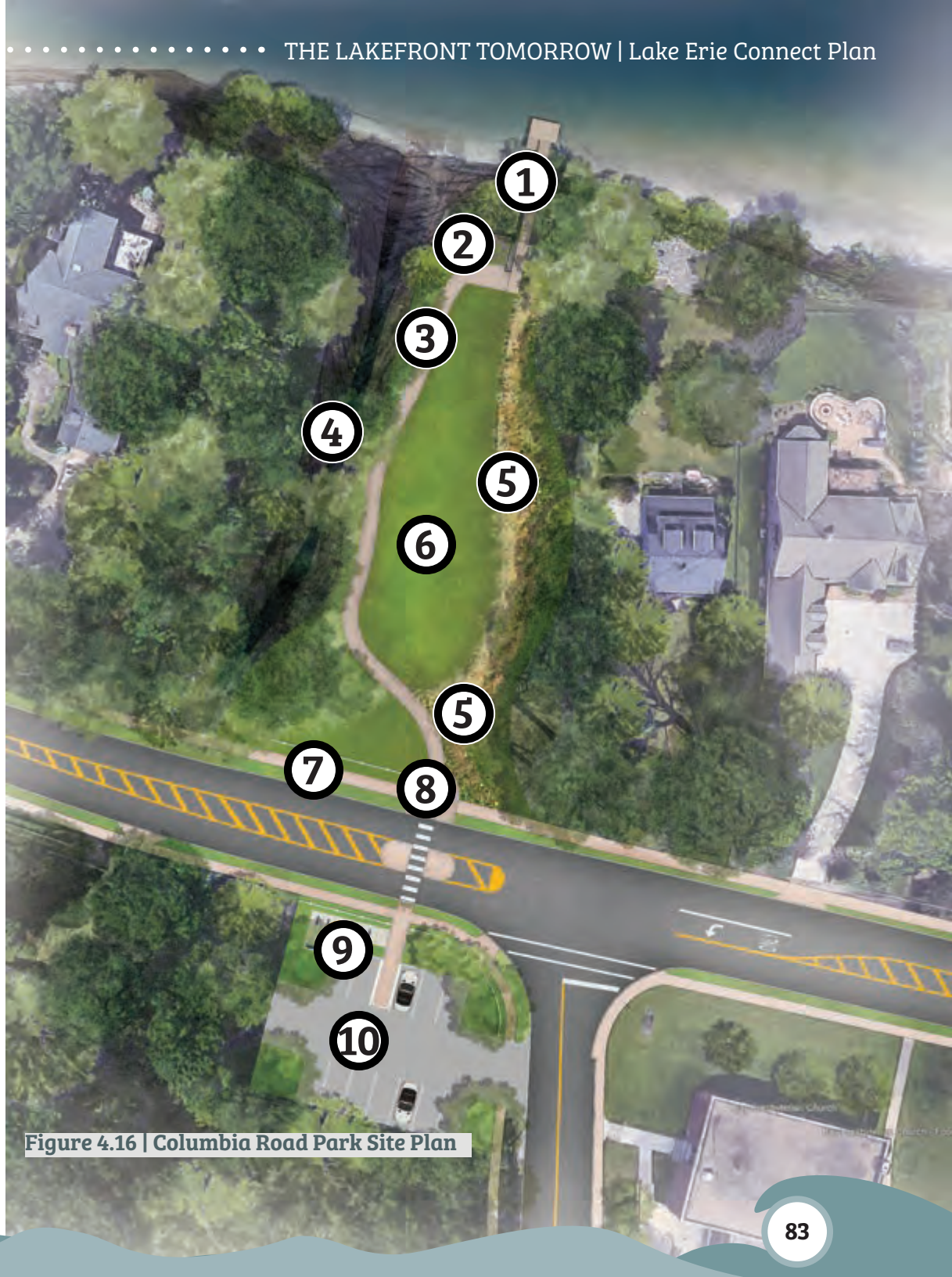


Figure 4.16 | Columbia Road Park Site Plan

FUTURE INITIATIVES & ACTIVITIES

First Energy Site in Eastlake

The Strategy Committee selected the First Energy Site in Eastlake to be studied in detail in this planning effort. The urban design concept shown in Figure 4.17 and defined with descriptions on this page are meant to inspire new interest in the site and solidify the community's vision for the area. The site plan features a boardwalk with opportunities for development, a lakefront trail, and mixed use pavilions to support a variety of activities.

Featured Site Elements

1. **Existing Lakeshore**
2. **Multi-Use Pavilions**
3. **Landscaped Park**
4. **Multi-Use Trail along railroad**
5. **Boardwalk**
6. **Lakefront Trail**
7. **Landscaped parking and drop-off**

Figure 4.17 | First Energy Site Plan

ENVIRONMENTAL CONSIDERATIONS

Planning for Sensitive Environmental Areas

Chapter Three includes a summary of environmental assets and areas of concern near the coastline. The coast is central to significant economic activity and is also rare habitat for many plants and animals in sensitive coastal landscapes. This plan recommends infrastructure improvements in many coastal areas that should be designed carefully to avoid environmental degradation. Figure 4.18 shows the most significant intersections between a transportation recommendation in Lake Erie Connect and an environmental area of concern. There are other priority corridors adjacent to forest land, flood zones, or that cross streams and rivers that may be factors in the development process. Best practices to address these concerns are shown in Table 4.6.

1. A portion of Lake Road borders the Avon Lake Power Plant air quality hotspot. This will be a potential factor in developing an active transportation facility.
2. Porter Creek Drive, Lake Drive, and Wolf Road connect through parks in Bay Village. New active transportation facilities should be designed to have minimal impact on the existing park land.
3. North and South Marginal Road are located near the Burke Lakefront Airport air quality hotspot. This will be a potential factor in developing active transportation facilities.
4. Lakeshore Boulevard and Reynolds Road are located near the Willoughby Lost Nation Airport air quality hotspot. This will be a potential factor in developing active transportation facilities.
5. Heisley Road and Headlands Road connect directly with Headlands Beach State Park and the Carol H Sweet Nature Preserve. New active transportation facilities should be designed to have minimal impact on the existing park land.
6. Lane Road runs through forested areas and into a conservation easement which will be a consideration for future transportation improvements.
7. Parmly Road runs through forested areas which will be a consideration for future transportation improvements.

Figure 4.18 | Environmentally Sensitive Areas and Transportation Recommendations

ENVIRONMENTAL CONSIDERATIONS

Table 4.6 and on this and the following pages summarize general environmental recommendations and Best Management Practices for sensitive coastal areas.

		LORAIN COUNTY	CUYAHOGA COUNTY	LAKE COUNTY
Environmental Resource	Forested Areas	• Avoid further deforestation and fragmentation of existing woodlands; • Priority corridors should identify potential high-quality forested habitat and habitat which may provide suitable habitat for state and federal species of concern; impacts to these areas should be avoided or minimized. • Enhancements, including planting of individual native trees and forested corridors may be implemented by priority corridors when it is feasible and beneficial.		• Avoid further deforestation and fragmentation of existing woodlands; • Individual projects in Mentor Lagoons Nature Preserve and Marina, Mentor Marsh, and other townships should identify potential high-quality forested habitat and habitat which may provide suitable habitat for state and federal species of concern; impacts to these areas should be avoided or minimized. • Enhancements, including planting of individual native trees and forested corridors may be implemented by individual projects when it is feasible and beneficial to the project.
	Water and Wetlands	• Conduct on-site environmental surveys which would identify the presence of wetlands, streams, and other waters and provide an assessment of the ecological value of individual waters; • Avoid direct impacts to streams, wetlands, and other water resources; • When impacts do occur, they should be minimized and planned in a manner which avoids substantial impediments to the ecological, recreational, and economic services provided by these ecosystems; • Preserve undeveloped buffers around wetland and stream resources, which may be required by individual municipalities; • Implement best management practices to avoid erosion and sedimentation into wetlands and stream. • Target individual streams and wetlands for preservation and/or restoration when economically feasible and beneficial to the project, local community, and surrounding environment.		• Avoid direct impacts to streams, wetlands, and other water resources; • When impacts do occur, they should be minimized and planned in a manner which avoids substantial impediments to the ecological, recreational, and economic services provided by these ecosystems; • Preserve undeveloped buffers around wetland and stream resources, which may be required by individual municipalities in Lake County; • Implement best management practices to avoid erosion and sedimentation into wetlands and stream. • Target individual streams and wetlands for preservation and/or restoration when economically feasible and beneficial to the project, local community, and surrounding environment.
	Flood Hazard Areas	• Avoid the deposition of fill material within mapped flood hazard areas which have the potential to raise the mean flood elevation		

Table 4.6 | Environmental Best Practices

	LORAIN COUNTY	CUYAHOGA COUNTY	LAKE COUNTY
Coastal Erosion Areas	• Plan future projects in a manner that neither increases nor subjects new areas to additional shoreline erosion; • Implement shoreline preservation measures which would prevent future erosion on a case-by-case basis.		• Plan future projects in a manner that neither increases nor subjects new areas to additional shoreline erosion; • Implement shoreline preservation measures which would prevent future erosion on a case-by-case basis. • Not anticipated to overlap with transportation connections in Lake County
Combined Sewer Overflows (CSOs)	• Opportunities to fund the removal of CSOs be pursued in conjunction with local and state regulatory agencies and non-governmental organizations; • Removal of CSOs should be implemented on a case-by-case basis when feasible within the scope of priority corridors.		• Not relevant; there are no permitted outfalls in Lake County.
Air Quality	• Future projects be planned and implemented in a manner which does not substantially increase air pollution within the Study Area • Multimodal transportation should be encouraged as a broad strategy to reduce car-dependency and vehicle emissions. In hotspot areas, reducing emissions is especially important, public health is also a concern. Care should be taken to balance these needs with additional study as transportation projects advance in these areas.		
Brownfields	• Priority corridors near Brownfields should be evaluated to determine if remediation is feasible at Brownfield sites. Otherwise improvements should avoid Brownfields		• Not relevant; no coastal brownfields in Lake County.
Conservation Easements	• Avoid direct and indirect impacts to areas protected under a conservation easement		
ODNR Land	• Not relevant; no ODNR public properties in Lorain and Cuyahoga Counties.		• Avoid direct and indirect impacts to high-quality habitats on ODNR properties; • Avoid projects which would have a negative impact on accessibility ODNR properties and other public spaces; • Individual Future transportation projects should identify potential impacts to Department of Transportation Act, Section 4(f) properties, which include public parks, recreation areas, and both public and private historic sites. • Encourage transportation projects which provide improved access to public recreation areas, which would meet the core goals of the Lake Erie Connect Plan; however, this should be done in a manner which does not inhibit access to, or impact the properties during and following construction; • Encourage improvements to east-west transportation corridors, identified by the Lake Erie Connect Plan as the primary means of regional, tourist traffic to the major ODNR properties and other publicly accessible parks and beaches.

Table 4.6 (Continued) | Environmental Best Practices

IMPLEMENTATION MATRIX

UNIFIED VISION

A series of maps and tables compile local initiatives and regional recommendations, creating a cohesive lakefront project list and a region that can compete for funding with one voice.

TRANSFORMATIVE CORRIDORS

Thirty corridors leading to the lake can better serve all people and trips with multimodal designs.

SUPPORTIVE MULTIMODAL INFRASTRUCTURE

Recommendations will close gaps and improve transit stops, improving the user experience and "last mile" connections.

FUTURE INITIATIVES & ACTIVITIES

The designs for three underutilized lakefront sites can spark creativity and additional investment in public land and urban design.

Lake Erie Connect was a multi-year planning process that overlapped with many other exciting initiatives to enhance the region's lakefront. The purpose of the Recommendation Summary (on this and the following pages) is to synthesize Lake Erie Connect's overarching recommendations and support the many local efforts that benefit the region as a whole. Recommendations are organized by the four main themes of this Chapter (left) in Tables 4.7-4.10.

109 INDIVIDUAL MULTIMODAL PROJECTS FORM THE VISION

30 LAKEFRONT ACCESS CORRIDORS IDENTIFIED FOR FUTURE STUDY

43 TRANSIT STOPS IDENTIFIED FOR IMPROVEMENTS

78 NEW OR IMPROVED CROSSWALK LOCATIONS

3 PARK SITE PLANS

UNIFIED VISION

The Unified Vision is a series of maps and tables compile local initiatives and regional recommendations, creating a cohesive lakefront project list and a region that can compete for funding with one voice.

109 INDIVIDUAL MULTIMODAL PROJECTS FORM THE REGIONAL VISION

Strategic Action	Description	Timeline	Partners	Funding/Capacity Sources
Maintain a regional database of transportation projects near the lakefront. See Page 56	**The Unified Vision included in this plan represents a moment in time; updates will need to be logged and the database can be used to track incoming funding and the region's priorities.**	Short (1-3 Years)	NOACA, ODOT, Cuyahoga Greenways Partners, Local Communities, Metroparks	NOACA (Overall Work Program)
Pursue funding for the Unified Vision to increase the region's competitiveness. See Page 63	**The Unified Vision includes a summary of 43 low-stress projects that would directly improve access to Lake Erie. Various local and regional plans are represented, and could be packaged to increase the likelihood of funding.**	Long (10-15 Years)	NOACA, ODOT, Cuyahoga Greenways Partners, Local Communities, Metroparks	NOACA (TLCI, Congestion Mitigation Air Quality, Transportation Alternatives, Carbon Reduction); ODNR (Clean Ohio Fund); Ohio Public Works Commission
Focus additional policy and transportation planning in the Equity Priority Areas. See Page 65	**The Equity Priority Areas are the east-west lakefront route and parks that serve Environmental Justice areas or could to greater effect. Using the Equity Priority Areas to guide future active transportation work at NOACA would activate the new transportation data produced in this plan.**	Short (1-3 Years)	NOACA	NOACA (Overall Work Program)

Table 4.7 | Unified Vision Recommendations

TRANSFORMATIVE CORRIDORS

Thirty corridors leading to the lake can better serve all people and trips with multimodal designs.

30 LAKEFRONT ACCESS CORRIDORS IDENTIFIED FOR FUTURE STUDY

Strategic Action	Description	Timeline	Partners	Funding/ Capacity Sources
Create Complete Streets plans for the 30 priority north-south corridors. See Page 66	**These 30 corridors connect 125,000 Northeast Ohioans to a lakefront park within a walking or biking distance. Enhancing these routes with multimodal infrastructure will promote safer access.**	Medium (5-9 Years)	NOACA, Local Communities	NOACA TLCI, local planning resources
Implement the region's lakefront trail plans for east-west connectivity. See Page 74	**The east-west lakefront route connects the region's lakefront parks, yet just 61 percent of the route has sidewalks today. The Lorain County Lakefront Connectivity Plan, Cuyahoga County Lakefront Public Access Plan, and Central Lake County Lakefront Connectivity Plan are keystone documents that would support the route with multimodal infrastructure. This plan closes the gap in Lake County with plans for new waterfront routes in eastern and western Lake County. Implementing these plans is the next step to supporting equitable access.**	Long (10-15 Years)	NOACA, ODOT, Cuyahoga Greenways Partners, Local Communities, Metroparks	NOACA (TLCI, Congestion Mitigation Air Quality, Transportation Alternatives, Carbon Reduction Program); ODNR (Clean Ohio Fund); Ohio Public Works Commission

Table 4.8 | Transformative Corridor Recommendations

MULTIMODAL INFRASTRUCTURE

Recommendations will close gaps and improve transit stops, improving the user experience and "last mile" connections.

78 NEW & IMPROVED CROSSWALKS

43 TRANSIT STOPS

Strategic Action	Description	Timeline	Partners	Funding/ Capacity Sources
Enhance transit waiting environments on the east-west route. See Page 68	Over 40 transit stops are identified in this plan for ongoing assessment and targeted improvements like overhead shelters, kiosks, benches, branding, and wayfinding.	Long (10-15 Years)	NOACA, Transit Agencies	NOACA (TLCI, Transportation Alternatives, STBG, Pilot TOD Program, Congestion Mitigation Air Quality)
Ensure that all uncontrolled pedestrian crossings on the east-west route have basic safety infrastructure. Consider enhanced safety improvements on a case-by-case basis. See Page 70	The east-west route must be crossed by nearly everyone traveling to a lakefront park. This plan prioritizes 35 uncontrolled crossings near lakefront parks that should be assessed for improvement. Some appear to lack basic safety infrastructure, like striping and signage, while others may need more enhanced infrastructure based on traffic conditions.	Medium (5-9 Years)	NOACA, ODOT, Cuyahoga Greenways Partners, Local Communities, Metroparks	NOACA (TLCI, Transportation Alternatives); ODOT (Safety Program)
Support lakefront public access with additional pedestrian crossings on the east-west route. See Page 72	Lake Erie Connect identified areas where pedestrian access to the lakefront is limited, and provides a list of forty-three locations where new pedestrian access should be considered.	Medium (5-9 Years)	NOACA, ODOT, Cuyahoga Greenways Partners, Local Communities, Metroparks	NOACA (TLCI, Transportation Alternatives); ODOT (Safety Program)

Table 4.9 | Multimodal Infrastructure Recommendations

FUTURE INITIATIVES & ACTIVITIES

The designs for three underutilized lakefront sites can spark creativity and additional investment in public land and urban design.

3 PARK SITE PLANS

Strategic Action	Description	Timeline	Partners	Funding/ Capacity Sources
Support land acquisition and reclamation by public agencies. See Page 76	**New plans are in motion for at least ten new or improved public spaces on the lakefront. New parks pose a minimal risk of congestion based on this plan's analysis, and would strengthen the environmental resiliency and economy of the region.**	Long (10-15 Years)	NOACA, Local Communities, Metroparks, Land Conservancies	Metroparks, Land Conservancies
Look for opportunities to enhance public art and placemaking near the lakefront. See Page 49	**Placemaking supports a resilient and exciting lakefront experience by offering unique things to look at and do along the way, while accentuating the personality of a community.**	Medium (5-9 Years)	NOACA, ODOT, Cuyahoga Greenways Partners, Local Communities, Metroparks	NOACA (TLCI, Congestion Mitigation Air Quality, Transportation Alternatives); ODNR (Clean Ohio Fund); Ohio Public Works Commission
Create a consistent, regional wayfinding scheme designed for all modes. See Page 48	**The region today has inconsistent branding and sparse wayfinding in many locations. Welcoming, consistent wayfinding will help the public easily navigate all that the lakefront has to offer.**	Short (1-3 Years)	NOACA, ODOT, Lake Erie Coastal Ohio Scenic Byway	NOACA TLCI

Table 4.9 | Future Initiatives & Activities Recommendations

APPENDIX A.

PARK TRAVEL TRENDS

- Public Access Point Methodology
- Park Summary Pages
  - Lorain County
  - Cuyahoga County
  - Lake County

THE REGION'S PARKS

The NOACA region is rich with recreational opportunities as shown in Figure A.1. All five NOACA counties have recreational destinations that support environmental conservation and quality of life. Larger park systems and those with unique amenities draw people from across the region and beyond. This study focuses on the parks closest to the lakefront.

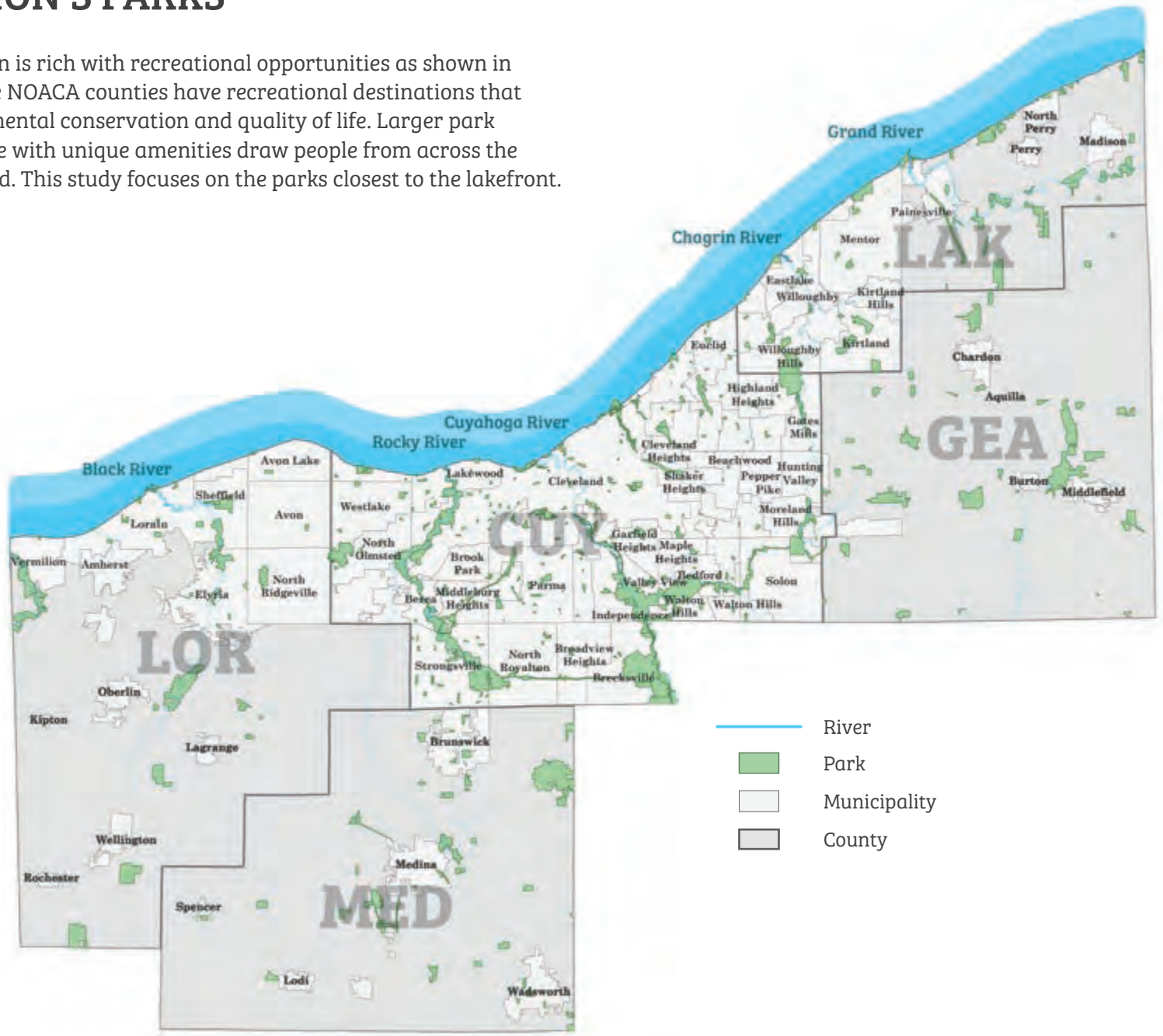


Figure A.1 | The Region's Parks

PUBLIC ACCESS POINT METHODOLOGY

The project team identified the 59 public access sites (or lakefront parks) in the NOACA region today using resources like the Ohio Department of Natural Resource's Coastal Atlas, parcel data from lakefront municipalities, and the Lake Erie Connect site visit notes. Each of the 59 sites consists of one or more contiguous parcels owned by a public entity and bound by Lake Erie.

Reading the Park Pages

In an effort to honor the characteristics of each particular site, **this chapter provides a summary page for each park that attracts on average at least 100 trips per day or has major improvements planned for the future**. The key, Figure A.2 to the right, describes each element of the page. The StreetLight methodology that produced the travel trends is discussed in Appendix D.

Figure A.2 | Park Page Example

LORAIN COUNTY'S LAKEFRONT SITES

Lorain County has 14 public access points to Lake Erie. Table A.1 summarizes each site's characteristics, including the park operator, area, coastline, estimated daily visitation, and parking availability.

The largest and most popular lakefront site in the County is Lakeview Park in the City of Lorain. Other sites with over 100 visitors per day include the Lakeside Landing, Sheffield Lake Community Park, Miller Road Park, and Veterans Memorial Park. This is not to say that smaller parks or those that attract fewer visitors are not vital community assets. In Lorain County, smaller parks include Brownhelm Township Lakefront Park, Waverly Place Park, and the historic Avon Lake Cemetery.

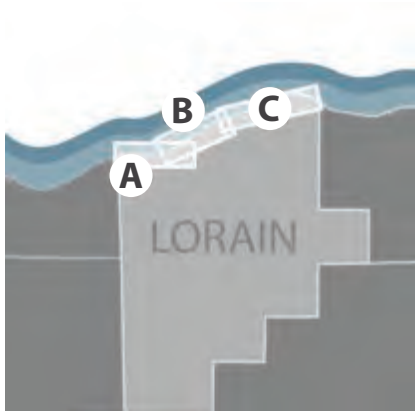
Veterans Memorial Park in the City of Avon Lake features a path leading to beautiful views of Lake Erie.

NAME	#	MUNICIPALITY	OPERATOR	AREA*	COASTLINE**	DAILY VISITORS	PARKING LOT
Showse Park	1	City of Vermilion	City	18.0	0.15	less than 100	Yes
Brownhelm Township Lakefront Park	2	City of Vermilion	Township	0.5	0.02	less than 100	No
Waverly Place Park	3	City of Lorain	City	0.6	0.04	less than 100	No
Lakeview Park	4	City of Lorain	Metroparks	49.3	0.36	1,500	Yes
Lorain Public Pier and Boat Ramp	5	City of Lorain	City	25.2	0.18	200	Yes
Lakeside Landing	6	City of Lorain	Port Authority	14.9	0.38	600	Yes
Century Park	7	City of Lorain	Metroparks	2.8	0.09	less than 100	No
Lakewood Beach Park	8	City of Sheffield Lake	City	0.7	0.05	less than 100	Yes
Sheffield Lake Community Park	9	City of Sheffield Lake	City	2.8	0.13	200	Yes
West Shore Park / Community Center	10	City of Sheffield Lake	City	2.8	0.06	less than 100	Yes
Shell Cove Park	11	City of Sheffield Lake	City	1.5	0.06	less than 100	Yes
Miller Road Park	12	City of Avon Lake	City	17.7	0.27	400	Yes
Avon Lake Cemetery	13	City of Avon Lake	City	1.0	0.02	less than 100	Yes
Veterans Memorial Park	14	City of Avon Lake	City	5.8	0.15	700	Yes

Table A.1 | Lorain County Lakefront Sites
Area in Acres, **Coastline in Miles

LORAIN COUNTY'S LAKEFRONT SITES

The 14 public access sites in Lake County are shown in Figure A.3. The site numbers match Table A.1 on the previous page and the site summary pages that follow.



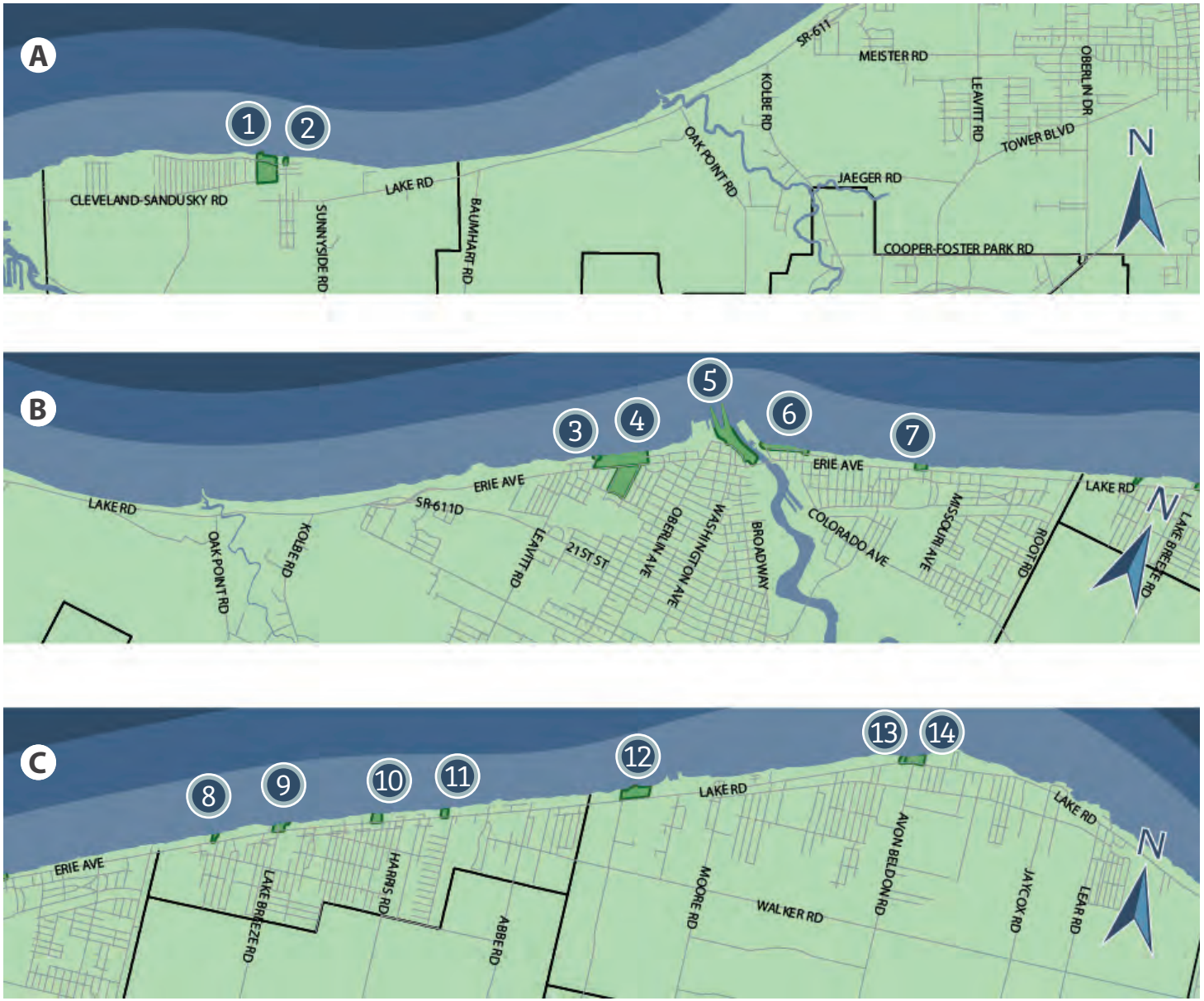
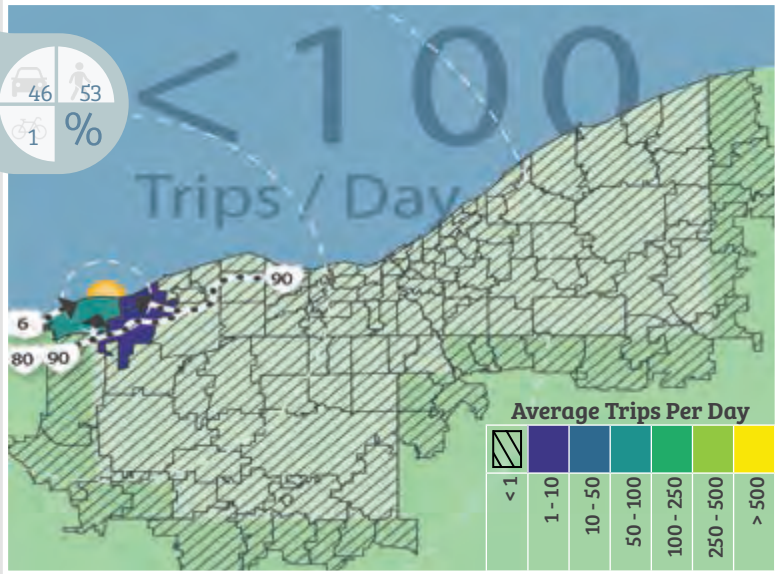


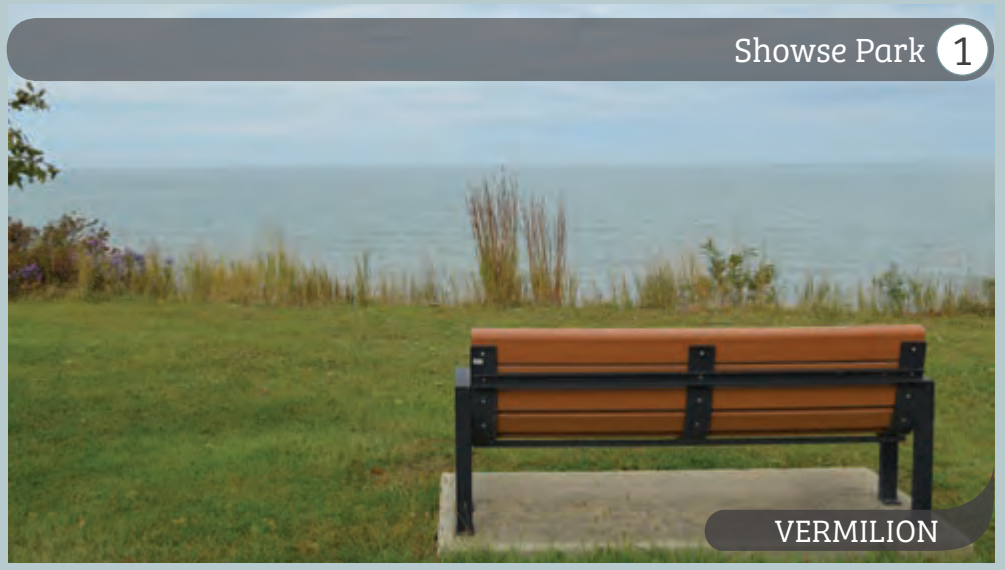
Figure A.3 | Lorain County Lakefront Sites

ACCESS

MODE



Showse Park 1



Showse Park is owned by the City of Vermilion and has a number of amenities including restrooms, a picnic area, and playgrounds. The park has three entrances and connects to several calm, low-stress roads, but is not near dedicated bike facilities and the nearby railroad presents a barrier. There is no transit connection to the park currently. The park attracts just under 100 trips a day and draws people mostly from nearby neighborhoods. Over half of trips arrive by biking and walking, while 46% of visitors drive a vehicle to the park.

AMENITIES

STANDARD

ADDITIONAL
Pier

OPERATOR
city

AREA
18.0

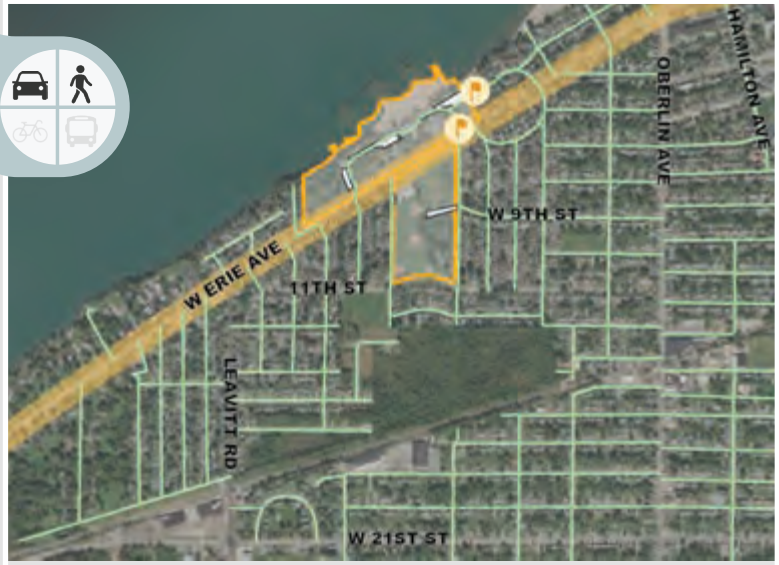
COASTLINE
0.15

COAST TYPE
low bank

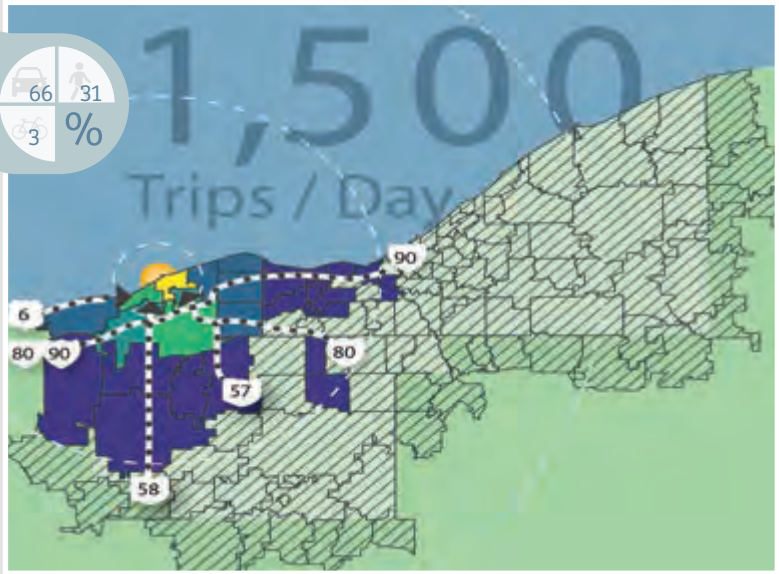
KEY THEMES FROM PUBLIC INPUT

Survey responses for Showse Park noted its active and passive amenities and that the park feels safe and clean.

ACCESS



MODE



Lakeview Park 4

Photo by Lorain County Metroparks

LORAIN

Lakeview Park is a large park operated by Lorain County Metroparks in the City of Lorain. The park offers a variety of amenities, including the popular Historical Rose Garden and the Sunset Terrace event space. The park has two entrances on Erie Avenue and is easily accessed by car, and there are crosswalks nearby on Erie Avenue. The park attracts 1,500 trips per day from the area, reaching into southern Lorain County and western Cuyahoga County. Still, around one-third (31%) of visitors arrive on foot, likely relying on the crosswalks on Erie Avenue to arrive.

AMENITIES

STANDARD

ADDITIONAL

Food Stand, Lighthouse, Observation Deck, Historical Marker, Boardwalk

OPERATOR

met.

AREA

49.3

COASTLINE

0.36

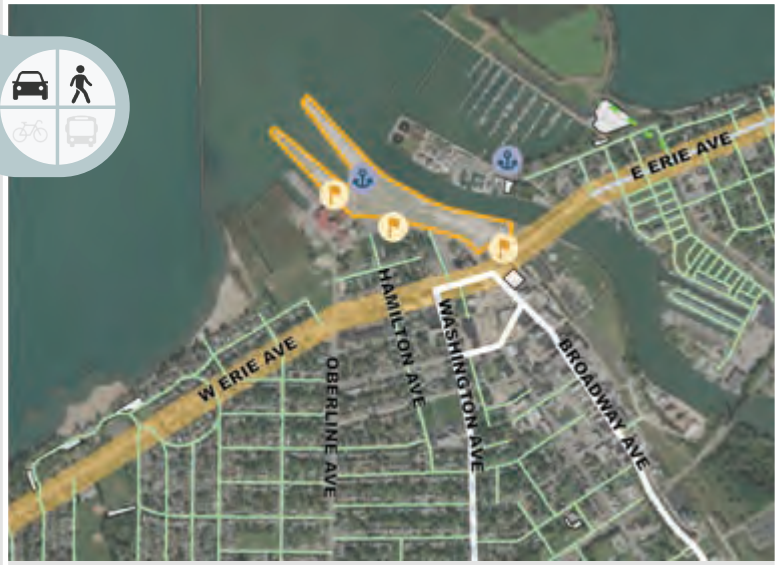
COAST TYPE

beach

KEY THEMES FROM PUBLIC INPUT

Survey responses for Lakeview Park noted its nice beach as an attraction for people walking and biking, even from far away.

ACCESS



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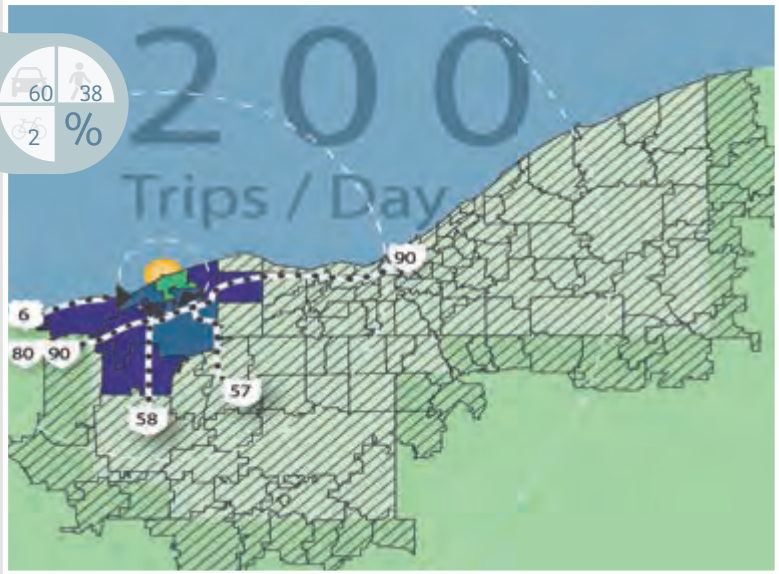


The Lorain Public Pier and Boat Ramp is also called "Hot Waters" and is on the west side of the Black River. This is a popular place for birding, fishing, boating, and also has access to a pier, lighthouse, and boardwalk. The park has multiple entrances and is primarily accessible by vehicle, although it does connect to several low-stress streets and crosswalks. This site attracts around 200 trips per day from northern Lorain County, with around 60% of trips currently arriving by car.

AMENITIES

STANDARD

ADDITIONAL

Vending Machines, Pier, Lighthouse, Boardwalk

OPERATOR
city

AREA
25.2

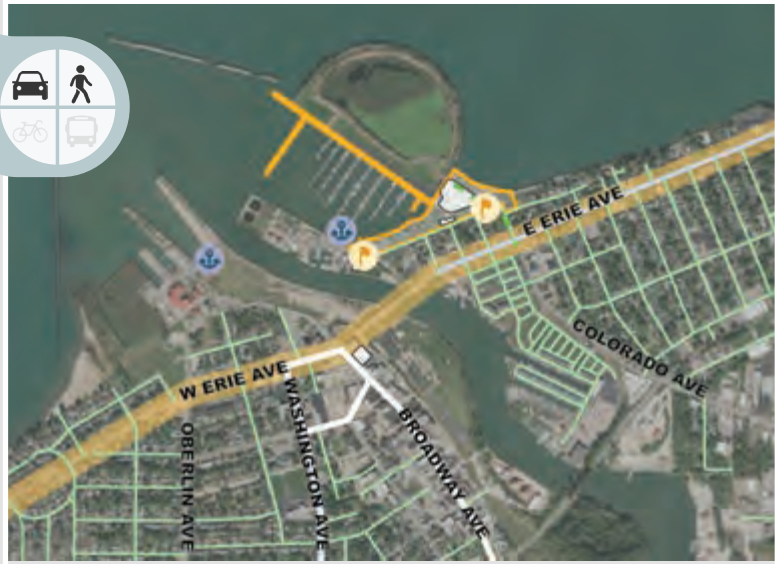
COASTLINE
0.18

COAST TYPE
harbor

KEY THEMES FROM PUBLIC INPUT

Survey responses noted the Pier's easy access and parking for motorists, proximity to city neighborhoods, and marina as positives.

ACCESS



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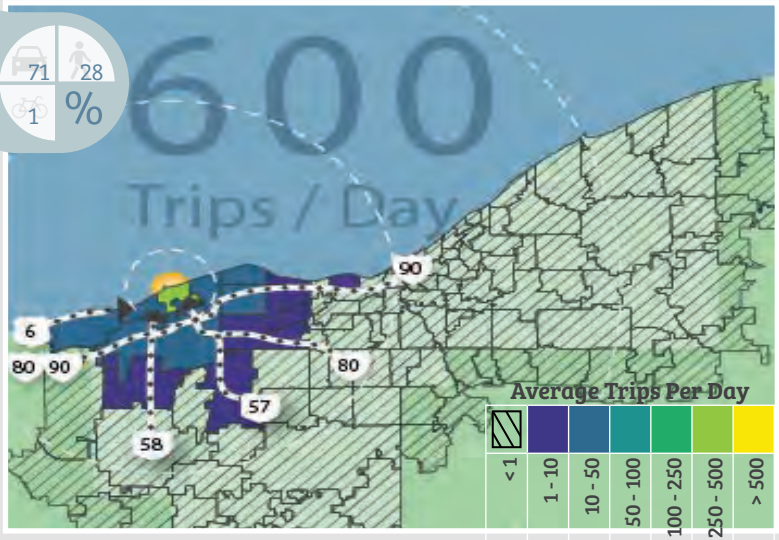
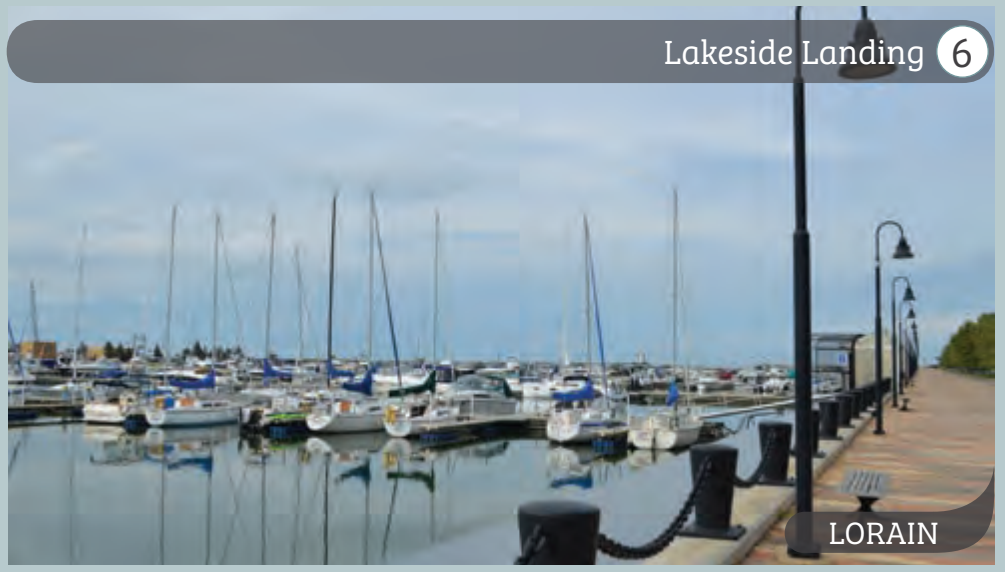


Lakeside Landing 6



Lakeside Landing is on the east side of the Black River and has an observational deck ideal for picnicking, fishing, and bird watching. Lakeside Landing is just across the river from the City's fishing pier, and visitors must cross the Erie Avenue bridge to get from one site to the other. The park has two entrances that are both near sidewalks and trails. A majority of visitors arrive to the park by car (71%). This park attracts around 600 trips per day primarily from northern Lorain County and western Cuyahoga County.

AMENITIES

STANDARD

ADDITIONAL

Vending Machines, Pier, Lighthouse, Observation Deck, Historical Marker, Boardwalk

OPERATOR
port

AREA
14.9

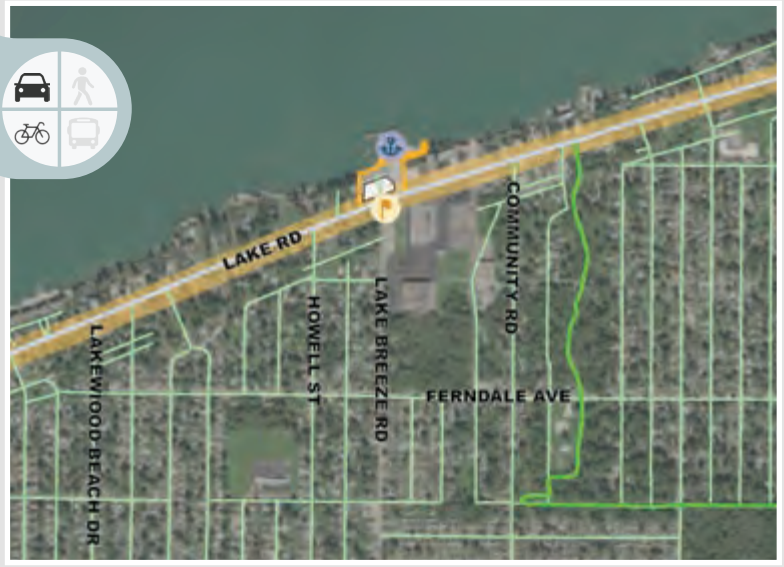
COASTLINE
0.38

COAST TYPE
beach

KEY THEMES FROM PUBLIC INPUT

No responses specific to this park were received.

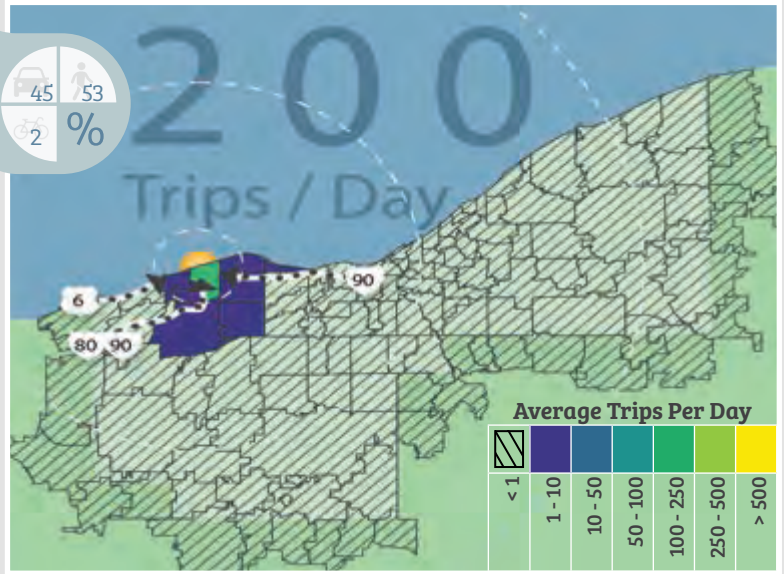
ACCESS



Site Boundary | Trail | Low Stress Road
Park Entry | Bike Lane | Scenic Byway
Boating
Parking Lot

MODE

45 % 53
2



Sheffield Lake Community Park 9

Sheffield Lake Community Park is operated by the City of Sheffield Lake and offers a number of amenities including a pier and a picnic area. It is also next to a public library. The park has one entrance on the north side of US-6 and is easy to access by car. Pedestrians can cross at a recently-installed crosswalk near Lake Breeze Road, but sidewalks in the area are limited. The park attracts around 200 trips per day primarily from nearby neighborhoods, and just over half (53%) of visitors arrive on foot.

AMENITIES

STANDARD

ADDITIONAL
Pier, Binoculars, Boardwalk

OPERATOR
city

AREA
2.8

COASTLINE
0.13

COAST TYPE
beach

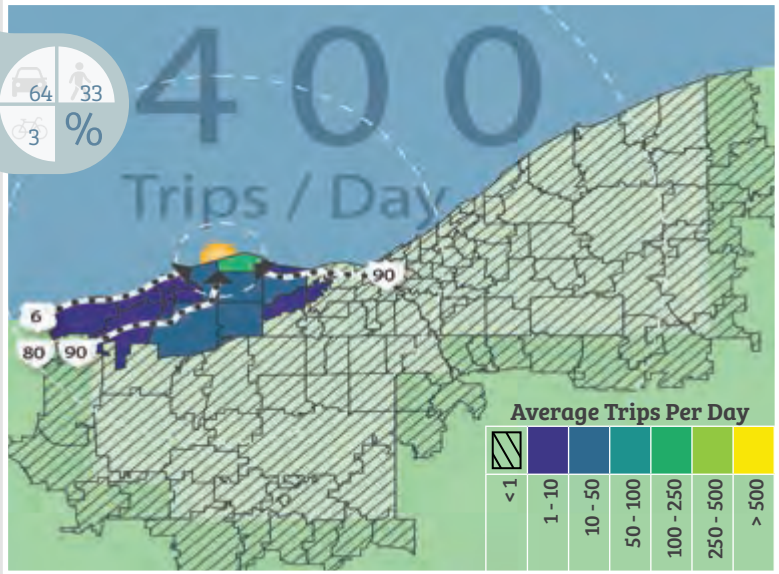
KEY THEMES FROM PUBLIC INPUT
No responses specific to this park were received.

ACCESS

Site Boundary
Park Entry
Trailhead
Boating
Parking Lot
Trail
Bike Lane
Low Stress Road
Scenic Byway

MODE

64 % 33 3



Miller Road Park 12

Miller Road Park in the City of Avon Lake features a long pier that is popular for fishing and sunset viewing. The park has one main entrance that is along a bike lane and an all-purpose trail system inside the park. The park attracts 400 trips per day from northern Lorain County including the City of Avon, and most visitors arrive by car (64%). To accommodate driving visitors, the park has a sizable parking lot that connects to park trails. Still, one-third of visitors arrive on foot to the park, likely relying on the crosswalks at Miller Road and sidewalks along Lake Road.

AMENITIES

STANDARD

ADDITIONAL
Vending Machines, Pier, Historical Marker, Educational Signage

OPERATOR
city

AREA
17.7

COASTLINE
0.27

COAST TYPE
beach

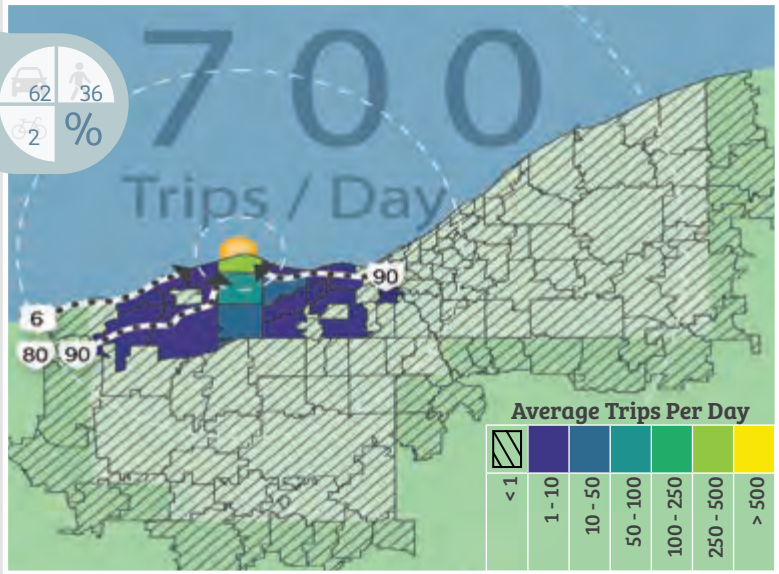
KEY THEMES FROM PUBLIC INPUT

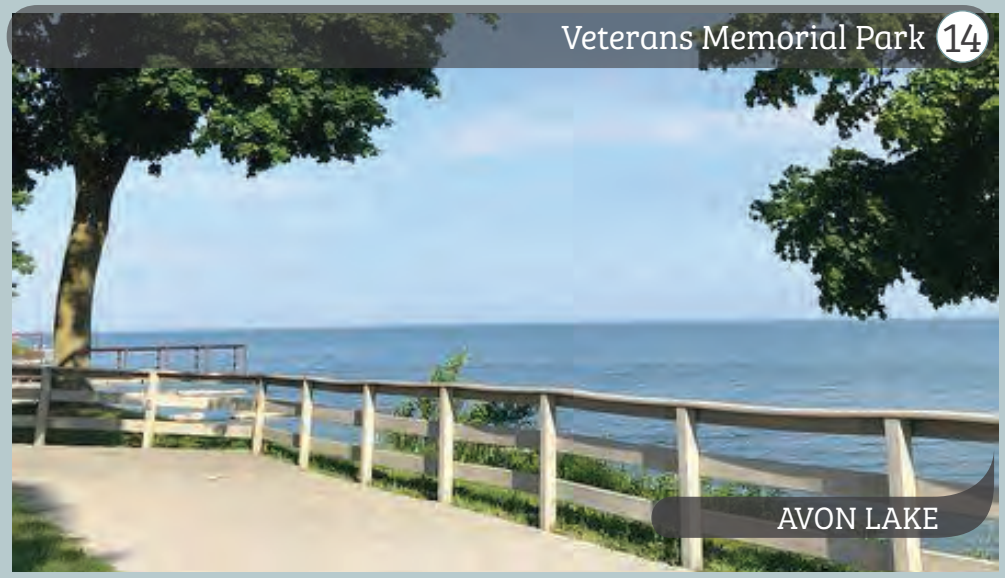
Survey responses noted Miller Road Park's clean facilities and easy access for motorists as positives. Lack of walking trails and lack of amenities were commonly cited as reasons people don't visit as often as they might.

ACCESS

Site Boundary | Trail | Low Stress Road
Park Entry | Bike Lane | Scenic Byway
Parking Lot

MODE





Veterans Memorial Park is operated by the City of Avon Lake and offers a number of amenities including picnic areas with charcoal grills, a fishing pier, swimming beach, and playground. There are three rental facilities located in the park popular for weddings, family reunions, and other private events. Located at the intersection of State Route 83 and State Route 6 the park is easily accessible by car and bicycle. The park attracts around 700 visitors a day, primarily from the local community.

AMENITIES

STANDARD

ADDITIONAL
Pier, Boardwalk

OPERATOR
city

AREA
5.8

COASTLINE
0.15

COAST TYPE
beach

KEY THEMES FROM PUBLIC INPUT

Survey responses noted Veterans Memorial Park's historic buildings, walking paths, and lack of crowds as positives. Difficulty parking and poor ADA-accessibility were cited as barriers to increased visitation.

105

CUYAHOGA COUNTY'S LAKEFRONT SITES

There are 22 lakefront sites in Cuyahoga County, as shown in Table A.2. As the most populated county in the region, the County has a range of parks that serve nearby residents and regional visitors. The most popular park in the County (and the NOACA region) is Edgewater Park, attracting an average of 7,600 daily visitors from all over Northeast Ohio.

There are a number of lakefront sites that are small but important cultural resources, like Rose Point in Rocky River, which is maintained in part by volunteers and attracts sunset viewers from the surrounding neighborhood. Other small scenic access points include road right-of-way endings that are largely unimproved but belong to public agencies, like Cliff Drive and Webb Road in Lakewood.

NAME	#	MUNICIPALITY	OPERATOR	AREA**	COASTLINE***	DAILY VISITORS	PARKING LOT
Lakeside Cemetery	15	City of Bay Village	City	0.7	0.02	less than 100	No
Huntington Reservation	16	City of Bay Village	Metropark	102.3	0.40	2,100	Yes
Cahoon Memorial Park	17	City of Bay Village	City	93.6	0.39	1,700	Yes
Columbia Park	18	City of Bay Village	City	1.6	0.02	less than 100	Yes
Bradstreet's Landing	19	City of Rocky River	City	6.0	0.08	200	No
Rocky River Park	20	City of Rocky River	City	6.0	0.09	400	Yes
Rose Point	21	City of Rocky River	City	0.8	0.08	less than 100	No
Webb Road Scenic Access	22	City of Lakewood	City	0.2	0.02	less than 100	No
Summit Avenue Scenic Access	23	City of Lakewood	City	0.1	0.02	less than 100	No
Lakewood Park	24	City of Lakewood	City	40.6	0.25	4,500	Yes
Cliff Drive Scenic Access	25	City of Lakewood	City	0.6	0.13	less than 100	No
Edgewater Park	26	City of Cleveland	Metropark	134.4	1.91	7,600	Yes
Wendy Park	27	City of Cleveland	Metropark	25.4	0.35	500	Yes
North Coast Harbor / Voinovich Park / East Ninth Street Pier	28	City of Cleveland	City	9.5	0.25	3,700	Yes
East 55th Street Marina	29	City of Cleveland	Metropark	20.2	0.61	900	Yes
Gordon Park	30	City of Cleveland	Metropark	51.5	0.52	1,300*	Yes
Cleveland Lakefront Nature Preserve	31	City of Cleveland	Port	92.0	0.37	1,300*	Yes
Bratenahl Road Scenic Access	32	Village of Bratenahl	Village	0.5	0.03	less than 100	No
Euclid Beach	33	City of Cleveland	Metropark	18.9	0.20	700	Yes
Villa Angela and Wildwood Park	34	City of Cleveland	Metropark	69.6	0.33	600	Yes
Euclid Park	35	City of Euclid	City	3.5	0.06	less than 100	No
Sims Park	36	City of Euclid	City	33.2	0.18	500	Yes

Table A.2 | Cuyahoga County Lakefront Sites

Sites 30 and 31 were analyzed together due to their proximity, **Area in Acres, ***Coastline in Miles

CUYAHOGA COUNTY'S LAKEFRONT SITES

Cuyahoga County's lakefront sites are shown in Figure A.4. The numbering of the sites match Table A.2 on the previous page and the site summary pages that follow.

Figure A.4 | Cuyahoga County Lakefront Sites

ACCESS

Site Boundary
Park Entry
Trailhead
Parking Lot
Trail
Active Trail
Bike Lane
Buffered Bike Lane
Low Stress Road
Scenic Byway
GCRTA Bus Route

MODE

92 % 6 2

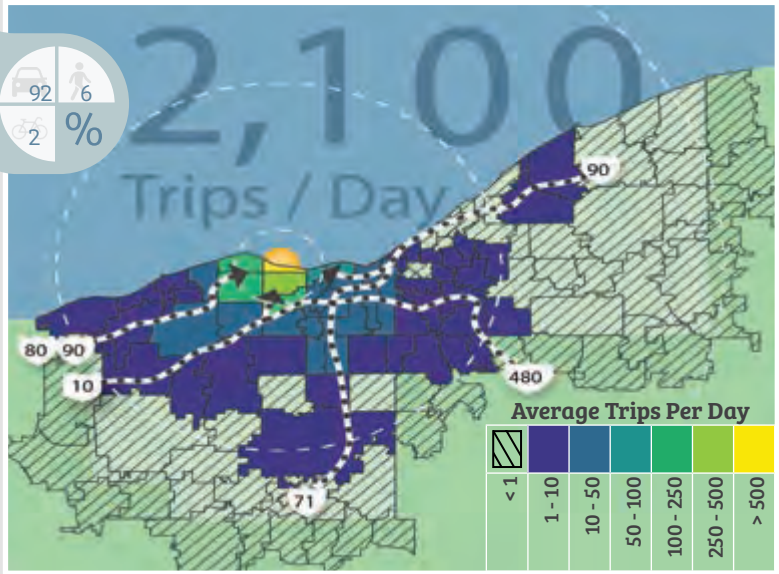


Photo by Cleveland Metroparks

Huntington Reservation is one of the most popular parks in the region, attracting over 2,100 trips per day. Operated by the Cleveland Metroparks, Huntington Reservation has a restaurant, picnic area, and playground. The park draws visitors from all over the NOACA region. Over 92% of visitors arrive by car, likely using one of the two sizable parking lots on either side of US-6 to access the park. Pedestrians can arrive using connected trails, and the park is also along a GCRTA bus route.

AMENITIES

STANDARD

ADDITIONAL
Food Stand, Vending Machines, Pier, Observation Deck, Educational Signage

OPERATOR
met.

AREA
102.3

COASTLINE
0.4

COAST TYPE
beach

KEY THEMES FROM PUBLIC INPUT

Survey responses noted Huntington Reservation's amenities, and easy access for all modes as positives. The steps to the beach are difficult for some to use, while others were not aware of the recent improvements at the park.

108

ACCESS

Site Boundary
Park Entry
Trailhead
Parking Lot
Trail
Active Trail
Bike Lane
Active Bike Lane
Buffered Bike Lane
Low Stress Road
Scenic Byway
GCRTA Bus Route

MODE

85 % 13 2

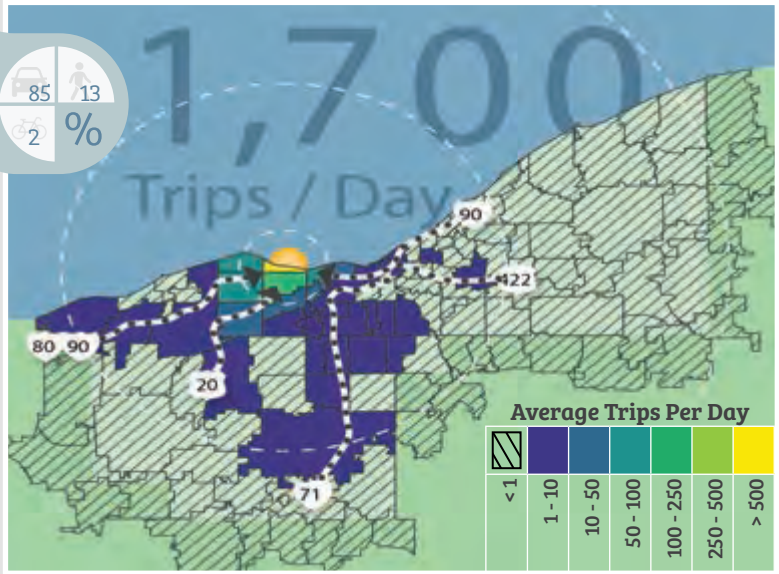


Photo Source: Cahoon Park Access Study

Cahoon Memorial Park is a large park in the City of Bay Village. The park attracts 1,700 trips per day, primarily from Cuyahoga and Lorain counties. The park has three entrances, connects to recently installed bike lanes and crosswalks on US-6, and is along a GCRTA transit line. Currently, 85% of visitors arrive to the park by car, 13% walk to the park, and 2% arrive by bicycle. The park was recently studied for improvements with a new master plan and was awarded NOACA TLCI Implementation funding for a new pedestrian bridge.

AMENITIES

STANDARD

ADDITIONAL
Educational Signage

OPERATOR
city

AREA
93.6

COASTLINE
0.39

COAST TYPE
low bank

KEY THEMES FROM PUBLIC INPUT

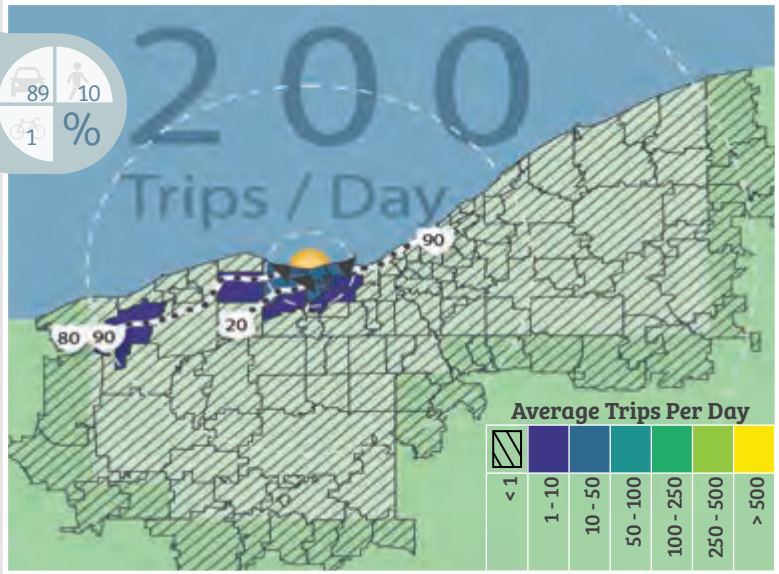
Survey responses noted Cahoon Memorial Park's safe and clean facilities and ease of access for all modes of transportation as positives. Suggestions to increase visitation were limited, but included making the beach dog-friendly.

ACCESS

Site Boundary
Park Entry
Trailhead
Parking Lot
Low Stress Road
Scenic Byway
GCRTA Bus Route

MODE

89 % 10 1



Bradstreet's Landing 19

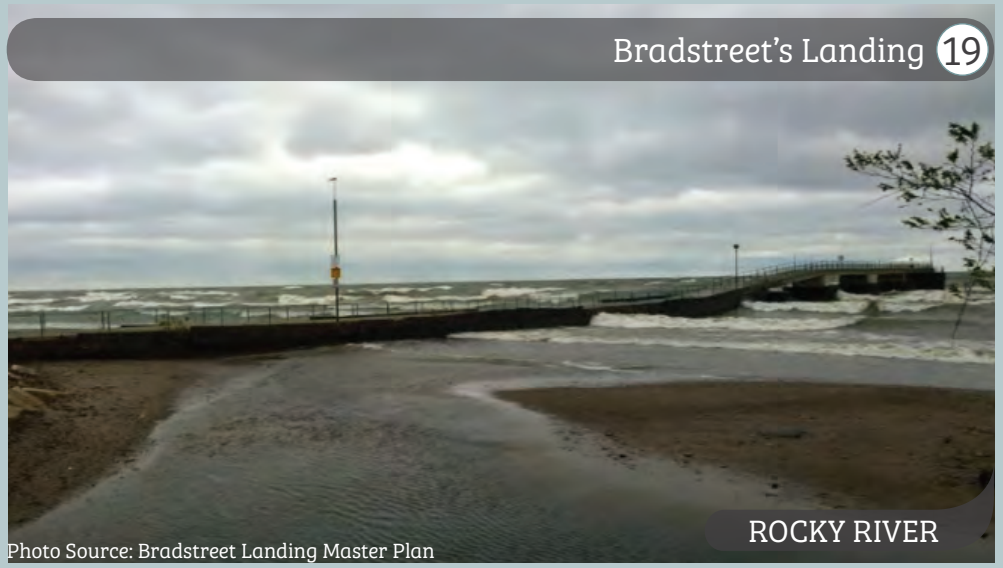


Photo Source: Bradstreet Landing Master Plan

Bradstreet's Landing is the site of the infamous Bradstreet Disaster, which demonstrated the power of Lake Erie's shallow but strong waves. Today, the park has a picnic area, restrooms, and is an ideal place for birding and fishing. The park attracts around 200 trips per day, primarily from nearby neighborhoods. The park has one entrance and is accessible by transit. Currently, 89% of trips arrive by car, and the park has a small parking lot. There are also transit stops directly in front of the park entrance. The City of Rocky River is currently redesigning the park.

AMENITIES

STANDARD

ADDITIONAL
Food Stand, Pier, Observation Deck, Historical Marker

OPERATOR
city

AREA
6.0

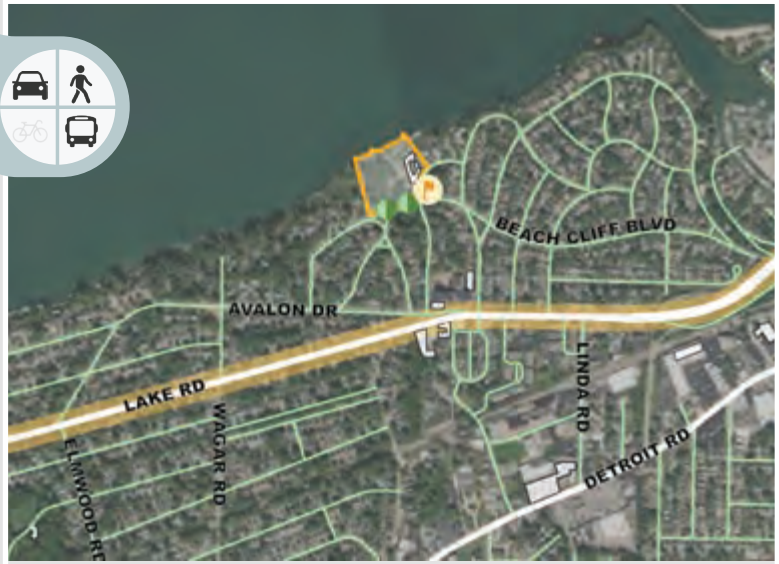
COASTLINE
0.08

COAST TYPE
low bank

KEY THEMES FROM PUBLIC INPUT

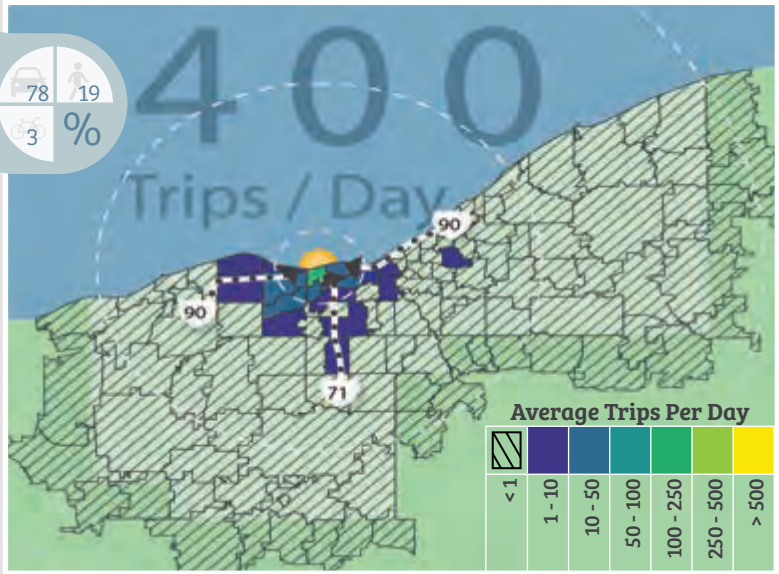
Survey responses noted Bradstreet's Landing as a nearby park that is easy to reach. Respondents were eager for the park to reopen given its current reconstruction.

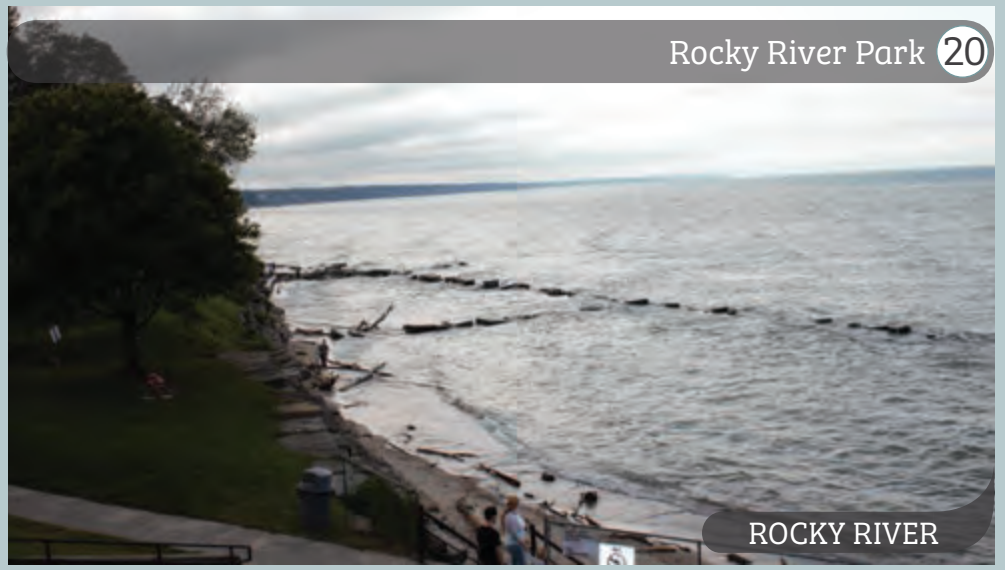
ACCESS



MODE

78 19 3 %





Rocky River Park is operated by the City of Rocky River and offers a playground, restrooms, and a picnic area. The park is connects to calm, neighborhood streets with complete sidewalk coverage. There is also a parking lot on site, and 78% of trips to the park arrive by car. The park attracts around 400 trips per day from northern Cuyahoga County and eastern Lorain County. There is one entrance to the park, which is near the transit line on Lake Road.

AMENITIES

STANDARD

ADDITIONAL

Observation Deck, Boardwalk

OPERATOR
city

AREA
6.0

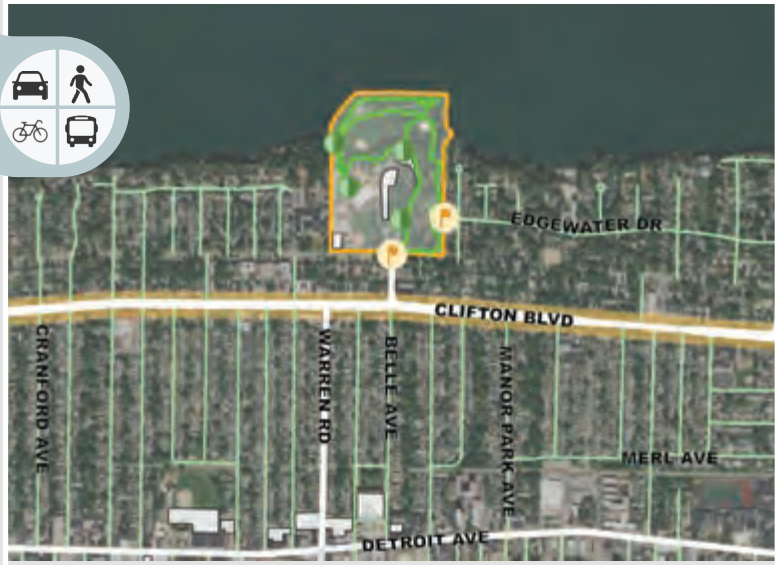
COASTLINE
0.09

COAST TYPE
low bank

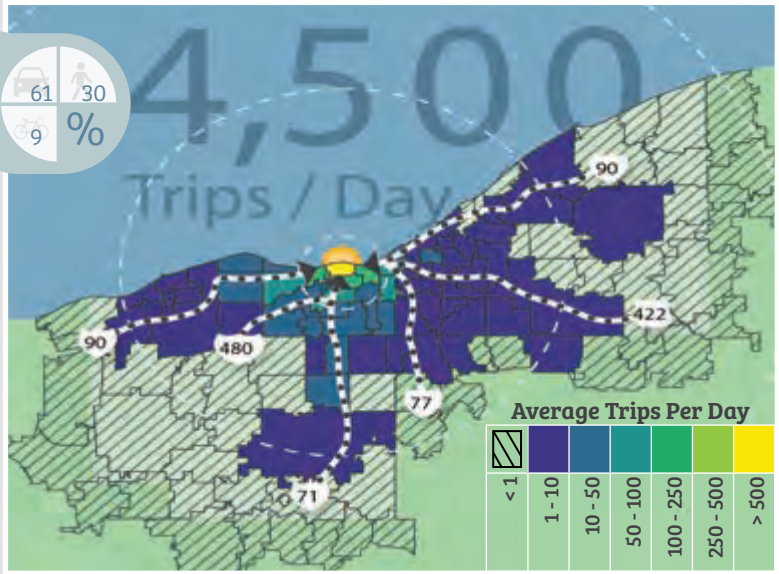
KEY THEMES FROM PUBLIC INPUT

Some survey respondents indicated that Rocky River Park is near their home, but is not one they choose to visit. Increasing the amenities at the park and reducing litter pollution were suggested as possible opportunities.

ACCESS



MODE



Lakewood Park is home to the popular Solstice Steps, which provide public art and seating to view the sunset. This park has many amenities, including sports facilities, playgrounds, restrooms, and a swimming pool. This park is a large regional attraction, drawing around 4,500 trips per day from all over the NOACA region. Even with this large regional draw, many people bike or walk to the park (9% and 30% respectively). The park's two entrances are easily accessed by all modes of transportation including transit, and the park has several parking areas for vehicles.

AMENITIES

STANDARD

ADDITIONAL

Swimming Pool, Food Stand, Binoculars, Historical Marker, Boardwalk

OPERATOR
city

AREA
40.6

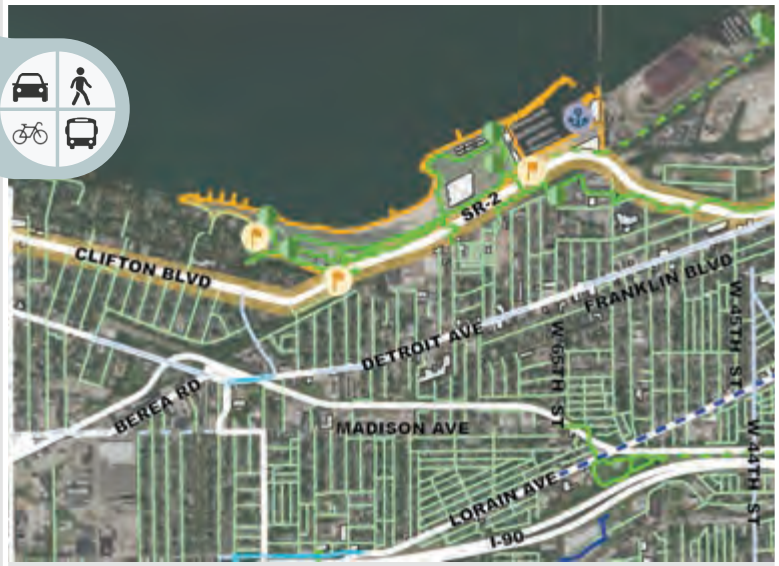
COASTLINE
0.25

COAST TYPE
bluff

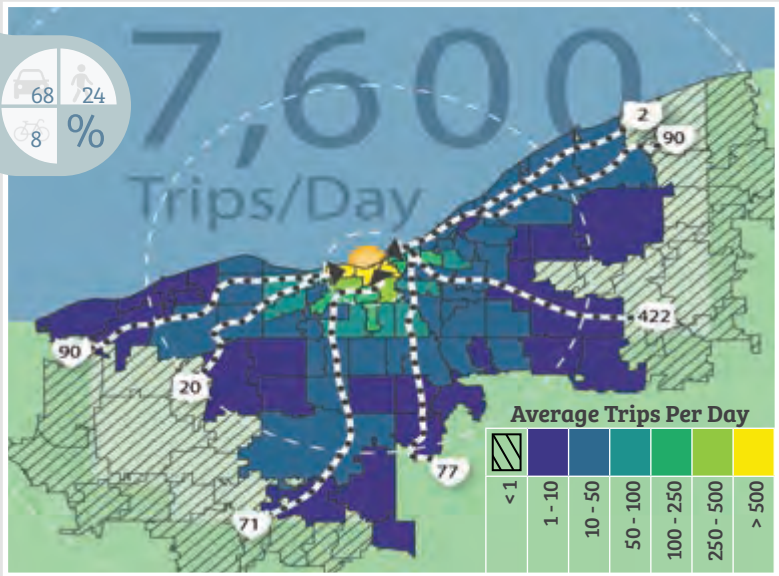
KEY THEMES FROM PUBLIC INPUT

No responses specific to this park were received.

ACCESS



MODE



Edgewater Park is the region's most popular lakefront park, attracting 7,600 trips per day from the NOACA region. The park offers three entrances and includes an upper and lower area, connected by trail. The park has a large picnic area and a beach house, which provides bathrooms, food stands, and a popular event space. While most visitors arrive by car (68%), the park is transit accessible and located near the City of Cleveland's growing bike network. Almost a quarter of visitors arrive on foot (24%) or by bike (8%).

AMENITIES

STANDARD

ADDITIONAL

Food Stand, Pier, Education Signage

OPERATOR

met.

AREA

134.4

COASTLINE

1.91

COAST TYPE

beach

KEY THEMES FROM PUBLIC INPUT

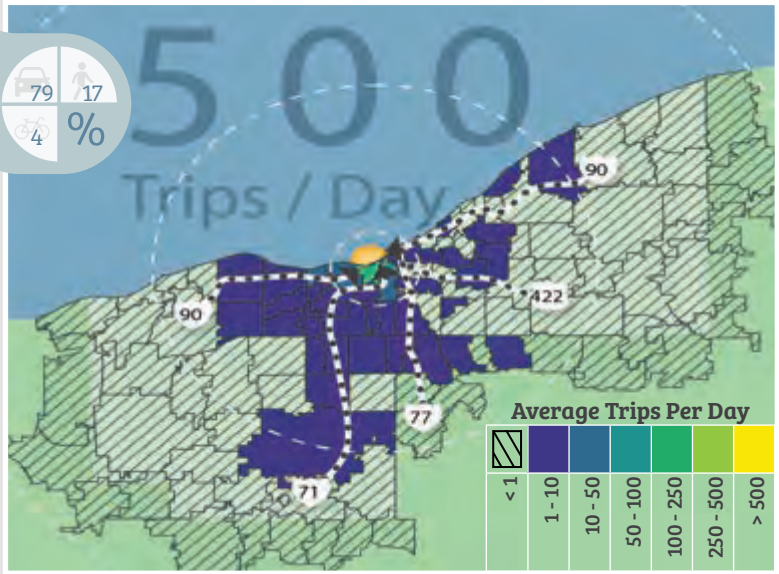
Edgewater is popular for its beach and new facility upgrades. Survey responses indicated that the bike and pedestrian connections just outside of the park make it easier for some to walk or bike to the park instead of drive.

ACCESS

Site Boundary
Park Entry
Trailhead
Boating
Parking Lot
Trail
Active Trail
Bike Lane
Active Bike Lane
Separated Bike Lane
Low Stress Road
Scenic Byway
GCRTA Bus Route

MODE

79 % 17 4



Wendy Park is located just west of the Cuyahoga River and provides seamless connection by trail to Edgewater Park and downtown Cleveland. Wendy Park is popular throughout the NOACA region, attracting 500 trips per day. Among other amenities, the park features sports facilities and views of a lighthouse. In 2019, most visitors arrived by car (79%), while 21% of visitors used other modes like biking and walking. In 2021, the Wendy Park Bridge and Whiskey Island Trail projects were completed, likely attracting more visitors to the park.

AMENITIES

STANDARD

ADDITIONAL
Vending Machines, Lighthouse, Boardwalk

OPERATOR
met.

AREA
25.4

COASTLINE
0.35

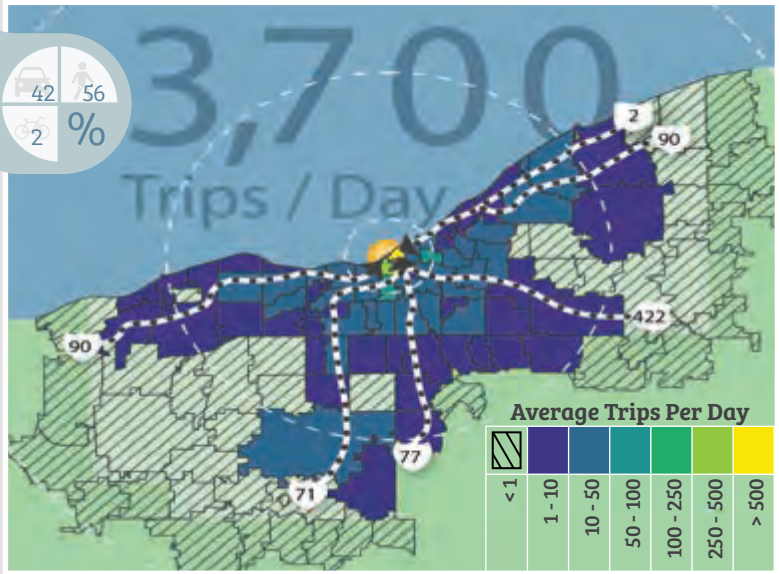
COAST TYPE
low bank

KEY THEMES FROM PUBLIC INPUT
Survey responses noted Wendy Park's new pedestrian bridge as a promising improvement. The park's passive amenities and sport fields are a draw for many.

ACCESS

Site Boundary
Park Entry
Parking Lot
Trail
Bike Lane
Active Separated Bike Lane
Low Stress Road
Scenic Byway
GCRTA Bus Route
Laketran Route
Laketran Express Route

MODE



North Coast Harbor / Voinovich Park / East Ninth Street Pier 28

Photo by Erik Drost, Wikimedia Commons

North Coast Harbor includes Voinovich Park and the East Ninth Street Pier located just east of Brown's Stadium. The harbor attracts 3,700 trips per day from across the region and is a popular lunchtime spot for downtown workers and sports fans. There is significant public parking nearby, but over half of visitors arrive to the Harbor on foot (56%). New connections from the mall to the Harbor (including the "land bridge" concept) are currently being explored by NOACA, the City of Cleveland, and ODOT.

AMENITIES

STANDARD

ADDITIONAL
Pier, Historical Marker, Boardwalk

OPERATOR
city

AREA
9.5

COASTLINE
0.25

COAST TYPE
harbor

KEY THEMES FROM PUBLIC INPUT

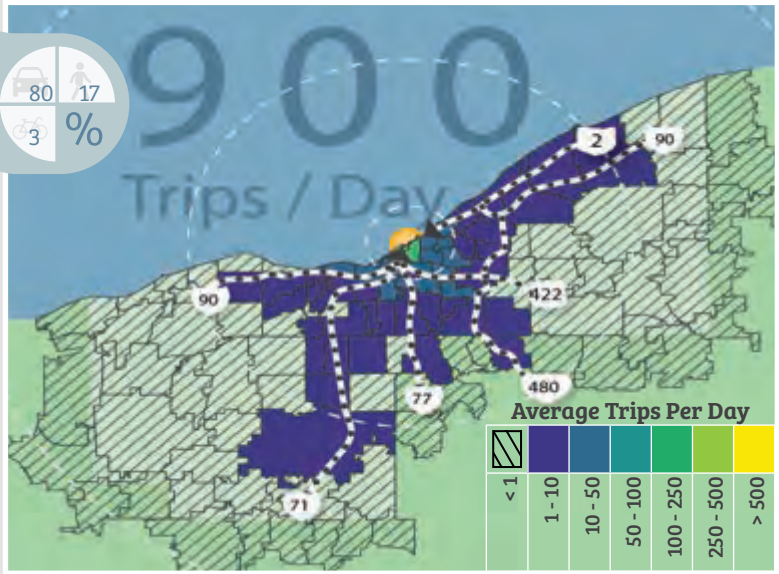
Survey responses noted North Coast Harbor's restaurants and active amenities as a draw. Suggested improvements include making it easier to walk or bike to the Harbor from downtown, and using the space as a civic, park commons.

ACCESS

Site Boundary
Park Entry
Trailhead
Boating
Parking Lot
Trail
Bike Lane
Buffered Bike Lane
Low Stress Road
Scenic Byway
GCRTA Bus Route
Laketran Route
Laketran Express Route

MODE

80 % 17 3



East 55th Street Marina 29

Photo by Kyle Lanzer, Cleveland Metroparks

The East 55th Street Marina is operated by Cleveland Metroparks and is a popular fishing spot with generous parking, restrooms, water fountains, and a small playground area. The park is near a transit line, and is directly accessed from Interstate 90. The park attracts 900 trips per day from throughout the region, with 80% of visitor arriving by car, and 17% arriving on foot. The park is included in the CHEERS Plan to create a sheltered embayment on the east side lakefront.

AMENITIES

STANDARD

ADDITIONAL
Food Stand, Pier, Boardwalk

OPERATOR
met.

AREA
20.2

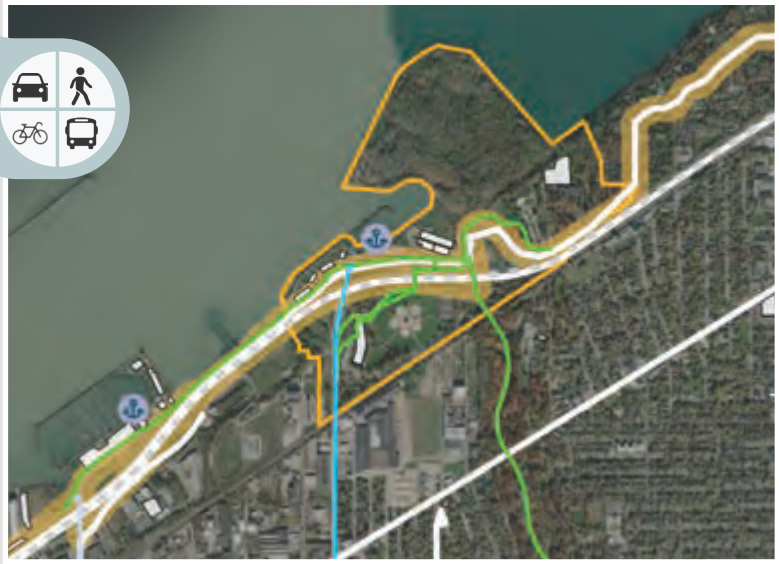
COASTLINE
0.61

COAST TYPE
harbor

KEY THEMES FROM PUBLIC INPUT

Survey responses noted the marina's proximity to nearby homes as a reason for visiting frequently. Suggested improvements include addressing flooding and erosion, adding more amenities, and making lakefront access easier.

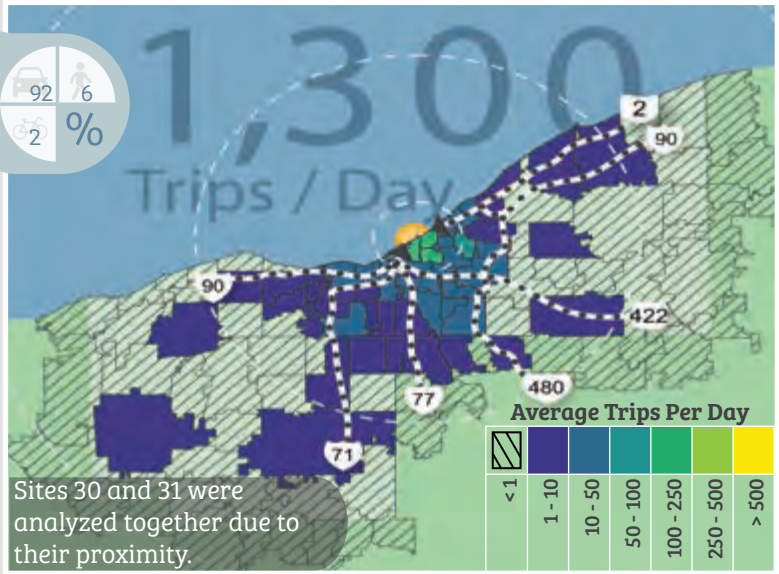
ACCESS



Site Boundary
Park Entry
Trailhead
Boating
Parking Lot
Trail
Bike Lane
Buffered Bike Lane
Low Stress Road
Scenic Byway
GCRTA Bus Route
Laketran Route
Laketran Express Route

MODE

92 % 6 2



Gordon Park 30

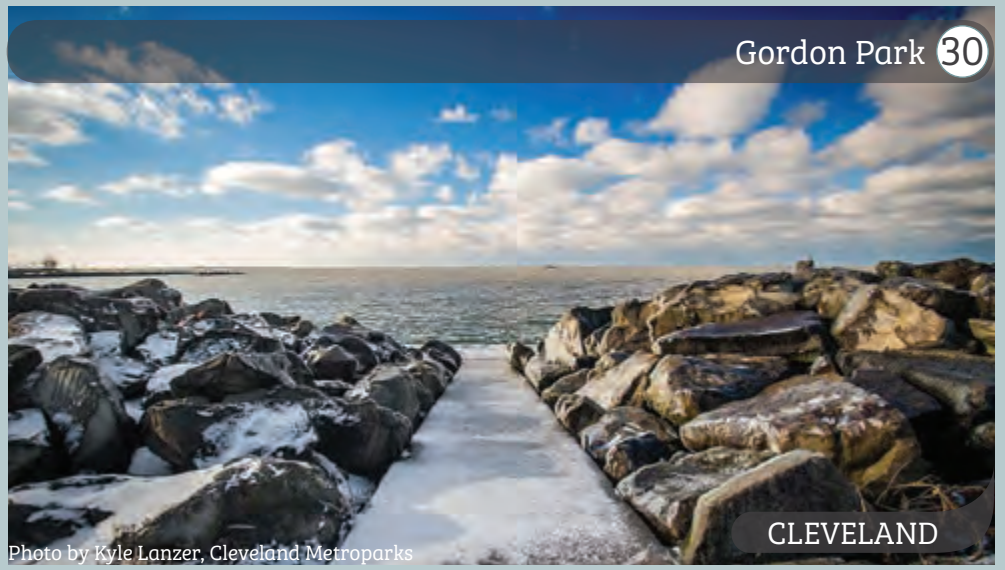


Photo by Kyle Lanzer, Cleveland Metroparks

Gordon Park includes the East 72nd Lakefront Reservation fishing area, picnic areas, restrooms, and water fountains. The park is adjacent to bike and pedestrian infrastructure, but there are limited opportunities to cross Interstate 90. The CHEERS Plan recommends new projects to make it easier to bike or walk to the park. Gordon Park and the Cleveland Lakefront Nature Preserve (Site 31) were analyzed together due to their proximity. Combined, these areas attract 1,300 trips a day from throughout the region.

AMENITIES

STANDARD

ADDITIONAL
Vending Machines, Educational Signage

OPERATOR
met.

AREA
51.5

COASTLINE
0.52

COAST TYPE
low bank

KEY THEMES FROM PUBLIC INPUT

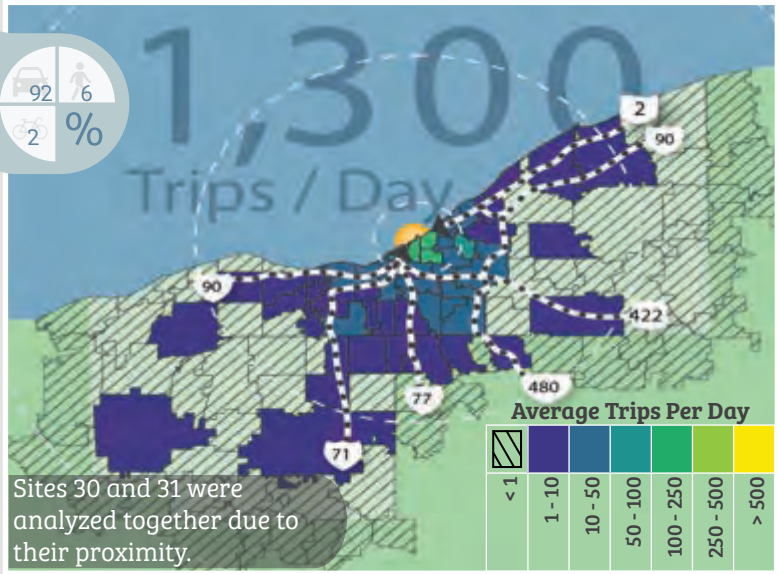
Survey responses noted Gordon Park's beautiful lakefront views, proximity to homes, and passive amenities as draws. Suggested improvements include reducing highway noise, adding more greenspace, and updating the park.

ACCESS

Site Boundary
Park Entry
Trailhead
Boating
Parking Lot
Trail
Bike Lane
Buffered Bike Lane
Low Stress Road
Scenic Byway
GCRTA Bus Route
Laketran Route
Laketran Express Route

MODE

92 % 6 2



Sites 30 and 31 were analyzed together due to their proximity.

Cleveland Lakefront Nature Preserve 31

Photo by Port of Cleveland

CLEVELAND

The Cleveland Lakefront Nature Preserve was once a dredge impoundment that now provides habitat for wildlife, including hundreds of migratory birds. Gordon Park (Site 30) and the Preserve were analyzed together due to their proximity. Currently, 80% of visitors drive to these two parks, and many visitors likely rely on the generous parking lot at the Preserve's entrance. The park includes interior trails that form a loop and connect to trails outside of the park.

AMENITIES

STANDARD

ADDITIONAL

Observation Deck, Educational Signage

OPERATOR

port

AREA

92.0

COASTLINE

0.37

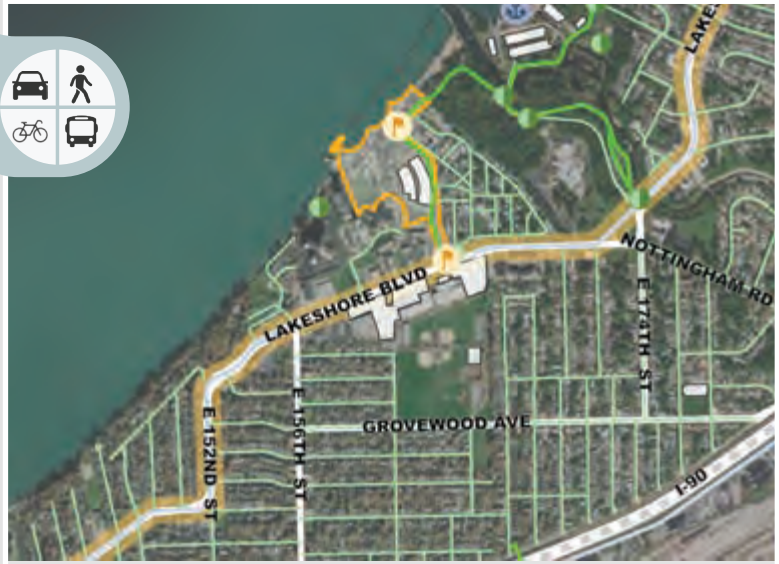
COAST TYPE

low bank

KEY THEMES FROM PUBLIC INPUT

Survey responses noted the Preserve's serene trails as a positive of this park. Respondents indicated they might visit more if there was direct access to the water or if there was more separated bike connections east-west in the area.

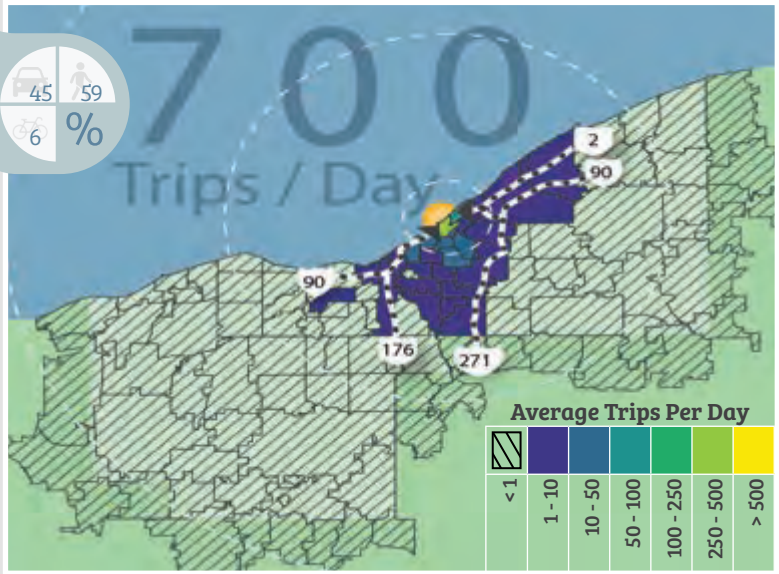
ACCESS



Site Boundary
Park Entry
Trailhead
Boating
Parking Lot
Trail
Bike Lane
Low Stress Road
Scenic Byway
GCRTA Bus Route
Laketran Route
Laketran Express Route

MODE

45 % 59
6



Part of the Euclid Creek Reservation, Euclid Beach Park was once home to the Euclid Beach Amusement Park which operated through the 1960s. Today, the park features a long sandy beach and iconic pier, with amenities like playgrounds, restrooms, and picnic tables. The park's southern entrance is along Lakeshore Boulevard, which is also a transit line. The park attracts 700 trips per day and notably, 59% of visitors arrive on foot. Possibly, many of these visitors arrive using the trails that connect Euclid Beach Park to nearby Wildwood Park (Site 34).

AMENITIES

STANDARD

ADDITIONAL
Food Stand, Educational Signage, Boardwalk

OPERATOR
met.

AREA
18.9

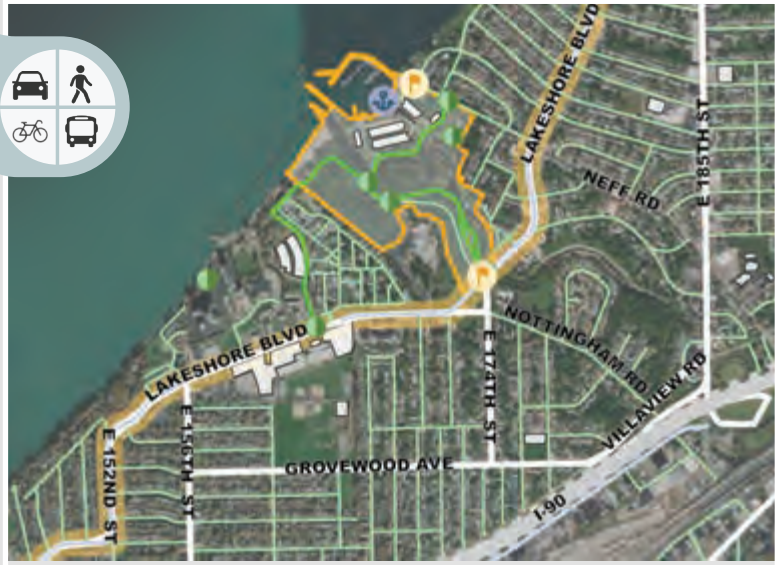
COASTLINE
0.2

COAST TYPE
beach

KEY THEMES FROM PUBLIC INPUT

Survey responses noted Euclid Beach's facilities, lifeguards, interesting history, and easy transportation access as reasons to visit frequently. Some cited safety concerns as a reason that they don't visit as often as they'd like to.

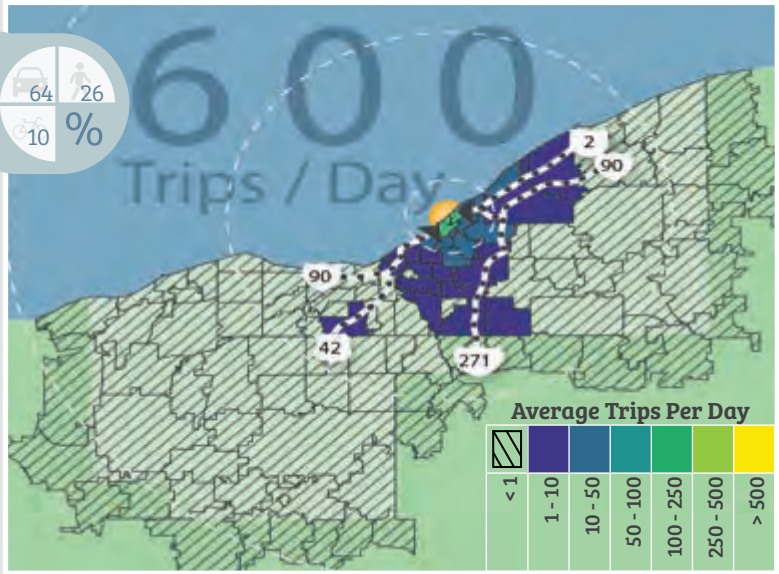
ACCESS



Site Boundary
Park Entry
Trailhead
Boating
Parking Lot
Trail
Bike Lane
Low Stress Road
Scenic Byway
GCRTA Bus Route
Laketran Route
Laketran Express Route

MODE

64 % 26 10



Part of the Euclid Creek Reservation, Villa Angela and Wildwood Park are located on the west bank of Euclid Creek. These parks offer boating and paddling opportunities as well as fishing, food stands, and a boardwalk. The area attracts 600 trips per day from Cuyahoga and western Lake counties, and over a quarter of visitors arrive on foot. 10% of visitors bike to the park, which is accessible by trail and via the bike lane on Lakeshore Boulevard. Over half (64%) of visits arrive by car, likely using one of two sizable parking lots.

AMENITIES

STANDARD

ADDITIONAL
Food Stand, Pier, Educational Signage, Boardwalk

OPERATOR
met.

AREA
69.6

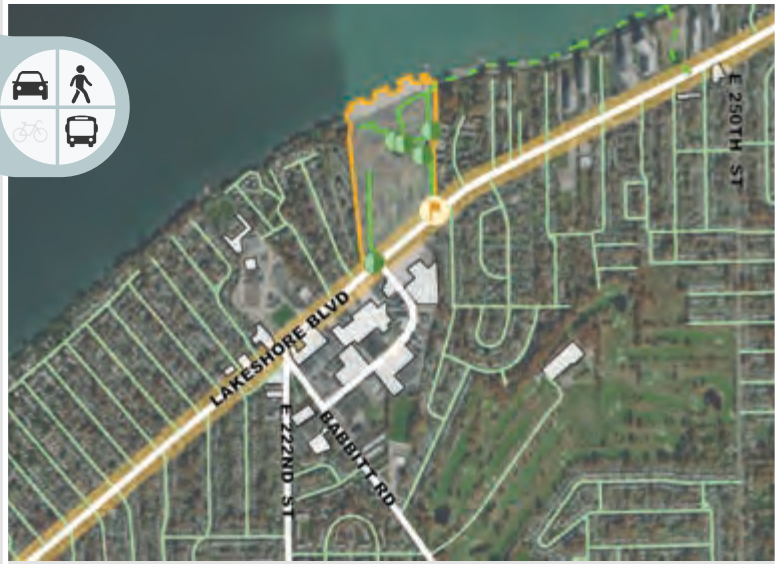
COASTLINE
0.33

COAST TYPE
low bank

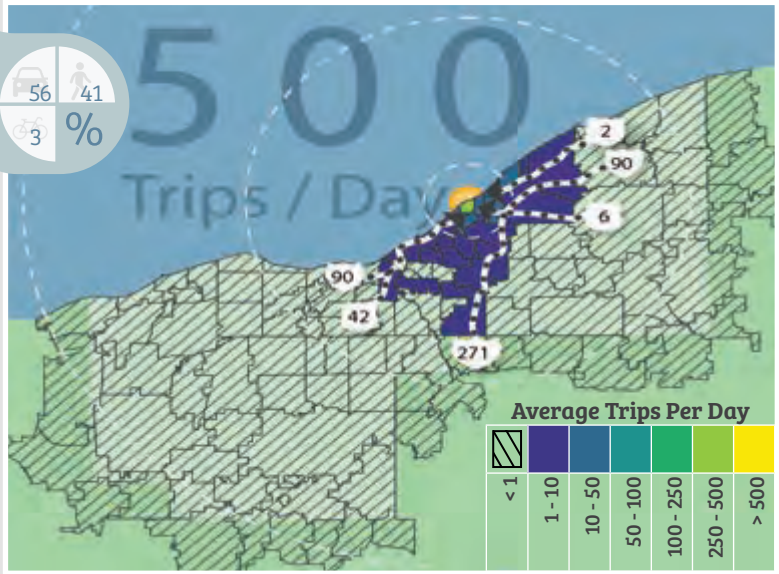
KEY THEMES FROM PUBLIC INPUT

Survey responses noted Villa Angela and Wildwood Park's wildlife and wildflowers, docking, and proximity as key reasons to visit. Some indicated that reaching this park is difficult and prevents them from visiting more often.

ACCESS



MODE



Sims Park 36

Sims Park is the site of the Henn Mansion event space and a large park with a playground, birding and fishing opportunities, and trails. The park is also the site of the City of Euclid's new pier and waterfront trail which extends east from Sims Park along the coast. The site attracts 500 trips per day, drawing from eastern Cuyahoga County and western Lake County. Over half of visitors arrive by car (56%), while 41% walk to the park. The park connects to nearby low-stress roads and several bus routes.

AMENITIES

STANDARD

ADDITIONAL

Pier, Educational Signage

OPERATOR
city

AREA
33.2

COASTLINE
0.18

COAST TYPE
beach

KEY THEMES FROM PUBLIC INPUT

Survey responses noted Sims Park's walking paths, disc golf, and beach as reasons for visiting frequently. Other respondents who live nearby indicated that they don't know much about the park, or feel unsafe visiting.

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LAKE COUNTY'S LAKEFRONT SITES

The accurately-named Lake County has the most public access points of the three counties in the region (23) as shown in Table A.3. Twelve of these parks are highlighted in this chapter, although each site offers a unique mix of amenities that make it a valuable culture resources

NAME	#	MUNICIPALITY	OPERATOR	AREA*	COASTLINE**	DAILY VISITORS	PARKING LOT
Willowick City Hall / Lakefront Lodge	37	City of Willowick	City	7.9	0.13	400	Yes
Quentin Road Park	38	City of Eastlake	City	1.1	0.03	less than 100	No
Eastlake Fishing Pier	39	City of Eastlake	Private	0.9	0.09	less than 100	No
Willowbeach Park	40	City of Eastlake	City	1.1	0.04	less than 100	Yes
Sunset Park	41	City of Willoughby	City	2.0	0.12	less than 100	No
Beachview Road Scenic Access (A/B/C)	42	City of Willoughby	City	2.0	0.28	less than 100	No
Osborne Park	43	City of Willoughby	City	43.3	0.21	600	Yes
Overlook Beach Park	44	City of Mentor-on-the-Lake	City	2.9	0.07	less than 100	Yes
Mentor Beach Park	45	City of Mentor-on-the-Lake	City	9.1	0.14	300	Yes
Mentor Lagoons Nature Preserve	46	City of Mentor	City	436.7	1.39	1,000	Yes
Headlands Beach State Park / Nature Preserve	47	Painesville Township	ODNR	142.5	0.82	800	Yes
Fairport Harbor Lakefront Park / Boat Access / Pier	48	Village of Fairport Harbor	Metropark	23.5	0.92	1,200	Yes
Painesville Township Park	49	Painesville Township	Metropark	66.2	0.22	400	Yes
Lake Erie Bluffs	50	Perry Township	Metropark	138.0	0.26	200	Yes
Perry Township Park	51	Perry Township	Township	70.4	0.58	300	No
North Perry Village Park	52	Village of North Perry	Village	5.8	0.05	less than 100	No
Lakeshore Reservation	53	Village of North Perry	Metropark	81.3	0.51	200	No
Bill Stanton Community Park	54	Madison Township	Township	32.8	0.24	200	Yes
Tuttle Park	55	Madison Township	Township	7.8	0.08	less than 100	No
Green Road Access	56	Madison Township	Township	.01	0.01	less than 100	No
Madison Township Park	57	Madison Township	Township	11.9	0.13	400	Yes
Bennett Road Access	58	Madison Township	County	.01	0.01	less than 100	No
Arcola Creek Park	59	Madison Township	Township	64.4	0.14	less than 100	Yes

Table A.3 | Lake County Lakefront Sites

Area in Acres, **Coastline in Miles

LAKE COUNTY'S LAKEFRONT SITES

The locations of Lake County's public access sites are shown in Figure A.5. The numbering of the sites match the Table A.3 on the previous page and site summary pages that follow.

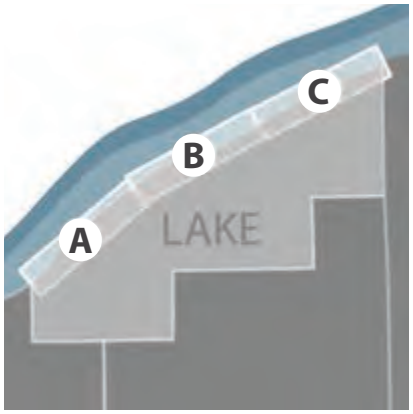
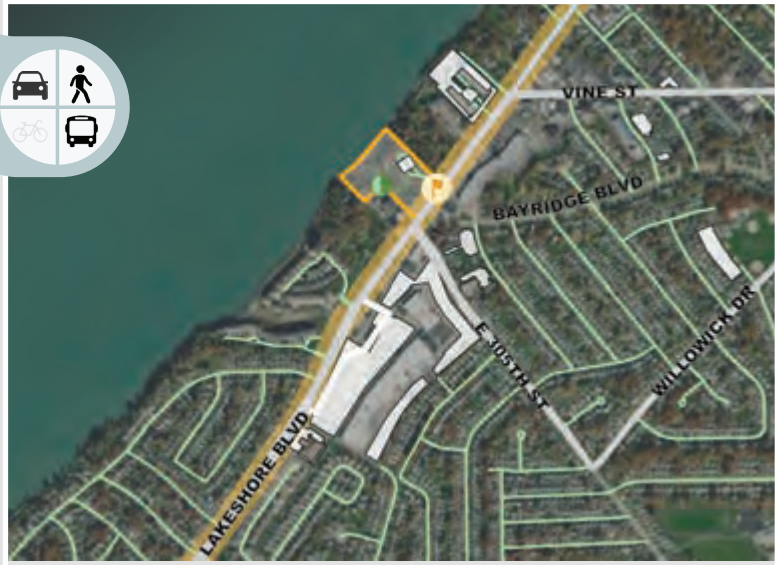


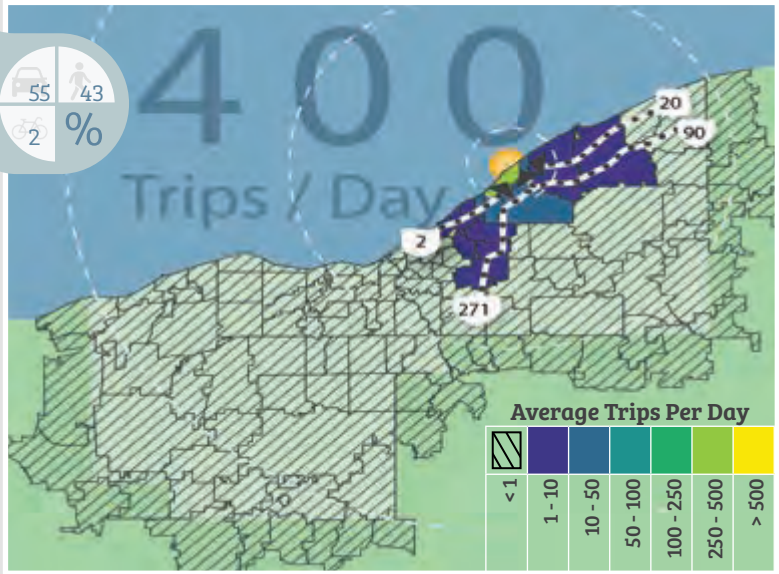
Figure A.5 | Lake County Lakefront Sites

ACCESS



Site Boundary
Park Entry
Trailhead
Parking Lot
Trail
Bike Lane
Low Stress Road
Scenic Byway
GCRTA Bus Route
Laketran Route

MODE



The current site of Willowick's City Hall and Lakefront Lodge is a popular place for sunset viewing and dog walking, attracting 400 trips per day. The site can be accessed by bus from both Lakeshore Boulevard and East 305th Street, and 43% of visitors arrive on foot, possibly from Southgate Shopping Center or from nearby neighborhoods. This site was studied through a NOACA TLCI project in 2019, and the City plans to relocate City Hall in the future to accommodate a new mixed-use development and public park.

AMENITIES

STANDARD

ADDITIONAL
Vending Machines, Historical Marker, Educational Signage

OPERATOR
city

AREA
7.9

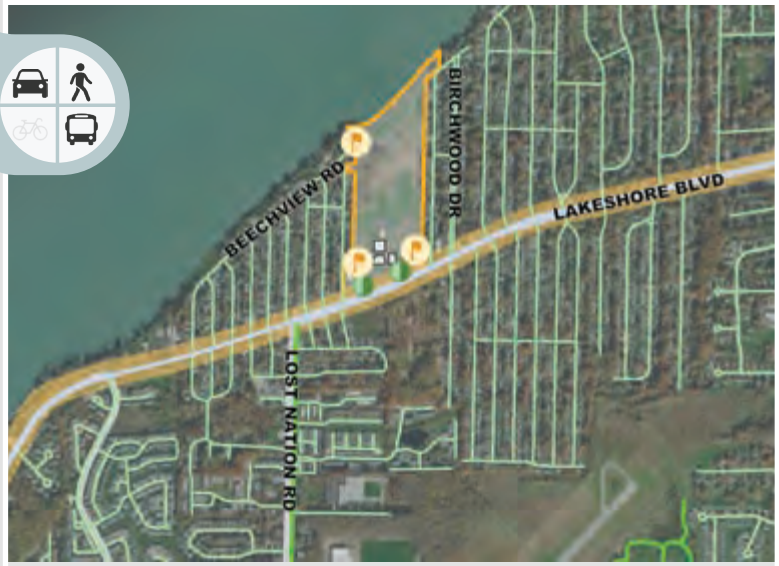
COASTLINE
0.13

COAST TYPE
bluff

KEY THEMES FROM PUBLIC INPUT

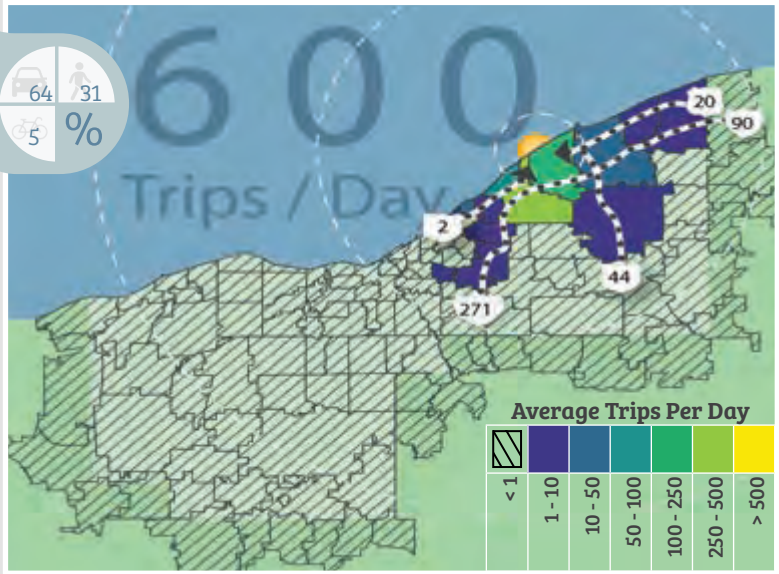
Survey responses note that the park is easy to access and attracts visitors to watch the sunset and walk dogs. Some respondents indicated that access to the water and ADA-improvements would make them visit more.

ACCESS



MODE

64 % 31 5



Osborne Park 43

Osborne Park in the City of Willoughby offers a waterpark area and pool, sport facilities, trails, and picnic area. The park is easily accessible by car and transit, and over half (64%) of visitors arrive by car. The park attracts 600 trips a day from throughout Lake County, and over one-third of visitors walk or bike to the park. The park has internal trails, and is currently the subject of a new design study to address erosion issues and enhance this community gathering space.

AMENITIES

STANDARD

ADDITIONAL
Food Stand

OPERATOR
city

AREA
43.3

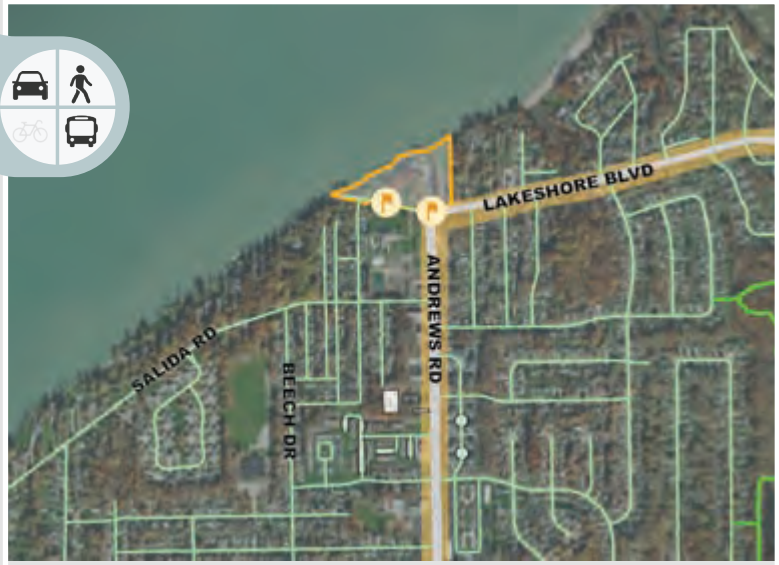
COASTLINE
0.21

COAST TYPE
bluff

KEY THEMES FROM PUBLIC INPUT

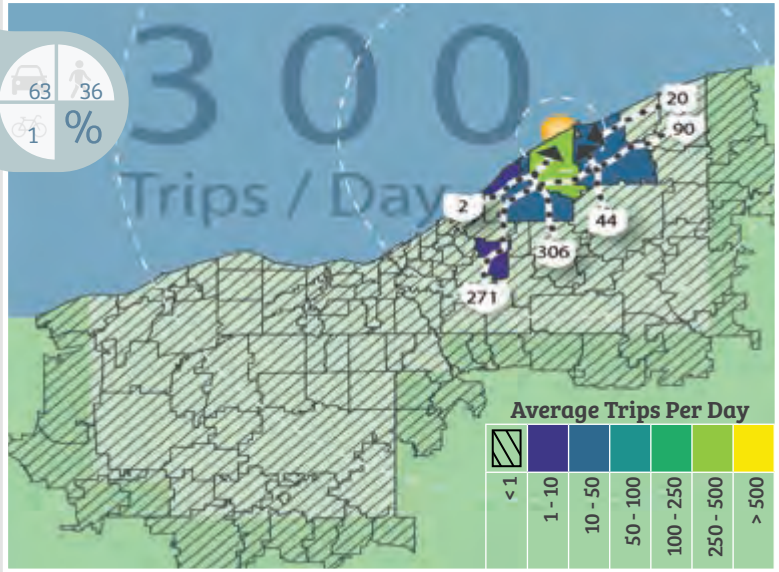
Survey responses noted Osborne Park is a gathering space for families and events, and has a nice walking path. Some responses cited lack of seating, issues with flooding and erosion, and poor ADA-accessibility as concerns.

ACCESS



MODE

63 % walk, 36 % car, 1 % bike



Mentor Beach Park in the City of Mentor-on-the-Lake is owned and operated by the City of Mentor. The park offers a pavilion, playground, and swings that face the lake. The park attracts 300 trips per day from northern Lake County and has two entrances. The park is easily accessed by transit and car, and connects to several neighborhood streets that are low volume and ideal for biking and walking. Over one-third of visitors arrive on foot, and 63% of visitors arrive by car. Community leaders plan for the site to host a restaurant in the future.

AMENITIES

STANDARD

ADDITIONAL
N/A

OWNER
city

AREA
9.1

COASTLINE
0.14

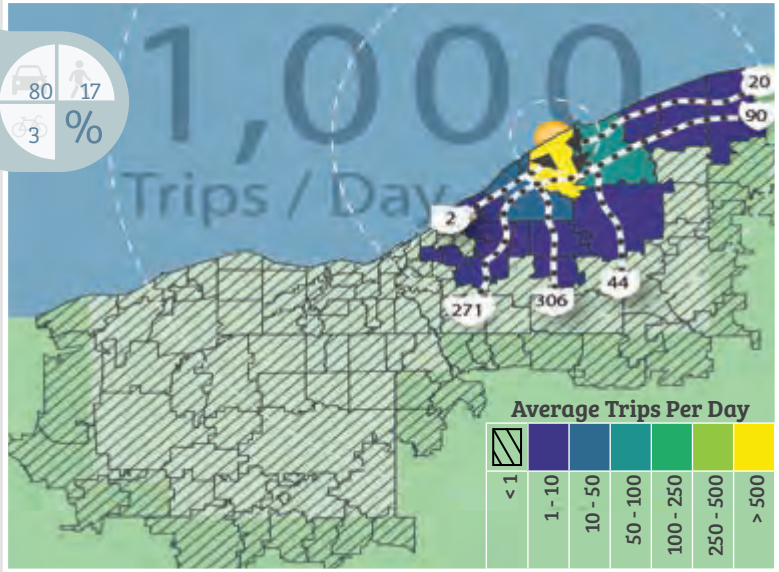
COAST TYPE
low bank

KEY THEMES FROM PUBLIC INPUT

Survey responses noted Mentor Beach Park's playground and great lakefront views as key reasons to visit. Some respondents preferred to go other nearby parks, citing lack of amenities and waterfront access.

ACCESS

MODE



Mentor Lagoons Nature Preserve is a popular park that provides marina access, restrooms, picnic areas, and abundant natural areas. Around 80% of visitors arrive by car, while 20% walk or bike to the park. The park features internal trails that connect to the neighborhood east of the preserve. The main entrance to the preserve is a short walk from transit. The Preserve attracts 1,000 trips from throughout Lake County, with over half of visitors coming from the nearby neighborhoods in the cities of Mentor and Mentor-on-the-Lake.

AMENITIES

STANDARD

ADDITIONAL

Historical Marker, Educational Signage

OWNER
city

AREA
436.7

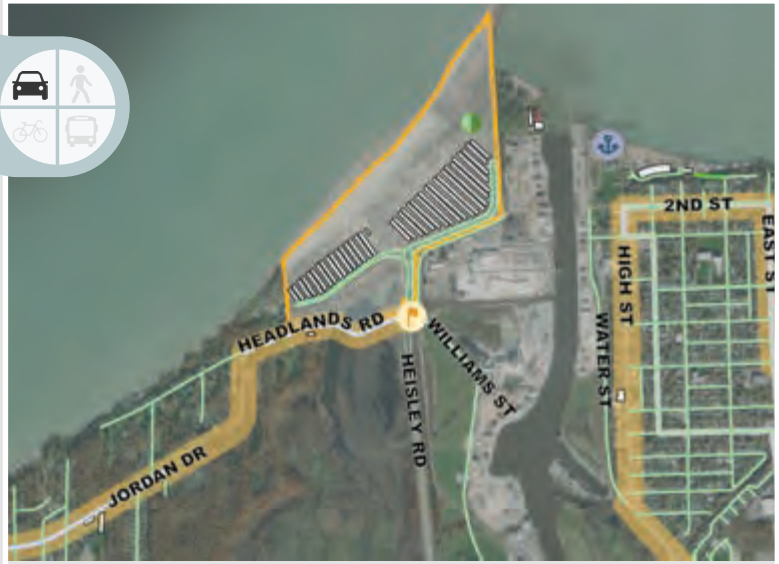
COASTLINE
1.39

COAST TYPE
low bank

KEY THEMES FROM PUBLIC INPUT

Survey responses noted Mentor Lagoon's well maintained trails, access for kayaks and canoes, and natural charm. Some respondents cited beach erosion and lack of amenities as reasons for not visiting the park more.

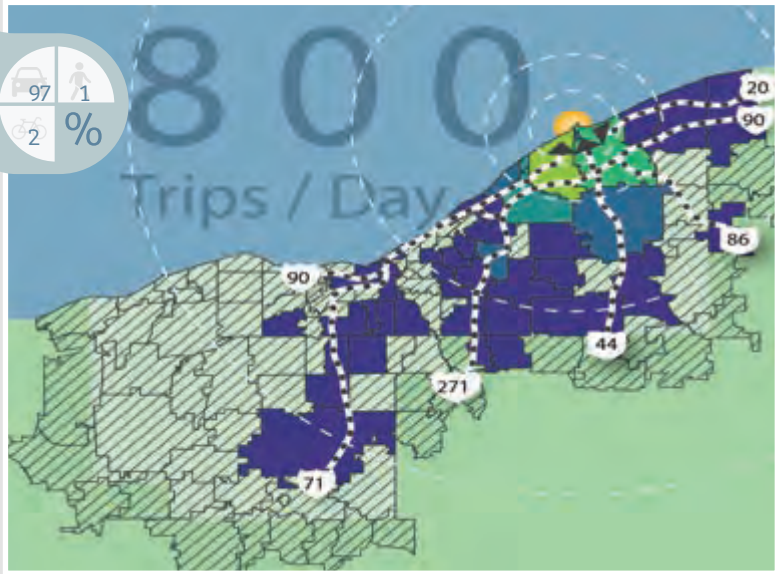
ACCESS



Site Boundary
Park Entry
Trailhead
Boating
Parking Lot
Trail
Bike Lane
Low Stress Road
Scenic Byway
Laketran Route

MODE

97 % 1 2



Headlands Beach State Park & Nature Preserve 47

PAINESVILLE TOWNSHIP AND MENTOR

Headlands Beach State Park and Nature Preserve is a large park with a regional draw throughout Northeast Ohio. The park features a large beach, play areas, and many opportunities for birding, fishing, and viewing wildlife. The park draws around 800 trips per day, and the vast majority (97%) of visits arrive by car. The park is on the west side of the Grand River opposite Fairport Harbor. The park is a key destination in a number of connectivity initiatives, including the Central Lake County Lakefront Connectivity TLCI Study.

AMENITIES

STANDARD

ADDITIONAL

Food Stand, Vending Machines, Lighthouse, Pier, Educational Signage

OPERATOR
state

AREA
142.5

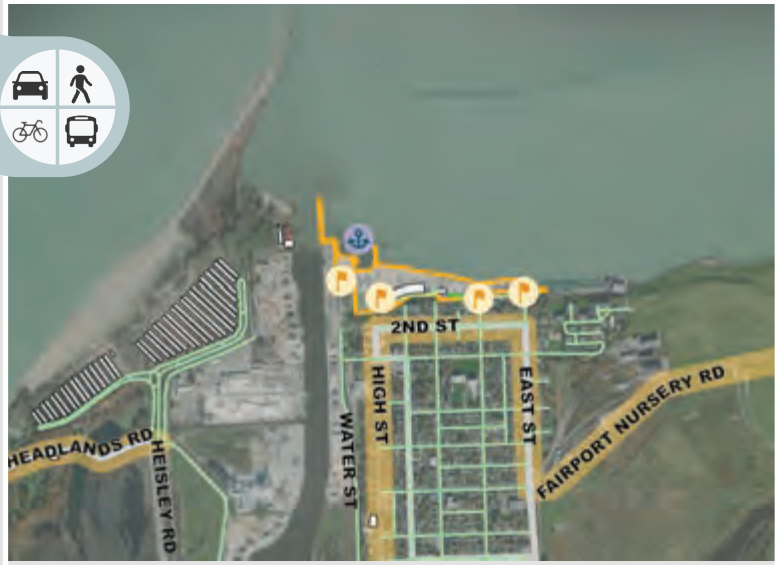
COASTLINE
0.82

COAST TYPE
beach

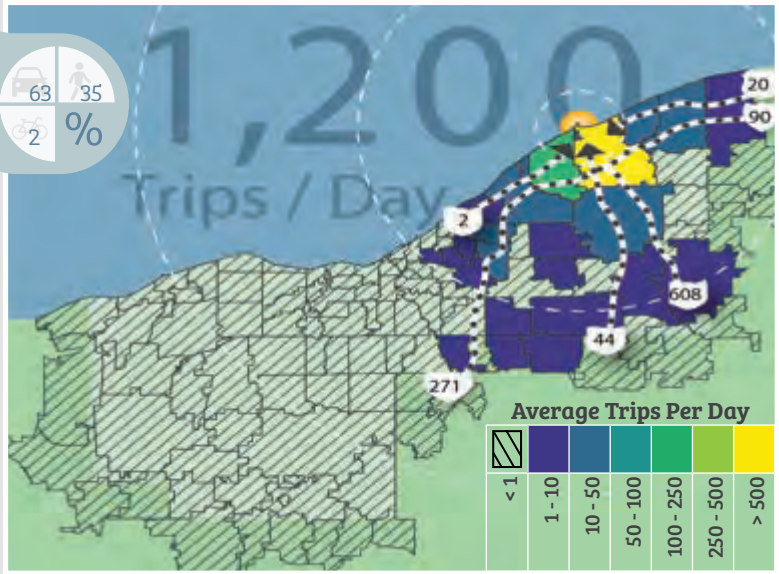
KEY THEMES FROM PUBLIC INPUT

Survey responses noted the variety of passive and active amenities at Headlands Beach Park. Some respondents said they would like space to bring dogs to the park and expressed concern about the water quality especially in the summer.

ACCESS



MODE



Fairport Harbor Lakefront Park / Boat Access / Pier 48

Fairport Harbor's Lakefront Park is adjacent to downtown Fairport Harbor and draws a large number of people (1,200 trips per day) from downtown, the rest of Lake County, and even Geauga County. The park offers a wide range of activities and services including a pier, lighthouse, concessions, and picnic areas. The park has a number of entrances, many of which are a short walk from transit. Over one-third of visitors arrive on foot, and 2% arrive by bicycle.

AMENITIES

STANDARD

ADDITIONAL

Food Stand, Vending Machines, Pier, Lighthouse, Historical Marker, Educational Signage

OPERATOR
met.

AREA
23.5

COASTLINE
0.92

COAST TYPE
beach

KEY THEMES FROM PUBLIC INPUT

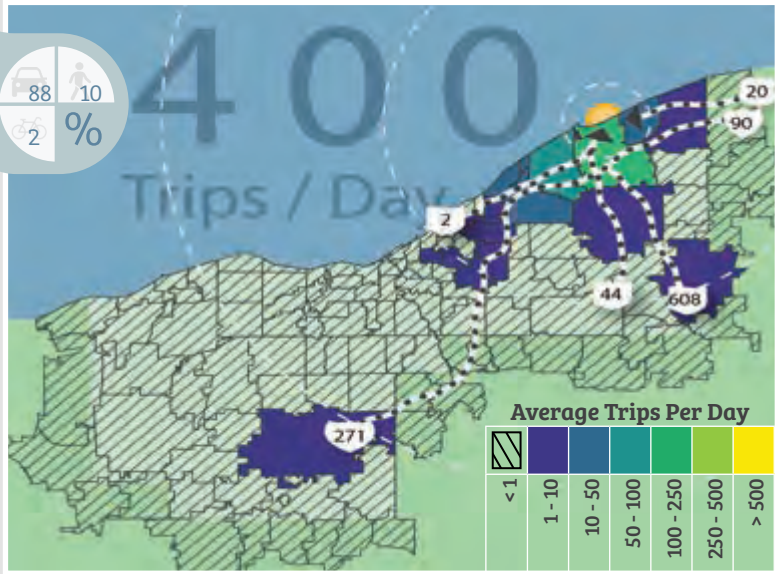
Survey responses noted Fairport Harbor's clean beach and easy access to the lake. Some respondents found it crowded on weekends and difficult to get a resident beach parking pass.

ACCESS

Site Boundary
Park Entry
Trailhead
Low Stress Road
Scenic Byway

MODE

88 % 10 2



Painesville Township Park 49

Photo by Painesville Township

Painesville Township park includes ball fields, play areas, restrooms, and switchback steps leading down to the pier. This park has been providing services to the community since the 1920s and offers a rental facility often used for weddings and other events. The park has two main entrances nestled behind a neighborhood of low-volume, calm streets which are ideal for biking and walking. Still, 88% of visitors arrive by car. The park attracts 400 trips per day from throughout Lake and Geauga Counties, and even Medina County.

AMENITIES

STANDARD

ADDITIONAL
Food Stand, Vending Machines

OPERATOR
met.

AREA
66.2

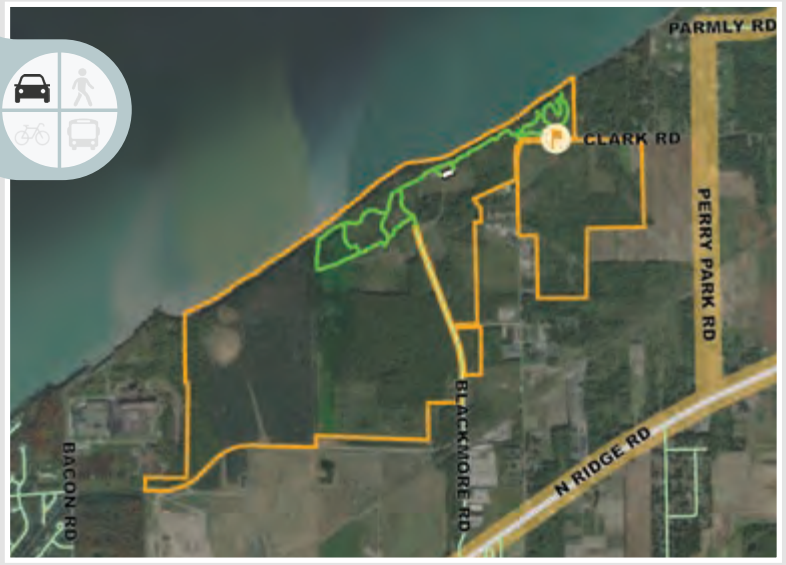
COASTLINE
0.22

COAST TYPE
low bank

KEY THEMES FROM PUBLIC INPUT

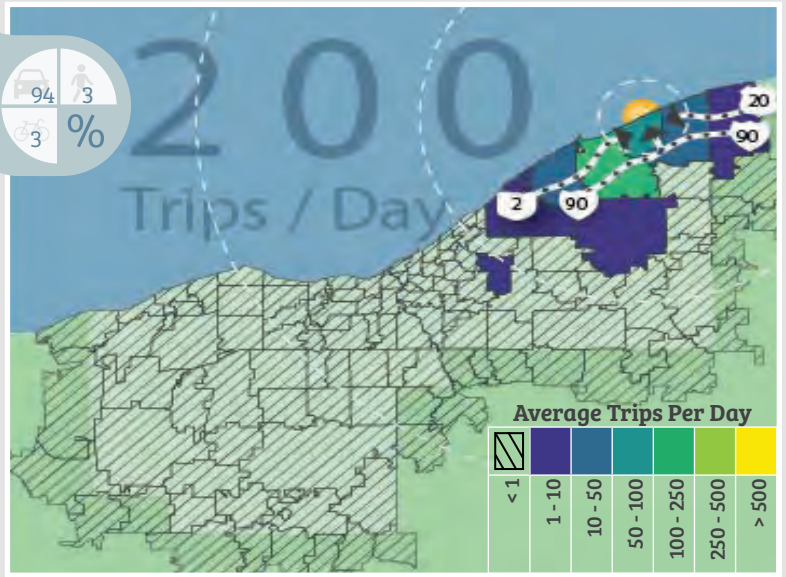
Survey responses noted Painesville Township Park's beauty and amenities, but wished there was easier access to the lake.

ACCESS



Site Boundary
Park Entry
Trail
Parking Lot
Low Stress Road
Scenic Byway
Laketran Route

MODE



Lake Erie Bluffs was established in 2012 and is a key conservation area that protects rare coastal habitat for plants, birds, and other wildlife. In 2016, the park opened a 50-foot observational tower. The park also features connected trails, scenic overlooks, and a reservable shelter for special events. The park attracts 500 trips per day throughout northern Lake County, and most visitors arrive by car. The park is within a short distance of the Lake Erie Coastal Ohio Trail Scenic Byway.

AMENITIES

STANDARD

ADDITIONAL

Observation Deck, Educational Signage

OPERATOR
met.

AREA
138.0

COASTLINE
0.26

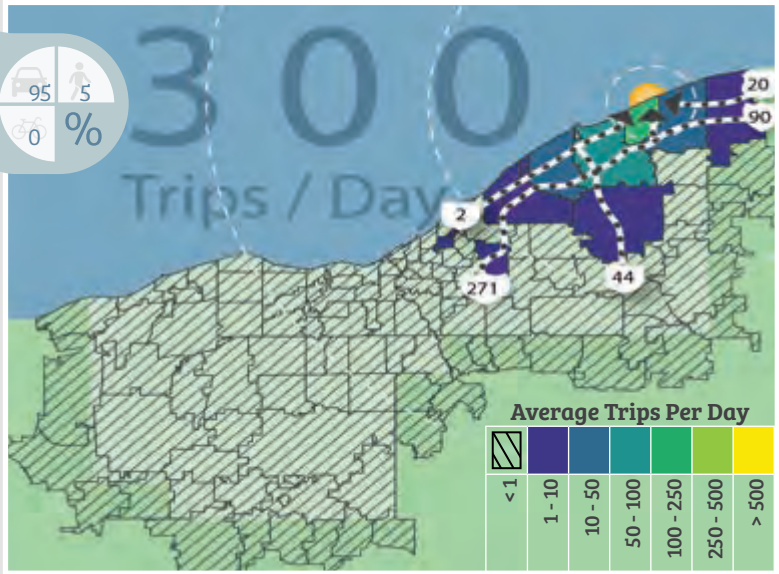
COAST TYPE
bluff

KEY THEMES FROM PUBLIC INPUT

Survey responses noted the great views and birdwatching at Lake Erie Bluffs. Some respondents cited erosion and lack of ADA access as concerns.

ACCESS

MODE



Perry Township Park 51

Photo by Perry Township

Perry Township Park is in rural Perry Township and is one of the few parks in coastal Northeast Ohio to offer campsites. The park provides a boat ramp for Perry Township residents, and attracts an average of 300 trips per day. The park is located along the Lake Erie Coastal Ohio Trail Scenic Byway, and the vast majority (95%) of visits arrive by car to the park. The park has one main entrance and a number of interior paths, and also features a pavilion, ball diamonds, and tennis courts.

AMENITIES

STANDARD

ADDITIONAL

Full Campsite, Primitive Campsite, Food Stand, Vending Machines, Education Signage

OPERATOR	AREA
twp.	70.4

COASTLINE	COAST TYPE
0.58	bluff

KEY THEMES FROM PUBLIC INPUT

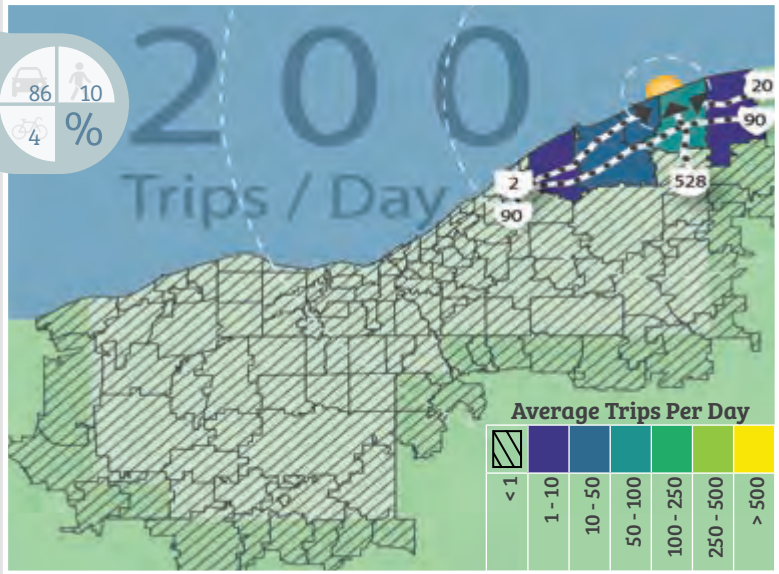
No responses specific to this park were received.

ACCESS

Site Boundary
Park Entry
Trailhead
Parking Lot
Trail
Low Stress Road
Scenic Byway

MODE

86 % 10 4



Lakeshore Reservation is operated by Lake Metroparks and was formed in the 1970s from a neighborhood of lakefront homes. The park features a mature stand of trees along the coastline, a large trail system, observational deck, and picnic areas. The park attracts 200 trips per day from northern Lake County and is accessible primarily by vehicle. Around 10% of visitors access the park on foot, likely from the nearby neighborhoods and relying on the sidewalk on Lockwood Road.

AMENITIES

STANDARD

ADDITIONAL
Observation Deck, Educational Signage

OPERATOR
met.

AREA
81.3

COASTLINE
0.51

COAST TYPE
bluff

KEY THEMES FROM PUBLIC INPUT

Survey responses noted Lakeshore Reservation's relaxing atmosphere and convenient beach access and amenities. Some respondents were concerned about erosion inhibiting access to the water.

ACCESS

MODE

79 % 17 4

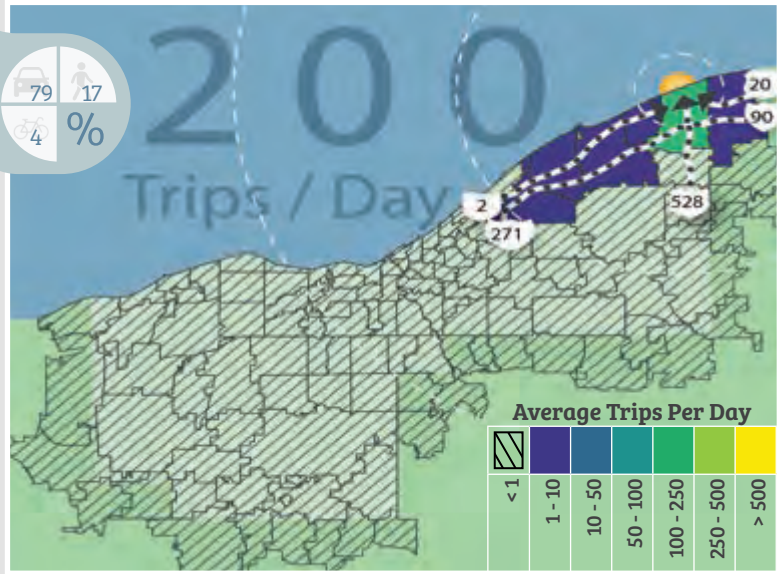


Photo by Madison Township

Bill Stanton Community Park in Madison Township offers sports facilities, playgrounds, rental facilities, and restrooms. The park's main entrance is on the Lake Erie Coastal Ohio Trail Scenic Byway, and the park attracts 200 trips per day primarily from northern Lake County. Nearly one-quarter of visitors arrive either on foot or by bike. In 2021, the Township began a project to protect the coastline in the park from erosion and stabilize the bluff, which is home to a stand of deciduous and evergreen trees.

AMENITIES

STANDARD

ADDITIONAL

Food Stand, Vending Machines

OPERATOR

twp.

AREA

32.8

COASTLINE

0.24

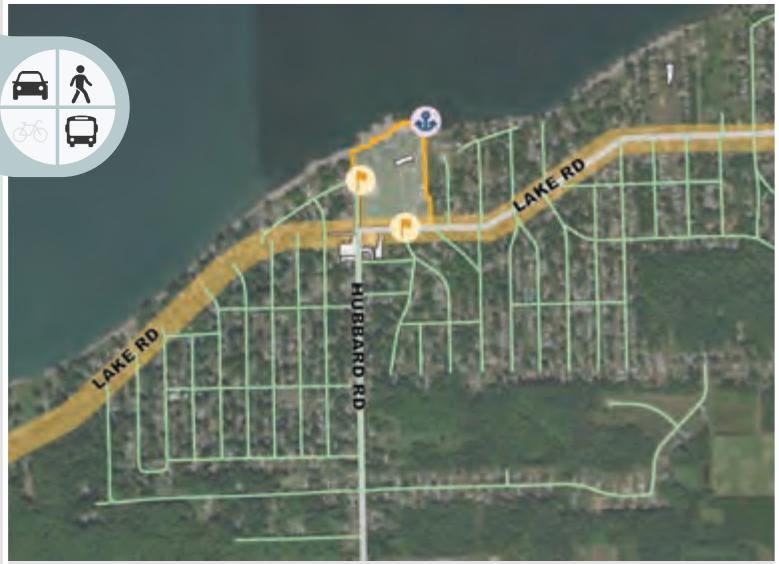
COAST TYPE

bluff

KEY THEMES FROM PUBLIC INPUT

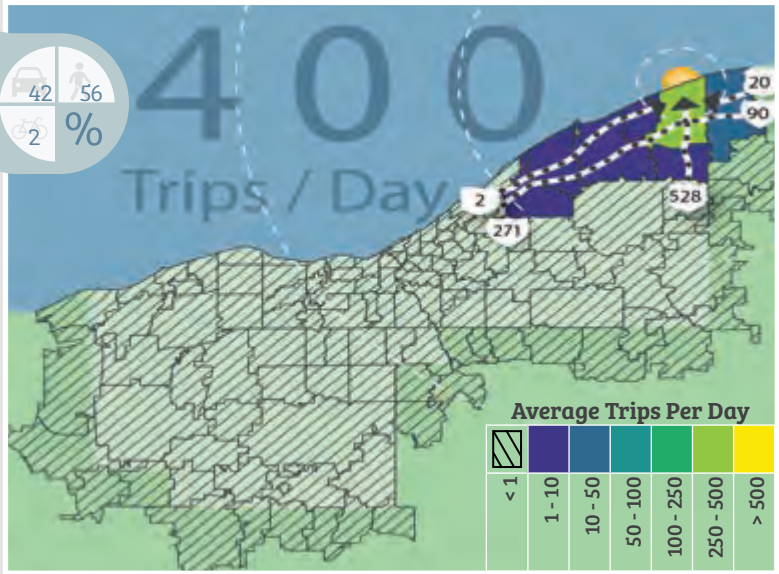
Survey responses noted Bill Stanton Community Park's quality sports facilities and ease of parking. Some respondents cited no easy access to the lake as a reason for not visiting more often.

ACCESS

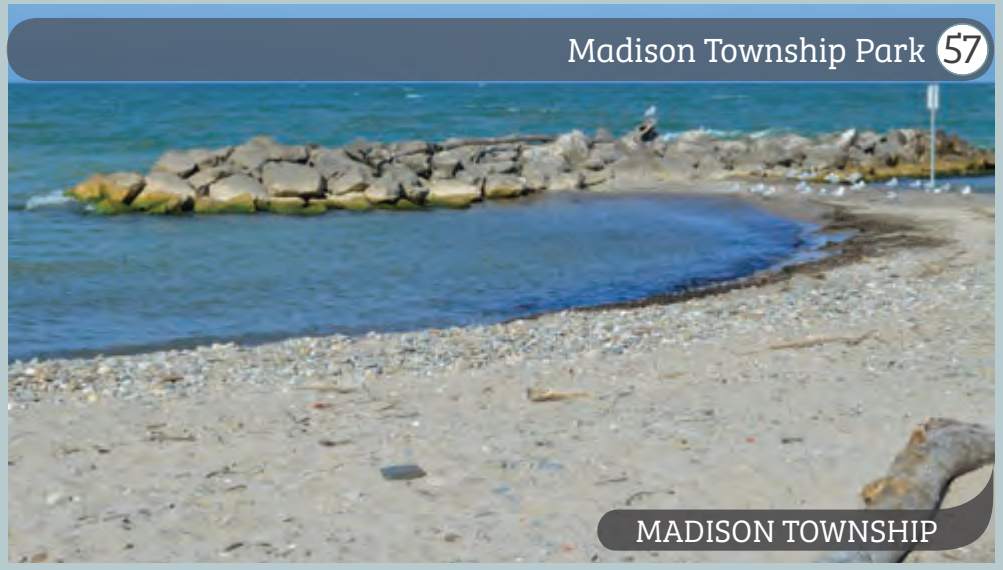


Site Boundary
Park Entry
Boating
Parking Lot
Low Stress Road
Scenic Byway
Laketran Route

MODE



Madison Township Park 57



Madison Township Park in Madison Township offers a picnic area, boardwalk, playground, and fishing opportunities along it's 0.13 mile shoreline. The park attracts 400 trips per day primarily from the Township but also from northern Lake and Ashtabula counties. Over half of visitors arrive on foot (56%), and the park is well-connected to surrounding neighborhoods with multiple entrances. The park is on the Lake Erie Coastal Ohio Trail Scenic Byway and a transit line.

AMENITIES

STANDARD

ADDITIONAL
Boardwalk

OPERATOR
twp.

AREA
11.9

COASTLINE
0.13

COAST TYPE
low bank

KEY THEMES FROM PUBLIC INPUT
No responses specific to this park were received.

APPENDIX

B.

PUBLIC ENGAGEMENT REPORT

- Engagement Summary
- Site Visits
- Focus Groups
- Strategy Committee
- Public Workshops and Pop-Ups
- Public Survey

ENGAGEMENT SUMMARY

Public input shaped each phase of the planning process, outlined in Figure B.1. To ensure diverse input on a consistent basis, NOACA formed a Strategy Committee of representatives from the region to guide the project and ensure Lake Erie Connect captured the needs and spirit of the community with authenticity. See page ii in the full plan for a list of Strategy Committee members. Figure B.2 shows the timeline of engagement activities for Lake Erie Connect.

The project relied on the following forms of engagement, summarized in this Appendix:

- Site Visits, October 2021
- Strategy Committee, March, June, August 2022
- Focus Groups, April 2022
- Public Survey, Spring, Summer 2022
- Public Pop-Ups, Summer, Fall 2022

Phase 1 | Existing Conditions

Where are there challenges accessing the lakefront? What are the current initiatives and plans along the lakefront? This first phase of the process answers these and other questions, so that the plan has a firm basis in how people use the lakefront today.

Phase 2 | Analysis

The analysis phase includes the exploration of both quantitative and qualitative data related to the lakefront's transportation network. The results of the public's input about how people access the lake, and what they do once they get there, is foundational to the analysis of possible future improvements.

Phase 3 | Recommendations

The recommendations of this study are two-fold: short-term, immediate projects that can improve safety and accessibility today and long-term, visionary projects that will set Northeast Ohio apart as a premier lakefront destination for the benefit of all people.

Figure B.1 | Planning Process Overview

Figure B.2 | Planning Process Timeline

ENGAGEMENT SUMMARY

Figure B.3 showcases the diverse forms of engagement included in Lake Erie Connect.

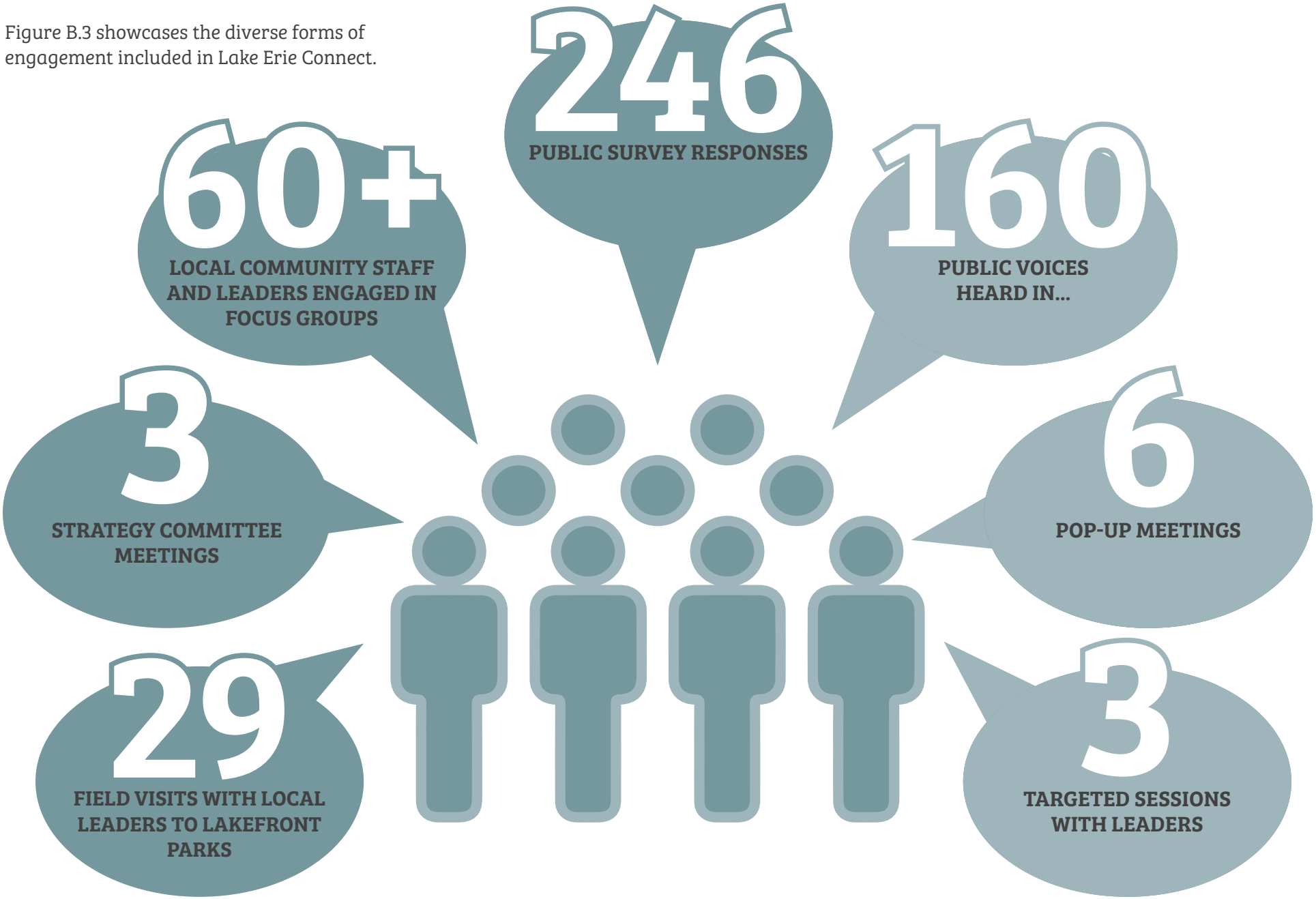


Figure B.3 | Engagement by the Numbers

SITE VISITS

In fall 2021, the Strategy Committee and project team conducted site visits at 29 lakefront parks to gain a better understanding of existing lakefront conditions. The sites were primarily well-known lakefront parks and areas with substantial development or access improvement plans. The Strategy Committee and regional leaders were invited to visit all sites, resulting in relationship building and cross-county education. Stakeholders from local communities were invited to join for particular sites to impart knowledge to the team.

The site visits took place from October 5th to October 7th, 2021. Despite the aggressive schedule, around 30 Strategy Committee members attended the site visits, including mayors, planning directors, and representatives from organizations like port authorities and metroparks. Figure B.4 shows the materials used to track notes during the visits.

The project team used the Site Visits to inventory existing amenities, future plans and visions, and access barriers. The team also gained a general understanding of overall lakefront dynamics among municipalities and organizations.

Key Findings

The following key findings are also outlined in Chapter 1, and originate from the many site-specific notes on the following pages:

- Many plans, ideas, and visions for the lakefront already exist, in various stages.
- Stakeholders are eager to work towards a more cohesive vision.
- Few existing public access points have true multimodal access.
- Most existing access points have a major barrier preventing equitable access, such as a highway, railroad, or lack of sidewalks.

Figure B.4 | Example pages from map packets used to take notes on site visits.

SITE VISITS

Lorain County Site Visit Notes

Showse Park / Brownhelm Township Park (Vermilion)- Erosion at the base of the park is a major concern. Sidewalks are being added to Liberty Avenue (Route 6) south of the site (past railroad tracks). Planned improvements for Showse Park include a new pavilion, dog park, and reconfigured and expanded baseball diamonds.

TLCI Plan Site (Vermilion / Lorain)- This site was proposed as a future park in the 2016 Lorain County Lakefront Connectivity Plan. Half the site is in Vermilion and half in Lorain; the Vermilion portion is a privately-owned storage area for cars ("junkyard"), while the Lorain portion is largely a vacant brownfield.

Lorain Harbor / Black River / TLCI Plan Site (Lorain)- Several dredge cycles continue to be needed until this site is filled. A connection for this site to the east and west neighborhoods would be helpful for the bicyclists and pedestrians.

Lakewood Beach Park (Sheffield Lake)- This site is eroding and has limited opportunity to increase public access.

Boat Ramp / Beach / TLCI Plan Site (Sheffield Lake)- There is only parking for boats at this site. Water taxis have been discussed to be able to get more traffic for the potentially redeveloped shopping center.

Miller Road Park / NRG Plant Site / TLCI Plan Site (Avon Lake)- Lake Road has bike access with the potential to add sidewalks. The current development is for remediation only with the potential for mixed use development. The City recently purchased land on West Shore Road east of NRG for a proposed redevelopment site focusing on connectivity. The parcel was included in the 2016 Lorain County Lakefront Connectivity Plan.

Veteran's Memorial / Blosser Park (Avon Lake)- Route 83, a major north/south corridor, terminates at Veteran's Memorial Park. The playground at Blosser Park is being replaced and there are two rentable facilities.

Shell Cove Park

Century Park

SITE VISITS

Cuyahoga County Site Visit Notes

Cahoon Park / Huntington Beach (Bay Village)- The City is currently installing bike lanes on Wolf Road. This supports the master plan for the area which focuses on new lakefront connections.

Community Confluence Study Area (Lakewood / Rocky River)- Access to the lakefront in this area is secluded and private. Recommended trails from the Community Confluence TLCI could potentially increase lakefront access, but the study area is primarily inland from the coast.

Lakewood Park (Lakewood)- The Solstice Steps are a community staple within Lakewood. South of Lake Avenue there is access via trails.

Gold Coast (Lakewood)- There are large bluffs which make it difficult and confusing to access the shoreline. However, this could be changed to increase access for bicyclists and pedestrians. Towards the western part of the land, a path is proposed in front of the Ace Apartment buildings.

Edgewater Park / Beach (Cleveland)- Access to the surrounding neighborhoods has been enhanced, and more options are being explored.

Wendy Park (Cleveland)- There is not a bike trail currently in the park, but a pedestrian trail will be built in the summer of 2022.

Irishtown Bend (Cleveland)- The park is fully funded and eminent domain is being enacted to acquire the last part of land. Land stabilization is one of the primary benefits of the planned park.

Canal Basin Park (Cleveland)- This land is mainly institutional based and has a larger trail in place for bicyclists and pedestrians.

North Coast Harbor / Mall Land Bridge (Cleveland)- Plans for a land bridge were in early discussion at the time of the site visit.

Gordon Park / Lakefront Reserve / CHEERS Plan (Cleveland)-Pedestrian safety will be increased with a land bridge. Wayfinding is difficult within the site and needs improved.

Euclid Creek Reservation / Wildwood Park (Cleveland)- This site has potential to be a major node of activity and may be a good priority for the Cuyahoga County Lakefront Public Access Plan, which was not released at the time of the site visit. Wayfinding is needed both in and around the park.

Beulah Park / Lakefront Reserve / Euclid Beach (Cleveland)- This site has numerous parking spots. However, there are only two bike racks in the entire park. Partners stated that around one million dollars is in the works to improve the park and its trails.

Sims Park (Euclid)- Future trails will be paved to create more accessibility for pedestrians and bicyclists. An area with a restaurant, kayak rental, and more will soon be constructed. Construction is slated to begin in 2023.

Euclid Beach Park

SITE VISITS

Lake County Site Visit Notes

City Hall/Lakeshore Lodge (Willowick)- Regional public access to the site would be connected through this site via Vine Street, which is the focus of a new NOACA TLCI plan. A previous TLCI recommends improvements to Lakeshore Boulevard and this site.

Osborne Park (Willoughby)- A site plan is in development for this park that will result in a new public feature. Ideally, the park will be used year-round.

Mentor Beach Park Pavilion (Mentor-on-the-Lake)- This site has a private beach and would be a great location for a private venue with public access to the beach like a restaurant or event space.

Fairport Harbor Marina / Lakefront Park (Fairport Harbor)- This park and trail connects individuals from the shore into the downtown district and is funded by a TLCI.

Diamond Shamrock / Glen Springs Site (Painesville Township)- A trail could easily be developed through the private park which would then make the park public through the Metroparks.

Painesville Township Park (Painesville Township)- There are many retail workers within this area for the shopping center. A trail connection could promote walking for these employees to their jobs.

Lake Erie Bluffs (Perry Township)- This site could connect easily to Painesville Township Park, further promoting walkability for the employees of the shopping center.

Madison Township Park (Madison Township)- This site has many regional destinations, such as restaurants. Private property is on either side of this site so east to west trails cannot be created, limiting this site to vehicles only.

Painesville Township Park

Osborne Park

FOCUS GROUPS

The Focus Groups supplemented the Strategy Committee's guidance with a broader range of civic stakeholders and city staff. The project team hosted four virtual focus groups in April 2022, focused on participants in:

- Lorain County
- Cuyahoga County
- City of Cleveland
- Lake County

A total of around 50 people attended the focus groups. Participants included local government staff such as parks and recreation directors, economic or community development staff, urban planners, transportation planners, and engineers. Staff from nonprofit organizations including advocacy organizations, community development corporations, and civic institutions were included that work near the lakefront or have an interest in transportation or public space improvements.

Figure B.5 indicates the professional focus areas of all of the focus group participants. Over half of the participants were associated with community planning and transportation planning/engineering.

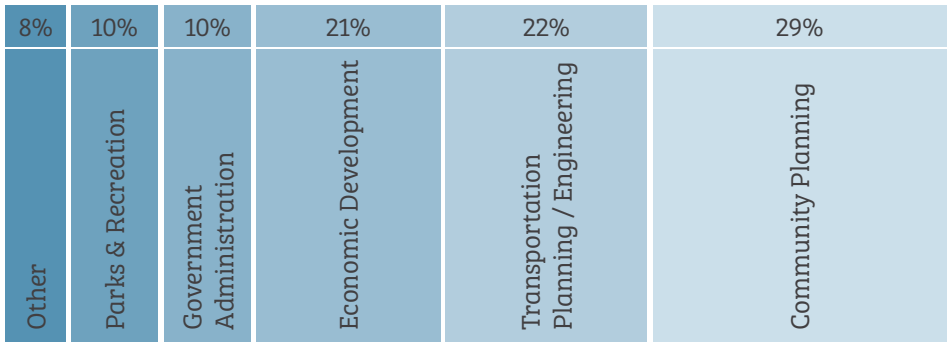


Figure B.5 | Focus Group Participants by Role

Due to COVID-19, the focus groups were held virtually. Each focus group included a brief presentation, summarizing the goals of Lake Erie Connect and key trends about the region's lakefront. Menti, an interactive website that allows for group polling, was used to gather feedback about the future of the Lake Erie coastline. Mural, an online tool, was used to collect comments on a large map of the region. The discussions were focused on learning about current lakefront initiatives, opportunities to expand public access, and areas where Lake Erie Connect might provide new detailed planning work to support the community's vision.

Key Findings

The key findings from the Focus Groups, below, were used to guide Lake Erie Connect.

- The lakefront today is viewed as a recreational asset, despite being overwhelmingly privately-owned. This is true in every lakefront county.
- There is strong consensus across the region that in just five years, the lakefront could be clean, accessible, and connected.
- The lakefront is a high priority and an important focus for the communities in each county, and each county is already investing in greater public access to the lake.
- Due to the region's geography, lakefront access is viewed as an "east-to-west" movement for tourism, and a "south-to-north" movement for local access to the lakefront. The latter is the greatest need and has been studied the least in each County.

Figure B.6 shows responses to the question: "How is the Lakefront Currently Used in Your Community?" Generally, each community uses the lakefront for a mix of residential, recreational, commercial, and industrial uses. Participants felt the lakefront was used the most for recreational purposes, which conflicts with the Lake Erie Connect land use analysis. In truth, over 80% of the lakefront is privately owned.

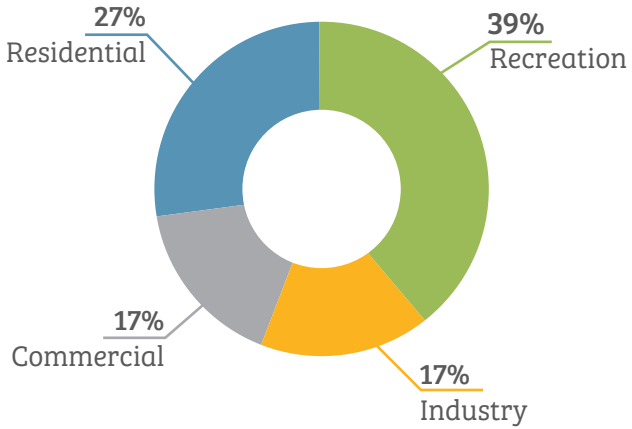


Figure B.6 | Current Lakefront Uses

Most participants responded to the question: "What would you like people to say about the lakefront in five years?". Responses varied but in general are captured in Figure B.7. Participants expressed that in five years, they would like the lakefront to feel clean, connected, accessible, integrated, beautiful, and vibrant.

Figure B.7 | Focus Group Participants' Most Common Words for the Lakefront's Future

Lakefront Importance

Participants generally agreed that the lakefront was either the highest priority or an important focus for their work, as seen in Figure B.8. No participants responded that the lakefront was not a focus.

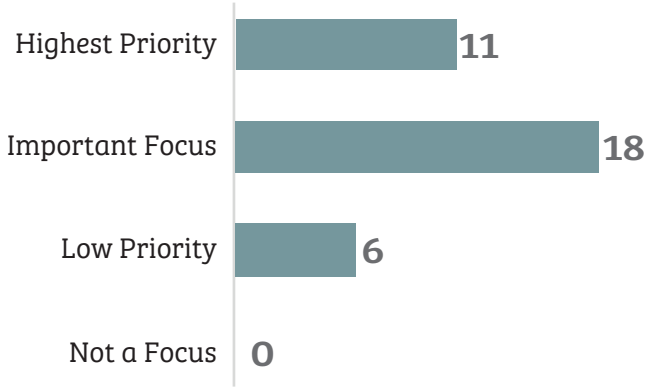


Figure B.8 | Lakefront Importance

FOCUS GROUPS

The focus groups identified several regional needs that Lake Erie Connect could address. The focus group participants also identified current lakefront initiatives and documented new opportunities to expand public access. These discussions identified several trends regionally and locally that Lake Erie Connect can potentially support.

Participants' responses varied to the question: "How can NOACA's lakefront plan help you?" as shown in Figure B.9. In order of prevalence, respondents felt that Lake Erie Connect should package projects to increase competitiveness for funding, recommend new transportation connections, and promote existing initiatives from partner organizations.

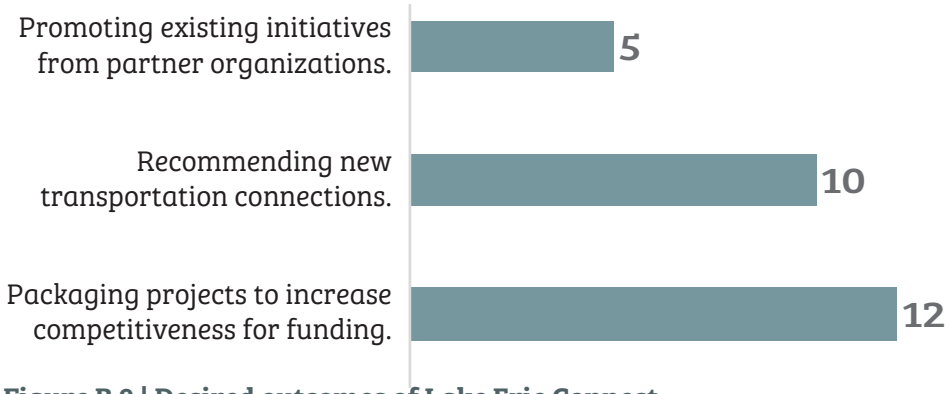


Figure B.9 | Desired outcomes of Lake Erie Connect.

Regional Trends

All four focus groups had consensus on a number of regional needs.

First, participants from each lakefront county generally agreed that there is a plan in place already for east-to-west route connectivity along the lakefront. The need remains for more north-south connections that would connect residents up to the lake, and to the east-to-west route. This includes transit connections from neighborhoods to lakefront destinations.

Communities also expressed the need to improve pedestrian and bicyclist safety on major arterial roadways with heavy traffic near the lakefront.

- Some participants mentioned diverting heavy vehicle traffic around major lakefront arterial routes.
- Communities have also mentioned cleaning streets of debris, widening sidewalks, adding protected bike lanes, and improving street lighting as potential solutions to improve pedestrian and cyclist safety.

Communities across the NOACA lakefront region expressed the importance for redevelopment and enhancement of lakefront property sites to public lakefront access points. There are several port authority agencies focusing on cleaning and redeveloping brownfield sites along the lakefront.

Local Trends

Larger lakefront communities, most notably communities within Cuyahoga County, shared a common goal to enhance and build public-private relationships in order to increase public access points, due to the limited open land access in this urbanized area.

Smaller lakefront communities, such as Avon Lake, are facing several roadblocks with private development of lakefront sites, with many of these communities having to compete with private investors in order to secure public lakefront land.

FOCUS GROUPS

Lakefront Connectivity Initiatives

There are a number of lakefront connectivity initiatives that are already in progress across the region. Participants in each focus group were tasked with sharing these initiatives in the discussion. Below is a list of proposed and ongoing lakefront connectivity initiatives per county.

Lorain County

- Vermilion has interest in the TLCI site on Erie Avenue and is studying redevelopment options.
- A multipurpose trail between Lorain and Vermilion is recommended by the 2016 Lorain County Lakefront Connectivity Plan.
- The City of Lorain is adding buffered bike lanes on Erie Avenue, from Oberlin Avenue to Broadway Avenue.
- Lorain County and the Lorain County Port Authority received a planning grant for brownfield remediation of waterfront land in 2018. The City of Lorain is interested in redevelopment of the Public Pier and Boat Ramp site once the land is cleaned.
- Avon Lake would like to expand Miller Road Park's beach towards the power plant site to the east.
- There is an ongoing private development at the power plant site east of Miller Road Park. The site needs brownfield remediation and the City is working to ensure that remediation is done to public standards.
- Lake Road near Miller Road Park is being repaved and the bike lanes are being widened.

Cuyahoga County

- Wolf Road in Bay Village is currently being rehabbed and is adding bike lanes from Clague Road to Cahoon Park.
- There is a Lake Avenue sidewalk expansion project underway in Lakewood.
- Lakewood is conducting a pier feasibility study at Lakewood Park.
- Lake Avenue bike connection to Cove is currently pending with the City of Cleveland, and includes linking existing bike lanes to the lake.
- Lakefront Connector feasibility study currently underway in Cleveland.
- City of Cleveland/County working on a plan for sidewalk expansion on Lake Avenue between West Boulevard and West 117th Street.
- New public-private partnerships are emerging to increase public land access in the City of Cleveland.
- Ongoing riverfront trail planning around Scranton Peninsula includes a trail connecting Carter Road to the Centennial Trail and Red Line Greenway.
- The CHEERS plan and its partners are moving forward with design and construction next steps. This includes new proposed bridges to Gordon Park.
- Trails from University Circle to the lakefront are included in the Restore Rockefeller TLCI plan.
- Cleveland Metroparks secured a RAISE grant for the Euclid Beach bike connector.
- The Western Reserve Land Conservancy purchased a mobile home park on the lakefront in Euclid to turn into greenspace.
- Euclid is working to extend its waterfront trail and create new connections to Lakeshore Boulevard. This includes a proposed 4/5-acre park at the east end of the existing trail.

Lake County

- Fairport Harbor is currently seeking funding for increased dock and recreational access.
- Lake Metroparks and other partners are working on plans for a new lakefront trail between Fairport Harbor and Painesville, through the Diamond Shamrock site.
- Erosion concerns on parks in Perry Township and Madison Township are resulting in new plans for bluff stabilization and improvement.
- More public-private partnerships are needed to bring dining options to parks.

STRATEGY COMMITTEE

The Strategy Committee consisted of representatives from lakefront municipalities, including cities, villages, townships, and counties (Figure B.10). Most of the members are also on NOACA board and committees. The role of the Committee was to share knowledge with the planning team, define the overall vision, refine proposed concepts, and finally, to carry the vision forward. Three Strategy Committee meetings were held to present information and gain feedback throughout the planning process. This ensured the team had the most current and relevant information, understood it to its fullest extent, and applied it in a helpful and constructive manner. The meetings were held as listed below:

- Strategy Committee #1, March 8, 2022
- Strategy Committee #2, June 30, 2022
- Strategy Committee #3, August 17, 2022

LORAIN

- County Commissioner
- County Engineer
- County Planning Director
- Vermilion Mayor
- Sheffield Lake Mayor
- Lorain Mayor
- Avon Lake Mayor

CUYAHOGA

- County Executive
- County Engineer
- County Planning Director
- Bay Village Mayor
- Rocky River Mayor
- Lakewood Mayor
- Cleveland Mayor
- Bratenahl Mayor
- Euclid Mayor

LAKE

- County Commissioner
- County Engineer
- County Planning Director
- Willowick Mayor
- Lakeline Mayor
- Timberlake Mayor
- Eastlake Mayor
- Willoughby Mayor
- Mentor Mayor
- Mentor on the Lake Mayor
- Fairport Harbor Mayor
- North Perry Mayor
- Painesville Township Administrator
- Perry Township Administrator
- Madison Township Administrator

Figure B.10 | Strategy Committee Roster

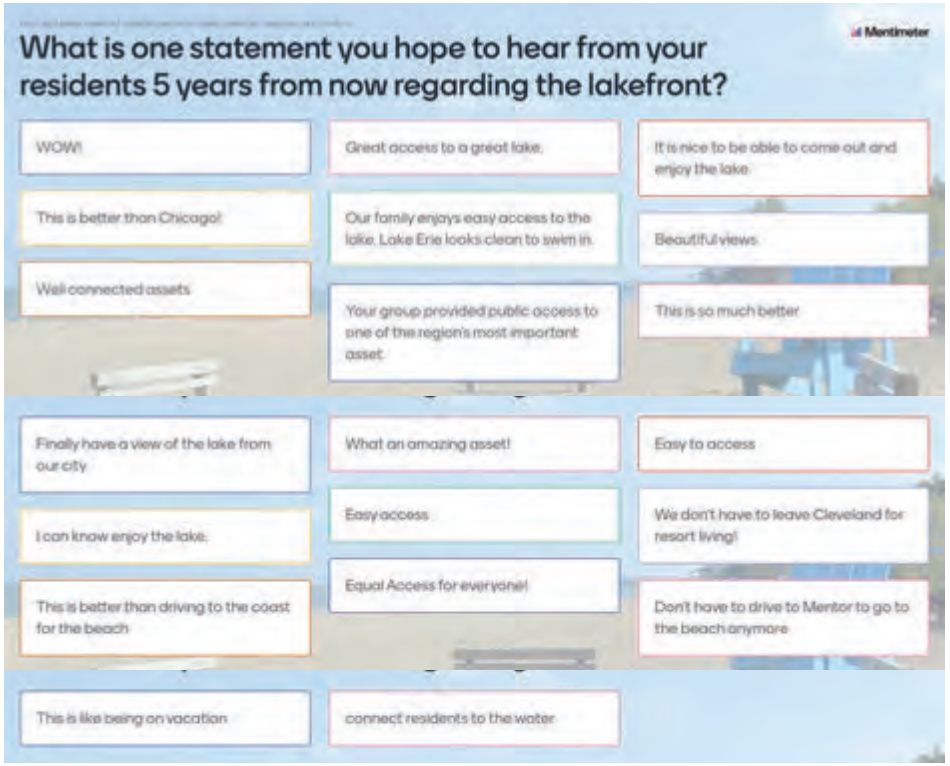


Figure B.11 | Results from brainstorming at Strategy Committee #1

Each Strategy Committee meeting was virtual due to the COVID-19 pandemic and the large geographic reach of the Committee. Interactive exercises, like Figure B.11, were used on platforms including Menti, Mural, and Zoom to keep conversation going and participants engaged. The first meeting centered on visioning for the future of the lakefront. The second meeting explored the results of the transportation analysis and discussed options for future site plan improvements. The third meeting highlighted the results of the site plans and the final status of the transportation findings.

PUBLIC WORKSHOPS AND POP-UPS

Overview

The planning team hosted public workshops (summer) and pop-ups (fall) in each of the three lakefront counties in 2022. At the summer events, the team facilitated a large-scale mapping activity to collect information on how and where people wanted to access the lake. In the fall events, the team focused on gathering input on last-mile comfort and safety recommendations. Below are the event locations and dates:

Cuyahoga County

- Summer Solstice, Lakewood Park, Lakewood, June 21
- Scaredy Cat Walk/Run, Bay Village, October 29

Lorain County

- Sunset Concert Series, Lakeview Park, Lorain, July 4
- Fall Festival, Pioneer Plaza Park, Elyria, October 29

Lake County

- Beachfest, Mentor Headlands, Mentor, July 16
- Captains Halloween Fest, Captains Stadium, Eastlake, October 15

Summer Walking Workshops

The summer events were called the "Walking Workshops". These were primarily used to facilitate overarching conversations with community members about regional lakefront access and connectivity. Much of the discussion was educational in nature and used to heighten public awareness of the study and the conditions surrounding Lake Erie access (Figure B.12). Many community members were surprised at the number of existing access points along the lake, as well as the true scale of our region's coastline.

The activity encouraged individuals to map their own lakefront access routes using string. String colors represented modes. Many people created long routes that touch many access points.

Figure B.12 | Materials from summer pop-ups

Summer pop-up event engagement.

PUBLIC WORKSHOPS AND POP-UPS

Fall Pop-Ups

In fall 2022, the project team attended three community events throughout the region to gather feedback on Lake Erie Connect. The events were popular and attracted a diverse audience. The posters displayed at the pop-ups included a preview of the site plan improvements for Pellet Terminal in Lorain, Columbia Road Park in Bay Village, and the former First Energy Power Plant site in Eastlake (see Chapter Four). Results from the interactive questions are shown in Figures B.13 and B.14.

Attendees also provided verbal comments about what is needed on the lakefront. They included:

- The need for more dog facilities and the acknowledgment that people enjoy bringing their dogs to the lakefront. This includes the need for more dog beaches and areas without leash requirements. This comment was especially true in Bay Village.
- High-water and flooding near the coast are a concern. Options for overlooking the lake rather than providing direct access were requested.
- Concerns about crossing the east-west route were common and included fear that even the most advanced countermeasures were not enough.
- Desire for kayak activities and launches.
- Signs between the east-west route and the park are needed to better advertise the park and its amenities.
- Desire for more retail businesses and restaurants/cafes on the lakefront.
- Desire for renovation of lighthouses and other landmarks.
- In Elyria, the lakefront is primarily used for community events and concerts. Participants had many suggestions to improve the lakefront including amenities, new businesses and restaurants, and offerings that cater to young people and families.
- Affordable housing was mentioned as a community concern near the lakefront, especially in Elyria.

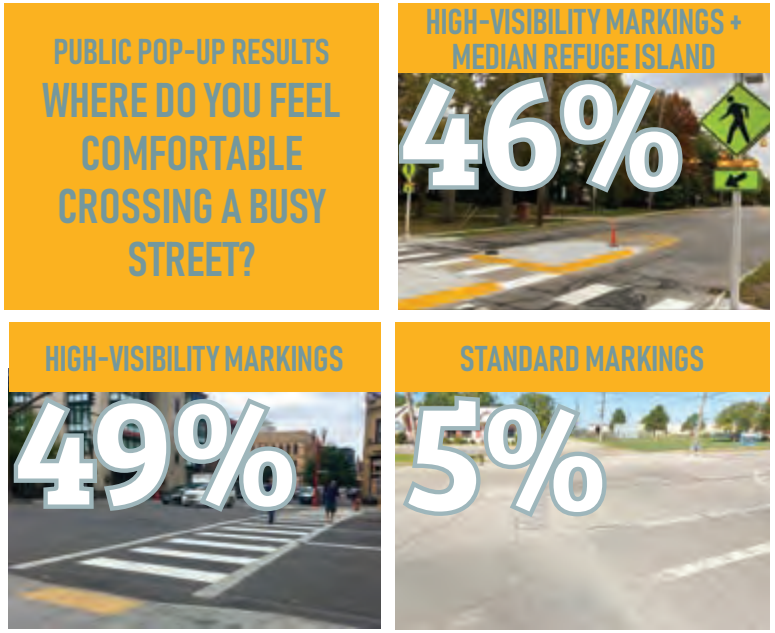


Figure B.13 | Pop-up results

Halloween event engagement.

Figure B.14 | Pop-up results

The fall pop-ups asked participants to select where they feel most comfortable crossing a busy street (Figure B.13) and riding a bike (Figure B.14). For both questions, the large majority of respondents preferred more visible infrastructure countermeasures that offer more protection and the greatest separation from vehicle traffic. This information helped prioritize the lowest-stress recommendations, even though they tend to be more expensive, in Chapter Four.

Halloween event engagement.

PUBLIC SURVEY

The public survey was available throughout spring and summer 2022. In total, 246 residents of Northeast Ohio took the survey and provided comments for all but 18 of the lakefront parks.

Outreach

Several outreach methods were used to increase public awareness of the project and survey. At the beginning of the study, a dedicated project website was launched for general information, updates, and public engagement, including hosting the public survey. To advertise, the project team developed the following materials for use by Strategy Committee members and other stakeholders:

- Social Media Posts
- Postcards (Figure B.15)
- Fliers
- Press Releases

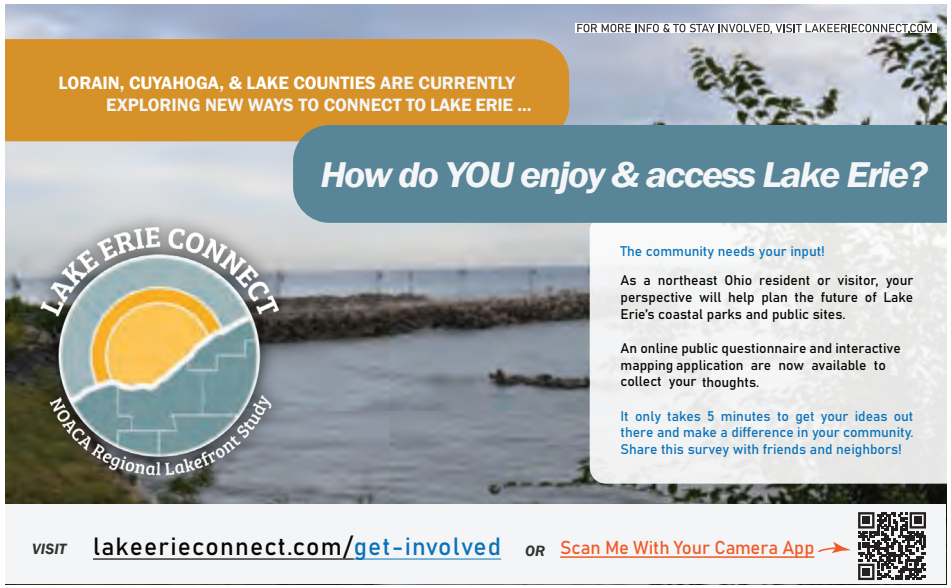


Figure B.15 | Survey Postcard

Key Findings

Proximity plays a key role in lakefront park visitation. While 246 people responded to the survey, some survey takers provided comments about multiple parks. There were 301 responses provided about particular parks, and the most common reason for park visitation was that a person lives nearby. There was not a single response received indicating the respondent never visits a nearby park.

Park cleanliness and maintenance is an important visitation factor. Of the 301 responses indicating the respondent visits a park often or very often, 201 said they visit the park because it is clean and well maintained. Overall, 93 respondents visit a park they do not live close to and ranked the park's cleanliness and maintenance highly when providing a reason.

Easy access is essential for people to visit a park comfortably. Of the 169 responses indicating the respondent never visits a park or visits it less often, 82 said they are unable to easily access the park (including by car, walking, biking, and ADA compliance). Despite living close to a park, 75 respondents do not visit a nearby park often. The top reason for not visiting the nearby park by this group is, "No direct access to lake or park".

All types of park amenities (active, passive, restrooms, swimming areas and other things to do) are very important to attract visitors to a park.

Concerns on erosion and water pollution are increasingly becoming major factors affecting why people are not visiting certain parks, especially those that have direct access to water and beaches.

PUBLIC SURVEY

The following section distills regional trends about the lakefront's parks based on comments about specific parks.

How often do you visit this lakefront park?

Survey responses were received for 41 of the region's 59 lakefront parks in response to this question. Overall, majority of the respondents indicated they visit a park along the lakefront 'often'.

Among the people who said they ***visit the park very often***, the top 3 reasons for visiting the park are:

- It's close to me
- I feel safe there
- It is clean and well maintained

Among the people who said they ***visit the park often,*** the top 3 reasons for visiting the park are:

- It's close to me
- It is clean and well maintained
- It's easy for me to drive/park

Among the people who said they ***do not visit the park often***, the top 3 reasons for not visiting the park are:

- No direct access to lake or park
- Personal Reasons (lack of time or interest)
- Lack of park amenities & things to do

Among the people who said they ***never visit the park***, the top 3 reasons for not visiting the park are:

- No direct access to lake or park
- Lack of park amenities & things to do
- Didn't know about some or all parks

Why do you choose to visit this park?

Survey responses were received for 38 of the region's 59 lakefront parks in response to this question. Respondents were given 12 possible reasons, and could choose as many as are applicable (Figure B.16). At least 200 of the 246 respondents visit parks for each of the following reasons:

- The proximity to where people live
- It is clean and well maintained
- Ease of driving/parking
- Feeling of safety
- Having nice passive amenities like benches or walking paths

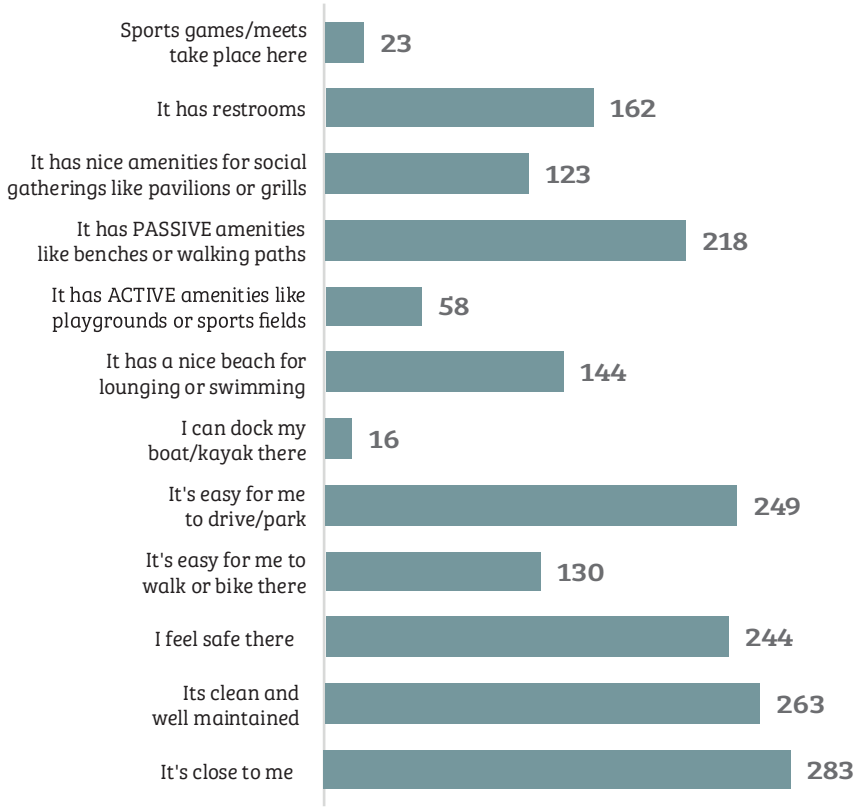


Figure B.16 | Survey Results, Reasons for Park Visitation

What prevents you from visiting this park more often than you do?

Respondents were given a list of possible reasons and could choose as many as are applicable (Figure B-17). In general, fewer survey takers chose to answer this question. The most common reasons for visiting a lakefront park more often were:

- No direct or easy way to access to the nearest lake
- Personal reasons (lack of time or interest)
- Lack of park amenities & things to do
- No direct access to the lake or place to swim, and
- Too much flooding or erosion.
- Amenities are not in good shape
- Difficult to drive or park there

Transportation and lack of easy access were the most common barriers to increased park visitation, across all parks.

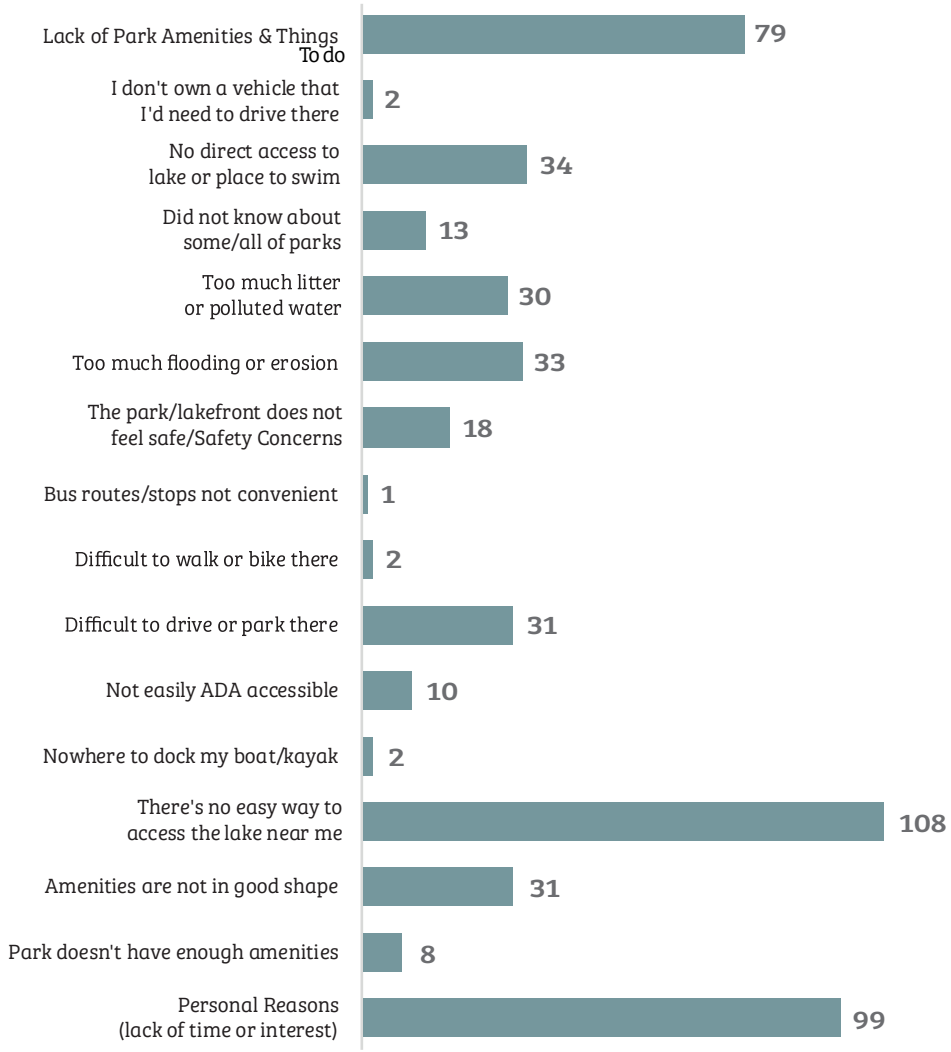


Figure B.17 | Survey Results, Barriers for Park Visitation

PUBLIC SURVEY

The survey asked respondents about modes of transportation that are currently used, or would like to be used, to reach lakefront parks. Key takeaways from these questions include:

- A majority of park respondents primarily drive to lakefront parks, but would like to use other modes more often (Figure B.18).
- Only two respondents who currently walk or use other modes of transportation except the car, chose car for "like to be able to use". All others who chose car for "like to be able to use" already drive to lakefront parks.

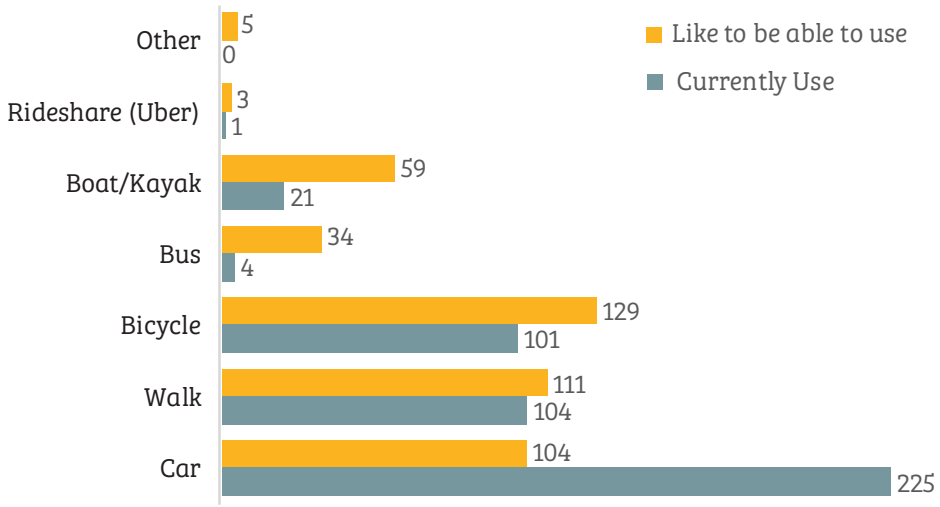


Figure B.18 | Survey Results, Current and Future Lakefront Travel

Nearly all survey respondents selected at least one option of areas for possible improvement at lakefront parks. Respondents were given eight options to choose from (Figure B.19) and could choose all if applicable. The most popular request was for more beaches with direct access to the water (18%).

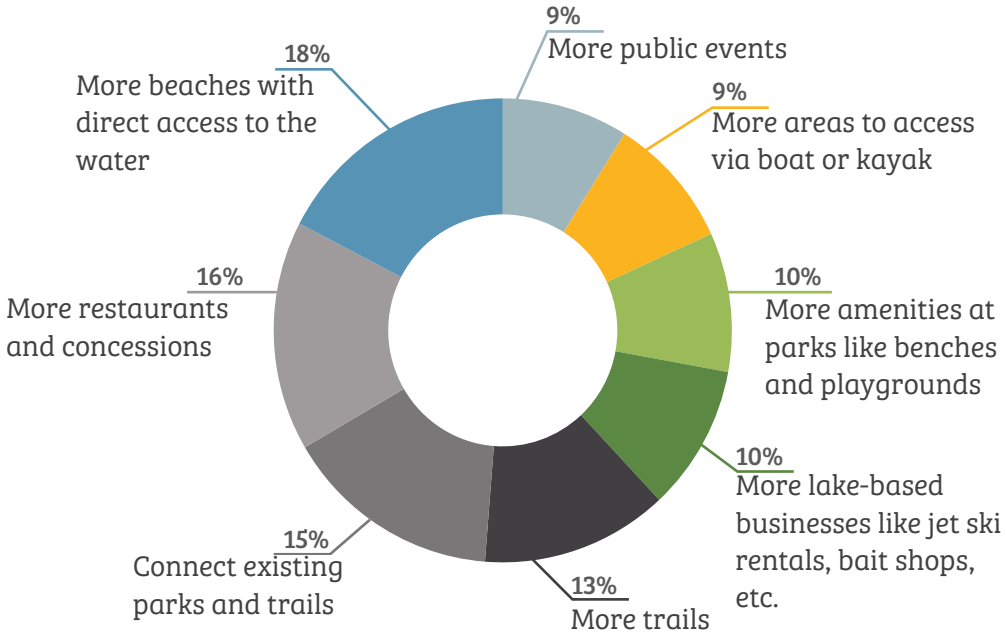


Figure B.19 | Desired Improvements at the Lakefront

PUBLIC SURVEY

The survey asked respondents to answer one open-ended question: "What is one thing that must change about the lakefront?". The 168 responses are clustered into broad thematic categories and reflect various perspectives on what changes can be made to increase visitation. Areas of focus, in descending order, that were repeatedly mentioned by respondents include:

- Increasing public access to the lake, waterfront, beaches, and areas to swim; including areas that are predominantly used by owners of private property along the lakefront.
- Environmental concerns, particularly the issue of controlling shoreline erosion from the changing water levels. Utilize natural and aesthetic solutions, like Euclid's waterfront trail project.
- Improving cleanliness in parks and beaches, and reducing pollution in the lake by applying better waste management and water quality regulations and practices. Increase the water quality to a level that is safe for swimming and odor-free.
- Increasing the number of and length of walking and biking trails within the parks, between parks, and to connect neighborhoods to parks.
- Offering more dining and entertainment options on the lakefront to create activity.
- Improving existing and adding new amenities and things to do in the parks and along the lakefront. Some suggestions include playgrounds, bathrooms, pavilions, lounging areas, landscaping, boardwalk, fishing piers, dog-friendly areas, golf course, nighttime/wintertime bonfires, and attractions similar to the Solstice Steps at Lakewood Park.
- Increasing the docking areas and options for those with private boats and launch areas for kayaks and paddles. Providing boat and kayak rental facilities for those who don't own one.
- Improving connectivity to the lake and parks from downtown areas and neighborhoods.
- Managing the residential development along the lakefront to promote more parks and publicly accessible areas with unobstructed views of the lake.
- Increasing awareness of the parks and lake by improving wayfinding or making maps for road and waterway users. Include educational courses about the lake in schools.
- Increasing safety in parks for children and families and at the beach by employing life guards.
- Considering alternative land uses on current industrial and institutional sites.

Mixed responses were received for the following areas of focus:

- While some suggested leveraging the lakefront and developing it as a destination to attract tourism, others suggested minimal non-commercial development to preserve the quiet natural state of the parks with trees, birds, water, and views of the sunsets.
- Availability of parking received mixed responses with some saying parking must be improved while others saying that parking must be reduced to reduce cars and increase green spaces.

APPENDIX

C.

SUPPLEMENTAL DATA

- Land Use
- Environmental Overview
- Environmental Maps

LAND USE

There are over 96,500 acres of land within two miles of the Lake Erie shoreline in the NOACA region. Land use varies throughout this two mile band, but private land dominates the landscape (Figure C.1). Figure C-2 shows the land use across the study area.

Other key trends related to land use include:

- Residential uses consume the most land in the three lakefront counties.
- Several large industrial sites in each county break-up public lakefront access and contribute to 11% of acreage within two miles of the shore.
- Lorain County has the largest proportion of land dedicated to industrial use, creating unique challenges to lakefront access due to lakeside railroads and industrial sites.
- Cuyahoga County has the second most acreage and the most lakeside commercial use of the three lakefront counties.
- Lake County has the most acreage of the three counties within two miles of the lakefront, and accounts for half of the public land.

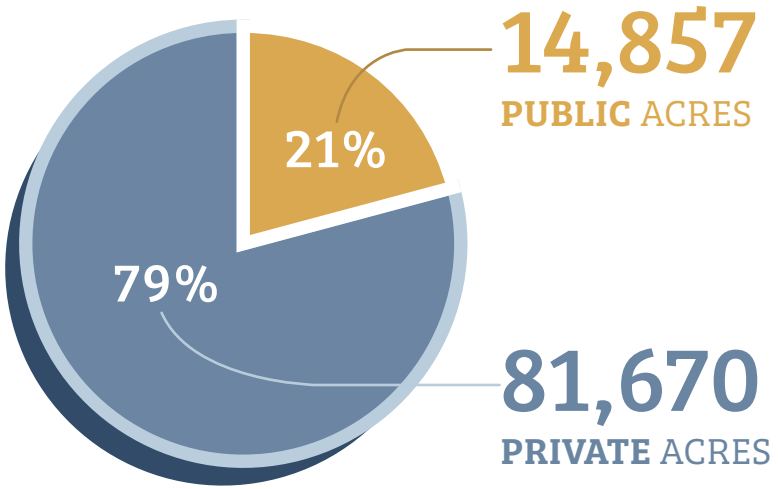


Figure C.1 | Land Ownership within Two Miles of Lake Erie, by Acreage and Parcels
Source: Auditor data from Cuyahoga, Lake, and Lorain Counties.

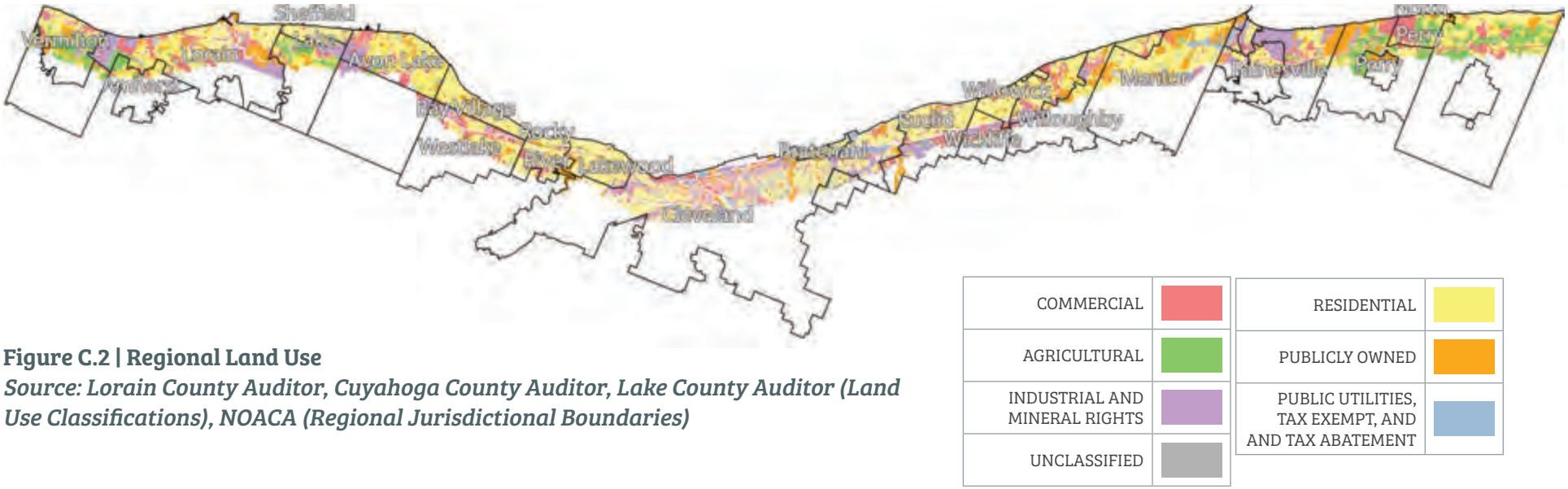


Figure C.2 | Regional Land Use
Source: Lorain County Auditor, Cuyahoga County Auditor, Lake County Auditor (Land Use Classifications), NOACA (Regional Jurisdictional Boundaries)

ENVIRONMENT

Methodology

To characterize the study area with respect to environment areas of concern, a desktop analysis of relevant and available geospatial data and online databases was completed. Publicly available geospatial data were obtained and reviewed from a variety of federal, state, and local agency databases and websites. This data was used to inventory environmental areas of concern in the study area through a desktop analysis completed in geographic information systems (GIS). The following geospatial data was obtained:

- 2019 National Land Cover Data (USGS 2021)
- U.S. Geological Survey National Hydrography Dataset (NHD) (USGS 2016)
- U.S. Fish and Wildlife Service National Wetland Inventory (NWI) (USFWS 2021)
- Federal Emergency Management Agency (FEMA) Flood Hazard Areas (FEMA 2021)
- Combined Sewer Overflow Locations
- National Conservation Easement Database (NCED) Easements (NCED 2017)
- Ohio Department of Natural Resources (ODNR) Lands (ODNR 2021a)
- Environmental Protection Agency (EPA) Facility Registry Service (FRS) Brownfields (EPA 2021a)

In addition to utilizing publicly available geospatial data in GIS, several resource-specific public databases were accessed and used to obtain information on resources located within the study area where GIS data were not available. These included the following:

- Ohio Brownfield Inventory Database: Statewide inventory that provides detailed information on brownfield properties
- Coastal Erosion Area (CEA) Map Viewer: Online viewer that illustrates coastal erosion areas within the State of Ohio.
- National Emissions Inventory (NEI) Data – Facility Mapping Tool: Mapping tool that provides emissions information for selected pollutants by "major emitting facility" defined as certain types of stationary sources of air pollutants which emit or have the potential to emit above the thresholds established by the Clean Air Act.
- Ohio EPA Division of Surface Water, Combined Sewer Overflow (CSO) Locations – Online map that displays Ohio EPA permitted CSO outfalls.

ENVIRONMENT

Lorain County

The region's coastal landscape has been shaped by changing land uses over time. Heavy industrial uses near the waterfront have led to brownfields, or contaminated land, that persist today in some places. Figure C.3 shows environmental conditions in Lorain County in three panels. There are significant areas of forest, wetland, and floodplains near the coast, and 17 brownfield sites, primarily near the City of Lorain.

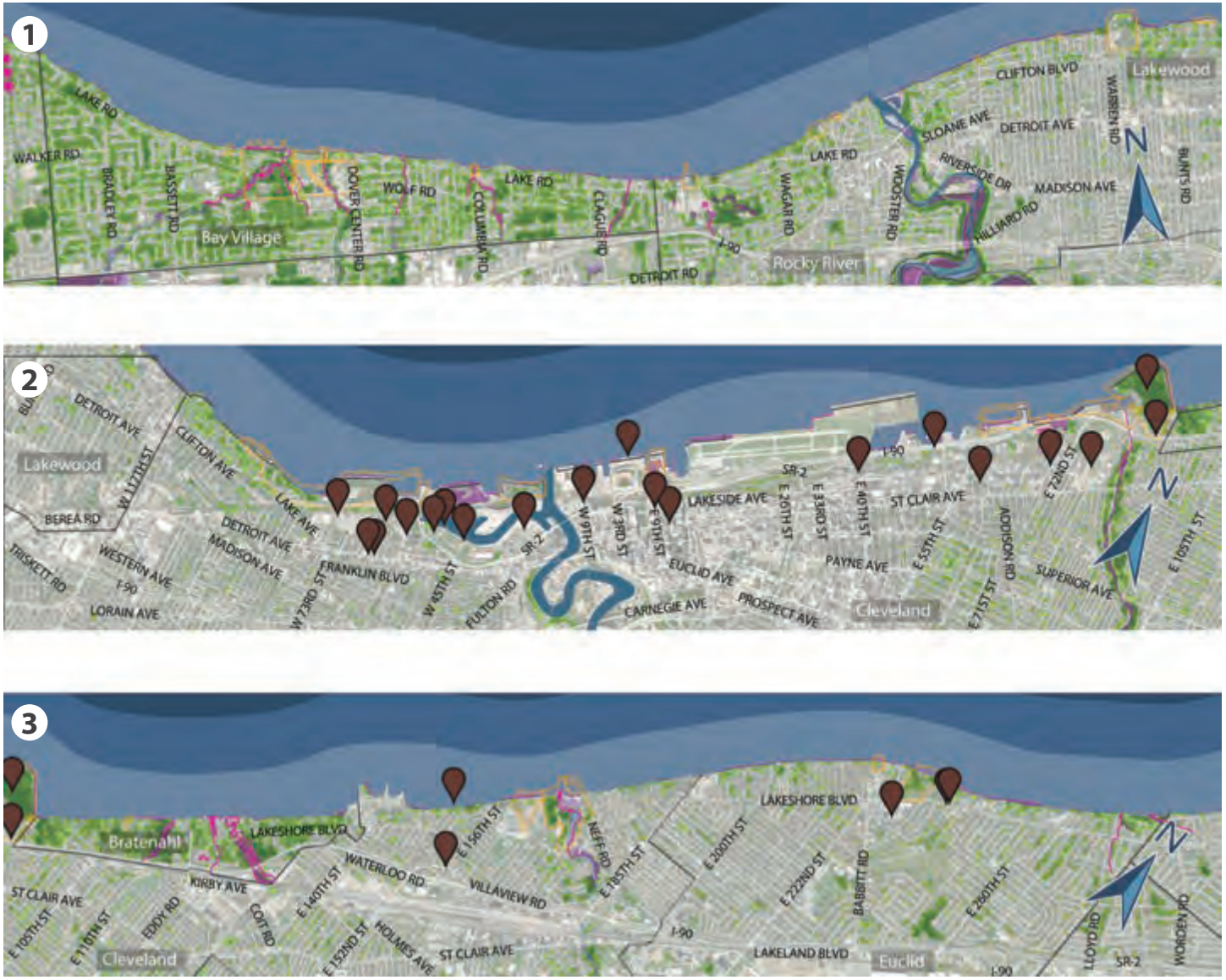
- Public Access Site
- Tree Canopy
- Wetlands
- Floodway
- 100-Year-Floodplain
- 500-Year Floodplain
- Brownfield

Figure C.3 | Lorain County Environmental Conditions

Sources: USA National Land Cover Database (Tree Canopy), US Fish and Wildlife Service National Wetland Inventory (Wetlands), Federal Emergency Management Agency (Floodzones), US Geological Survey National Hydrology Dataset (Rivers and Streams), EPA Environmental Registry (Brownfields), NOACA (Road Network), ESRI (Satellite)

Cuyahoga County

Figure C.4 shows environmental conditions in Cuyahoga County. The County has several large patches of forested land, especially in the cities of Bay Village and Rocky River and on the eastern side of the City of Cleveland near the Cleveland Lakefront Nature Preserve. Wetlands and floodplains are present across the County, even in some areas with dense development. There are also 24 brownfield sites near the Lake, primarily in and east of the City of Cleveland.



- Public Access Site
- Tree Canopy
- Wetlands
- Floodway
- 100-Year-Floodplain
- 500-Year Floodplain
- Brownfield

Figure C.4 | Cuyahoga County Environmental Conditions
Sources: USA National Land Cover Database (Tree Canopy), US Fish and Wildlife Service National Wetland Inventory (Wetlands), Federal Emergency Management Agency (Floodzones), US Geological Survey National Hydrology Dataset (Rivers and Streams), EPA Environmental Registry (Brownfields), NOACA (Road Network), ESRI (Satellite)

ENVIRONMENT

Lake County

Lake County's environmental conditions are shown in Figure C.5. The County has large forested areas in the Mentor Lagoons Nature Preserve and Marina, the Mentor Marsh, and the County's less developed eastern townships. Many of these areas are preserved and are publicly accessible. There are 535 acres of mostly forested/shrub scrub wetlands; with the largest cluster in Mentor Marsh. There are no coastal brownfields within the county.

- Public Access Site
- Tree Canopy
- Wetlands
- Floodway
- 100-Year-Floodplain
- 500-Year Floodplain

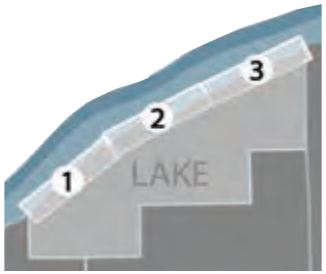


Figure C.5 | Lake County Environmental Conditions

Sources: USA National Land Cover Database (Tree Canopy), US Fish and Wildlife Service National Wetland Inventory (Wetlands), Federal Emergency Management Agency (Floodzones), US Geological Survey National Hydrology Dataset (Rivers and Streams), NOACA (Road Network), ESRI (Satellite)

Forested Areas

Forested areas – mixed, evergreen, and deciduous – were plotted to identify larger areas of contiguous forested cover, which provide high quality habitat and ecological value in a predominantly developed landscape like the study area. Figures C.6-C.14 show forested areas throughout the study area. In Lorain County, the largest area of forested land is deciduous forest, just west of Beaver Park Marina and Oak Pointe Road, south of Route 6 (see Figure C.6 Lorain-1). Forested areas in Cuyahoga County are largely limited to the western third of the county within the study area, with the exception of the Cleveland Lakefront Nature Preserve. In the western third, larger forested areas are located east of the Rocky River Wastewater Treatment Plant and within the Huntington Reservation (see Figures C.9-C.11). In Lake County, large forested areas are associated with the Mentor Lagoons Nature Preserve and Marina, the Mentor Marsh, and undeveloped areas in Perry Township, North Perry and Madison Township between residential or industrial areas (see Figures C.12-C.14).

Water Resources and Wetlands

The U.S. Army Corps of Engineers and EPA regulate the discharge of fill into waters of the United States under Section 404 of the CWA. If a Section 404 permit is required, a Section 401 water quality certification under the CWA must also be issued by Ohio EPA. Section 404 of the CWA established a program to regulate the discharge of dredged or fill material into waters of the United States, including associated wetlands. Activities such as infrastructure development are regulated under this program, and a permit is required before any dredged or fill material can be discharged into waters of the United States. Additionally, at the state level, Ohio EPA regulates isolated wetlands and level one streams through a permitting requirement.

The USGS NHD indicates that a total of 103.5 miles of streams and rivers and a total of 94.9 acres of lakes and ponds are located within the study area. These include the Black River, Rocky River, Chagrin River, Grand River, and numerous tributaries to Lake Erie including Doan Brook, Euclid Creek, and Beaver Creek.

The NWI data indicates that a total of approximately 865.2 acres of wetlands are located within the study area. These are broken out by wetland type and county in Table C.1 and illustrated in Figures C.6-C.14. The majority of the wetlands in the study area are located in Lake County, where a total of 535 acres exist which are predominantly forested/shrub scrub wetlands. These wetlands are primarily located within the eastern two thirds of Lake County within the study area, and one of the largest wetlands is the Mentor Marsh (see Figure C.13 Lake-2). There are approximately 172 acres of wetlands in Cuyahoga County, of which, riverine wetlands comprise the majority (98.5 acres; see Figures C.9-C.11). In Lorain County, there are approximately 158.2 acres of wetlands, of which riverine wetlands comprise the largest category with 65.5 acres.

WETLAND TYPE BY ACREAGE	LORAIN COUNTY	CUYAHOGA COUNTY	LAKE COUNTY
Lake	--	13.8	77.3
Riverine	65.5	98.5	61.5
Emergent	0.6	6.9	11.2
Forested/Shrub	51.1	10.2	350.8
Pond	41.1	42.6	34.3
Total	158.2	172	535
Total in all counties			1,538.6

Table C.1 | NWI Wetlands within the Study Area
Source: USFWS 2021

ENVIRONMENT

Flood Hazard Areas

Flood hazard areas are defined as areas with a one percent chance of floods occurring in any given year. Development in the regulatory floodplain or flood hazard area is discouraged because floodplains provide a natural means of detaining floodwaters and thus protect downstream properties from damage. The FEMA National Flood Hazard Layer data indicates that approximately 5.8 percent or 1,538.6 acres of the study area is located within flood hazard areas. The majority of those areas are classified as Zone AE, which have base flood elevations established and floodplain management standards apply within those areas. Zone A flood hazard areas comprise the next largest category and do not have base flood elevations or flood depths established but do have floodplain management standards. Zone AO comprise the smallest number of flood hazard areas and do not have base flood elevations but have average flood depths between one and three feet. Table C.2 provides a breakout of flood hazard areas by county.

As shown in Figures C.6-C.14, flood hazard areas are associated with streams and rivers in the study area, as well as portions of the Lake Erie shoreline. Larger areas of flood hazard are associated with the Black River, Rocky River, Chagrin River, and the Grand River.

COUNTY	FLOOD HAZARD AREA AND ACREAGE		
	ZONE A	ZONE AE	ZONE AO
Lorain	37.7	287.6	44.9
Cuyahoga	61.9	386.8	12.6
Lake	202.2	504.3	0.6
Total	301.8	1,178.7	58.1
Total in all counties			865.2

Table C.2 | Flood Hazard Areas within the Study Area
Source: FEMA 2021

Coastal Erosion Areas (CEAs)

CEAs are designated land areas along the Lake Erie shore that are anticipated to be lost due to Lake Erie-related erosion if preventative measures are not taken. They are a component of the Ohio Coastal Management Act and a CEA Permit is required for certain development, including construction of a new building or septic system. Based on a review of ODNR's CEA Map Viewer, there are no CEAs designated within the study area in Lorain County. Those that are designated in Cuyahoga County are located on private property or in areas that would not be conducive to trails or other infrastructure. CEAs in Lake County are predominantly behind residential properties, in open areas/marsh areas, behind and adjacent to the Beacon Road Water Treatment Facility, and within and adjacent to undeveloped industrial areas. Additionally, there are small areas within Fairport Harbor and within or adjacent to several local parks (i.e., Perry Township Park, North Perry Park). Note: These areas have not been mapped as they are not anticipated to overlap with potential transportation connections given the land uses that they are associated with.

Combined Sewer Overflows (CSOs)

CSOs are a priority water pollution concern because they discharge a combination of stormwater, untreated human and industrial waste, and other stormwater pollutants into waterways during periods of heavy rainfall or snowmelt. They are some of the major sources responsible for beach closings and aesthetic impairments. In Lorain County, there is only one CSO location; it is in Avon Lake and is associated with the Center Road Pump Station (see Figure C.8 Lorain-3). Based on data obtained from the Northeast Ohio Regional Sewer District, there are 23 CSO locations within the City of Cleveland within the study area (City of Euclid 2021; see Figures C.10 and C.11). The majority (14) of these discharge to Lake Erie, five discharge to the Cuyahoga River, and the remaining four discharge to smaller receiving waters. Additionally, there are eight CSO locations in the City of Euclid within the study area, all of which discharge to Lake Erie (see Figure C.12 Cuyahoga-3). The Ohio EPA, Division of Surface Water online mapping tool for CSO locations did not indicate any permitted outfalls in cities in Lake County.

Air Quality

Air quality is defined by ambient air concentrations of specific pollutants that have been determined by the EPA to be a concern related to the health and welfare of the general public and the environment and that are widespread across the U.S. The Clean Air Act is the primary federal statute governing the control of air quality. Under the authority of the CAA, the EPA designates pollutants as "criteria pollutants" for which National Ambient Air Quality Standards (NAAQS) have been established to protect public health and welfare. Criteria pollutants are regulated under the Clean Air Act and are six of the most common air pollutants and include carbon monoxide, lead, ozone, particulate matter, nitrogen dioxide, and sulfur dioxide.

To provide an indication of potential "hotspots" of air quality within or adjacent to the study area, a review of the EPA's NEI facility mapping tool was completed with a focus on those permitted facilities with emissions that exceeded one or more of the criteria pollutants, based on the most recent data available (2017). Based on the mapping tool, there are four point sources in the study area with emissions above established thresholds under the Clean Air Act for one or more of the criteria pollutants. These are summarized in Table C.3 below and depicted on Figures C.8 Lorain-3, C.10 Cuyahoga-2, and C.12-C.13 Lake 1-2).

In addition to the hotspots, the air quality monitor locations are indicated on Figures C.6-C.14. Within Lorain, Cuyahoga, and Lake Counties, there are 36 sensors:

- Ozone (O3) - 7
- Particulate Matter
  - Coarse Particles (PM10) - 7
  - Fine Particles (PM2.5) - 9
- Carbon Monoxide (CO) - 3
- Sulfur Dioxide (SO2) - 5
- Lead (Pb) - 2
- Nitrogen Dioxide (NO2) - 2

FACILITY NAME	MUNICIPALITY	COUNTY
Avon Lake Power Plant	Avon Lake	Lorain
Burke Lakefront Airport	Cleveland	Cuyahoga
Carmeuse Lime, Inc. – Grand River Operations	Grand River	Lake
Willoughby Lost Nation Airport	Willoughby	Lake

Table C.3 | Majority Facilities with 2017 Emissions Exceeding One or More Pollutant
Source: EPA 2021

ENVIRONMENT

Brownfields

According to the EPA, a brownfield is land that may have a hazardous substance, pollutant, or contiminant. Brownfields cannot be redeveloped, reused, or expanded without work to assess these potential contaminants and remediate them. Based on the EPA FRS data, there are 17 brownfields sites in Lorain County and 24 brownfield sites in Cuyahoga County; none are located in Lake County. As indicated in Figures C.6 and C.7 Lorain 1-2, the majority of the sites in Lorain County are located within the City of Lorain near the Port of Lorain. In Cuyahoga County, the brownfield sites are predominantly located along the lakefront west and east of the Flats and east of Burke Lakefront Airport (see Figure C.10 Cuyahoga-2).

Based on the Ohio Brownfield Inventory Database, there is one brownfield site in Lorain County in the City of Lorain, two brownfield sites in Cuyahoga County within the City of Cleveland near the border with Bratenhal, and one in Euclid (see Figures C.10 Cuayhoga-2 and C.11 Cuyahoga-3).

Conservation Easements

Based on NCED data, there are eight conservation easements located within the study area; four are located in Cuyahoga County and four are located in Lake County (see Figures C.11 Cuyahoga-3, C.12 Lake-1, and C.14 Lake-3). These easements are all permanent easements that range from 1.3 acres up to 93.7 acres in size. Five easements totaling 140.9 acres are held by the Western Land Conservancy, two totaling 27.7 acres are held by Lake Metroparks, and one 43-acre easement is held by the U.S. Natural Resources Conservation Service (NCED 2017).

ODNR Lands

There are three ODNR-owned lands within Lake County in the study area: Headlands Dunes State Nature Preserve, Headlands Beach Park, and Mentor Marsh Dedicated Nature Preserve (see Figure C.13 Lake-2). Together these three parks and preserves total over 293 acres (see Table C.4). There are no ODNR-owned lands in Lorain or Cuyahoga Counties.

ODNR LAND	ACRES
Headlands Dunes State Nature Preserve	18.9
Headlands Beach Park	131.4
Mentor Marsh Dedicated Nature Preserve	143.1
Total	293.5

Table C.4 | ODNR Land and Acreage
Source: ODNR 2021

LORAIN COUNTY MAPS

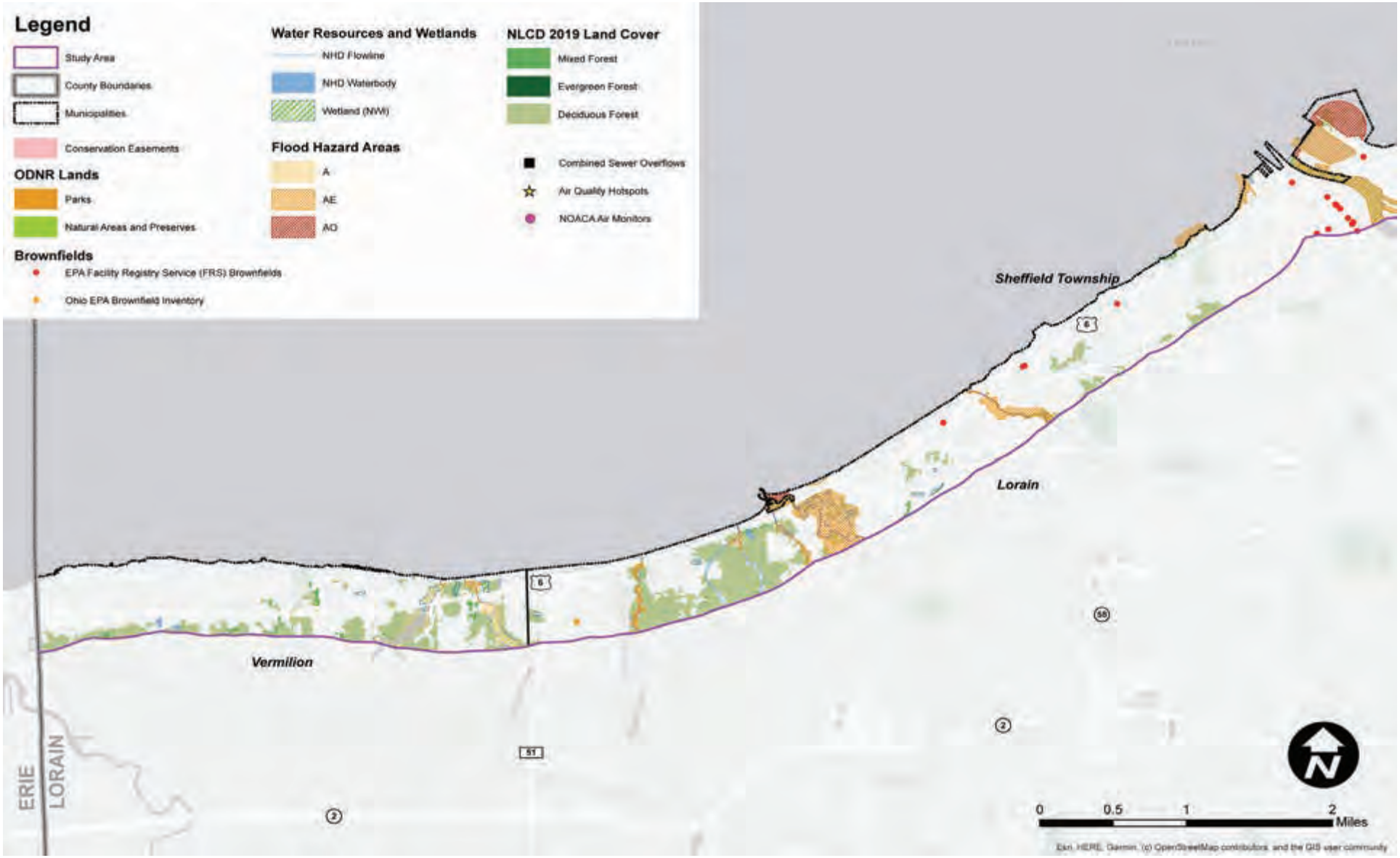


Figure C.6 | Lorain-1

LORAIN COUNTY MAPS

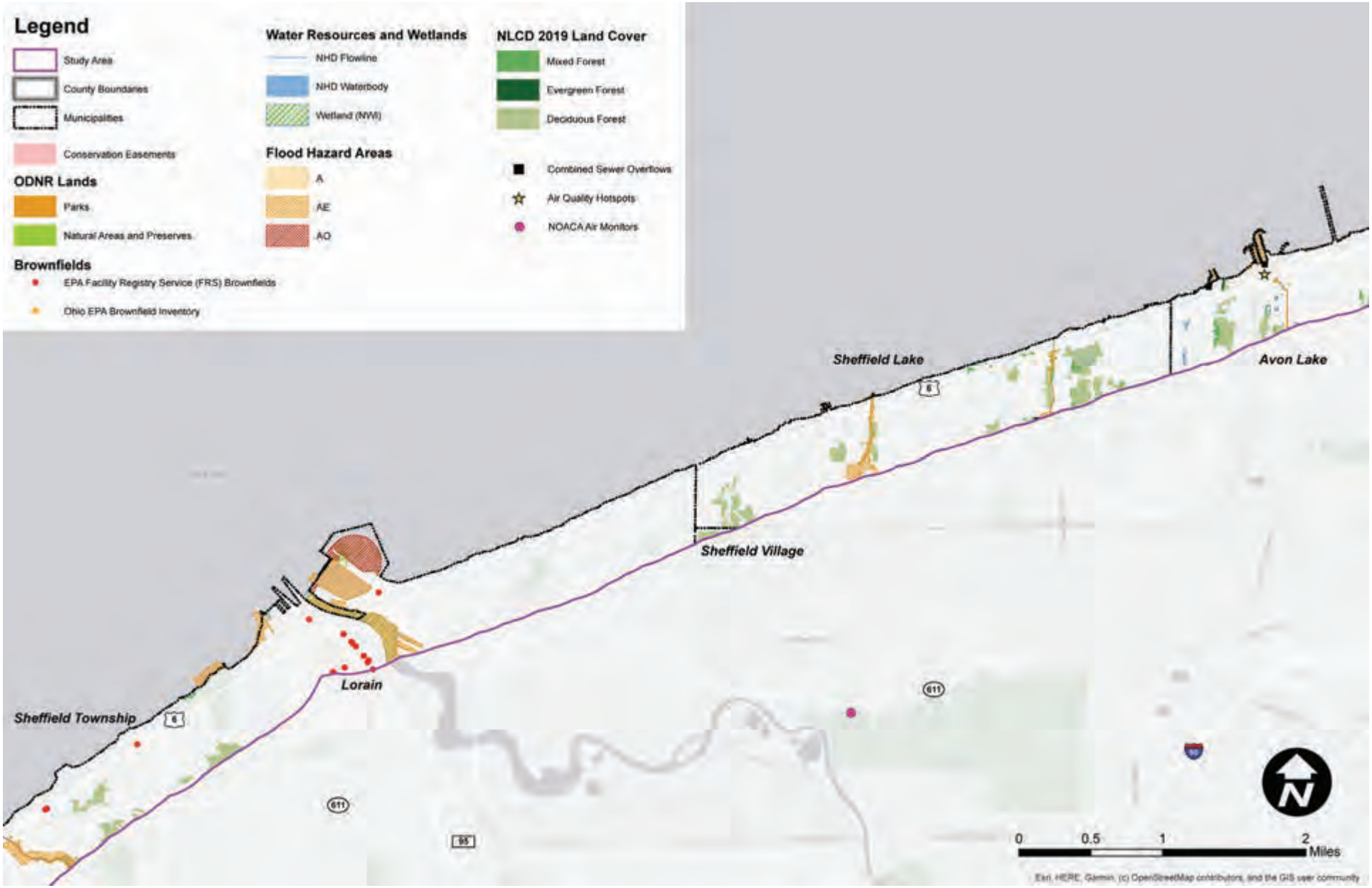


Figure C.7 | Lorain-2

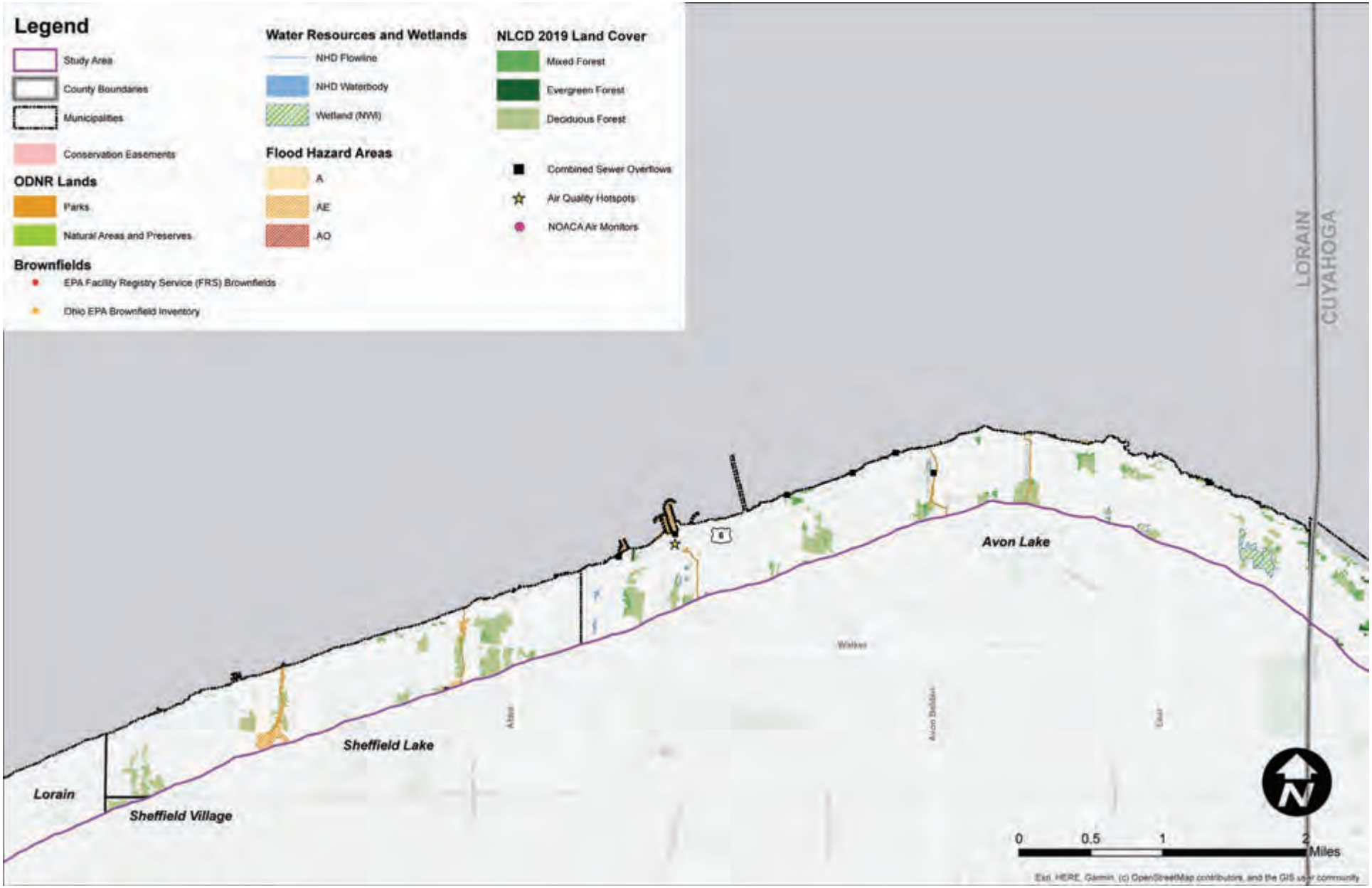


Figure C.8 | Lorain-3

CUYAHOGA COUNTY MAPS

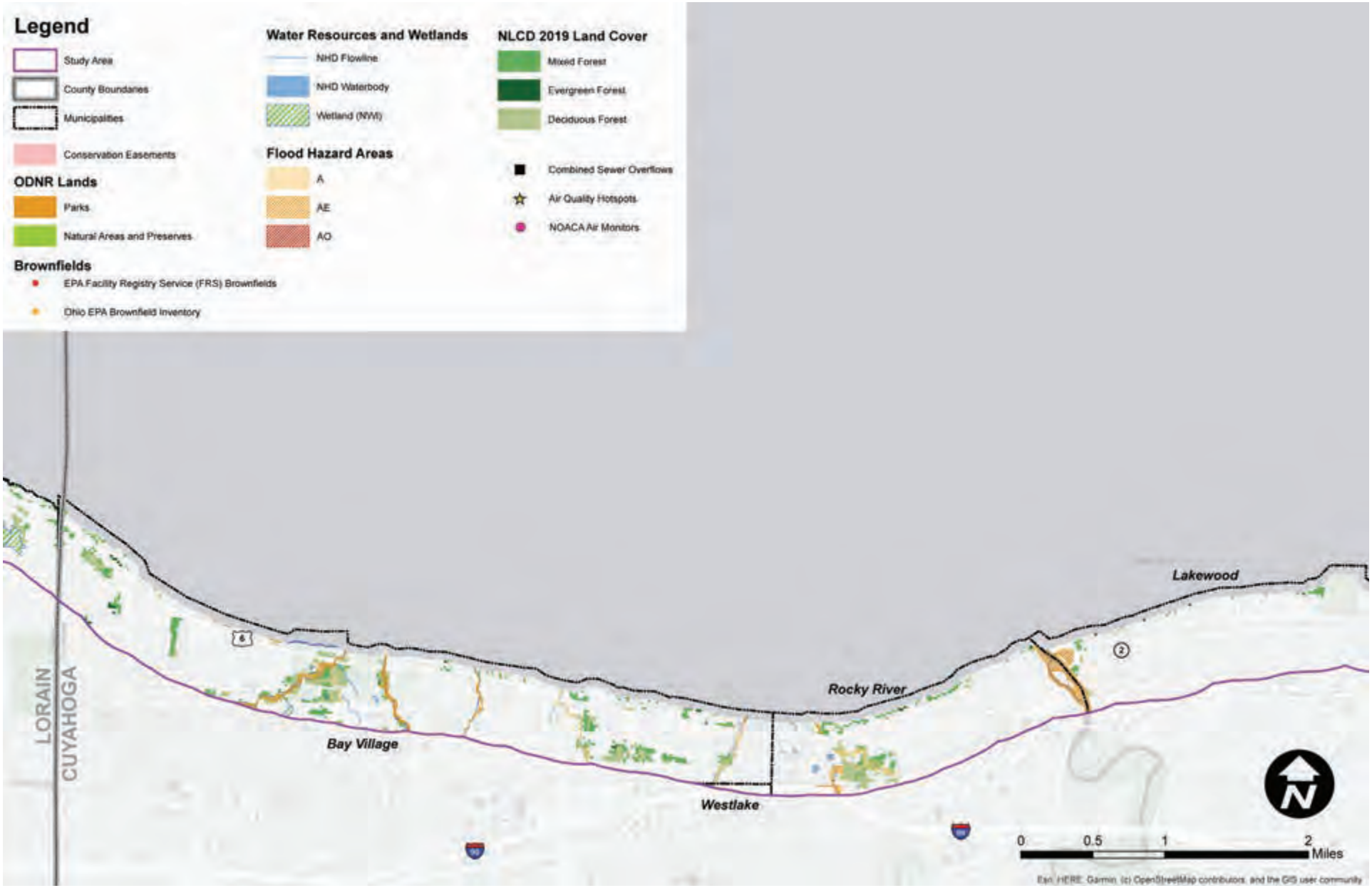


Figure C.9 | Cuyahoga-1

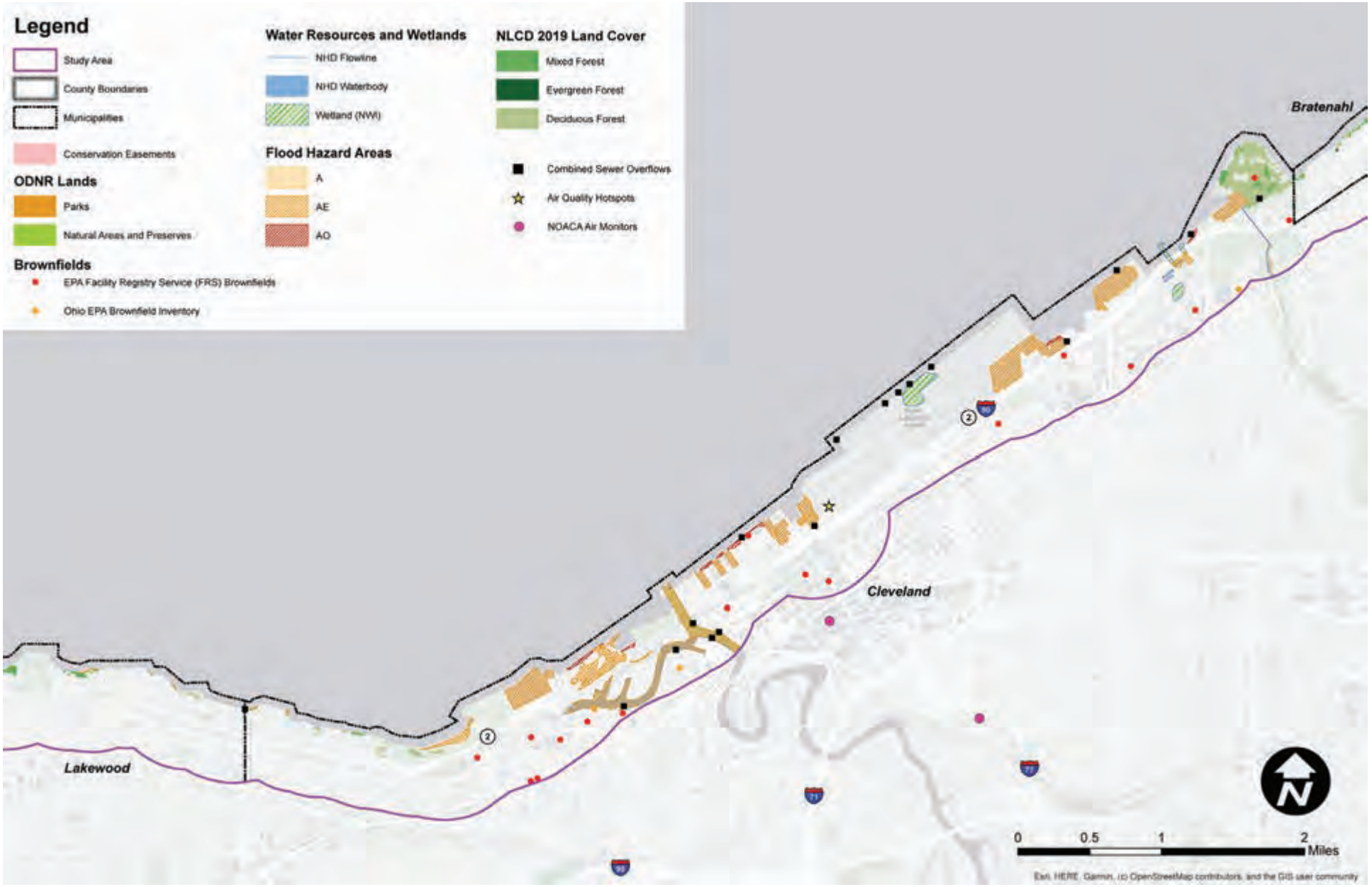


Figure C.10 | Cuyahoga-2

CUYAHOGA COUNTY MAPS

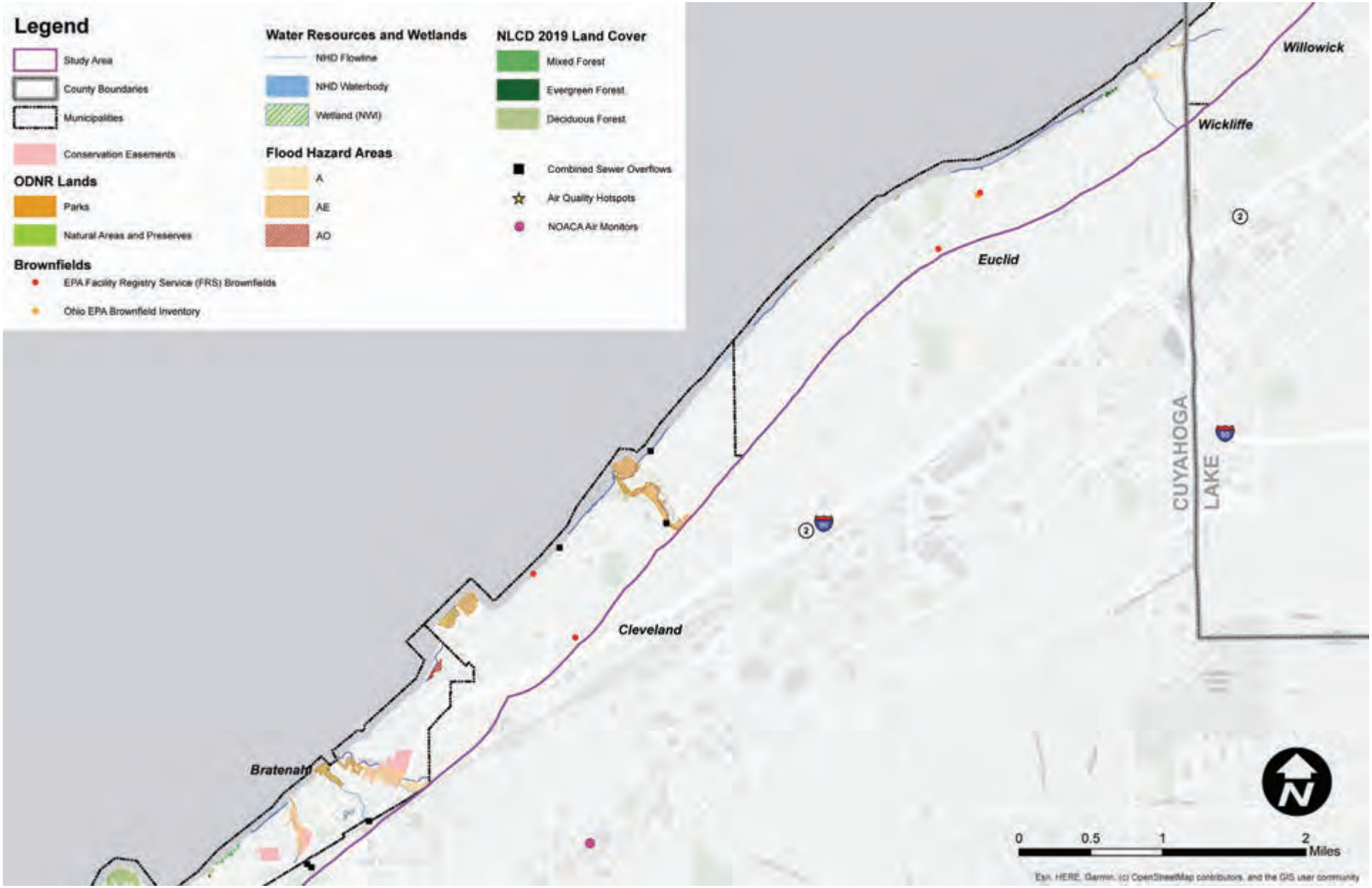


Figure C.11 | Cuyahoga-3

LAKE COUNTY MAPS

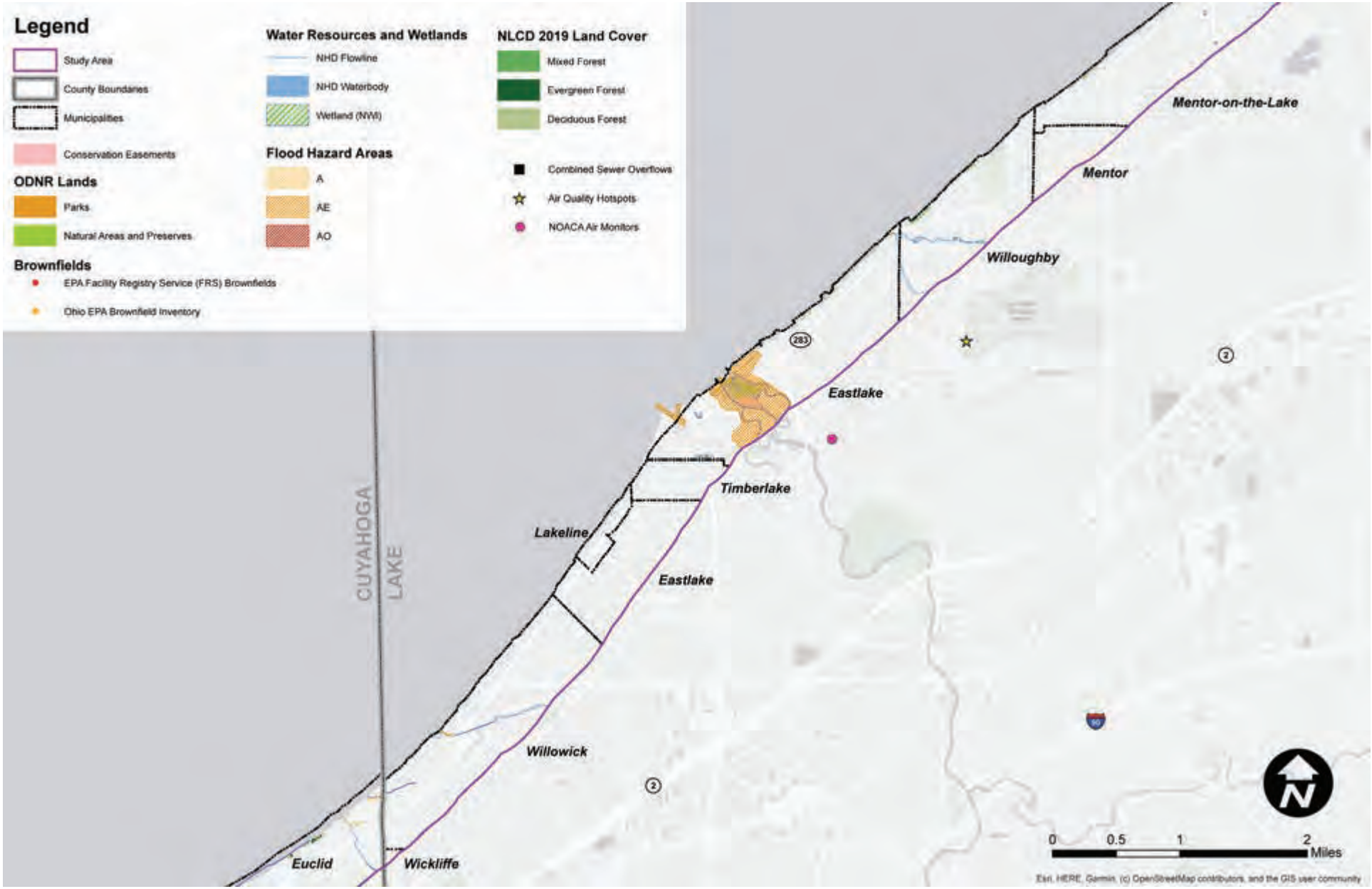


Figure C.12 | Lake-1

LAKE COUNTY MAPS

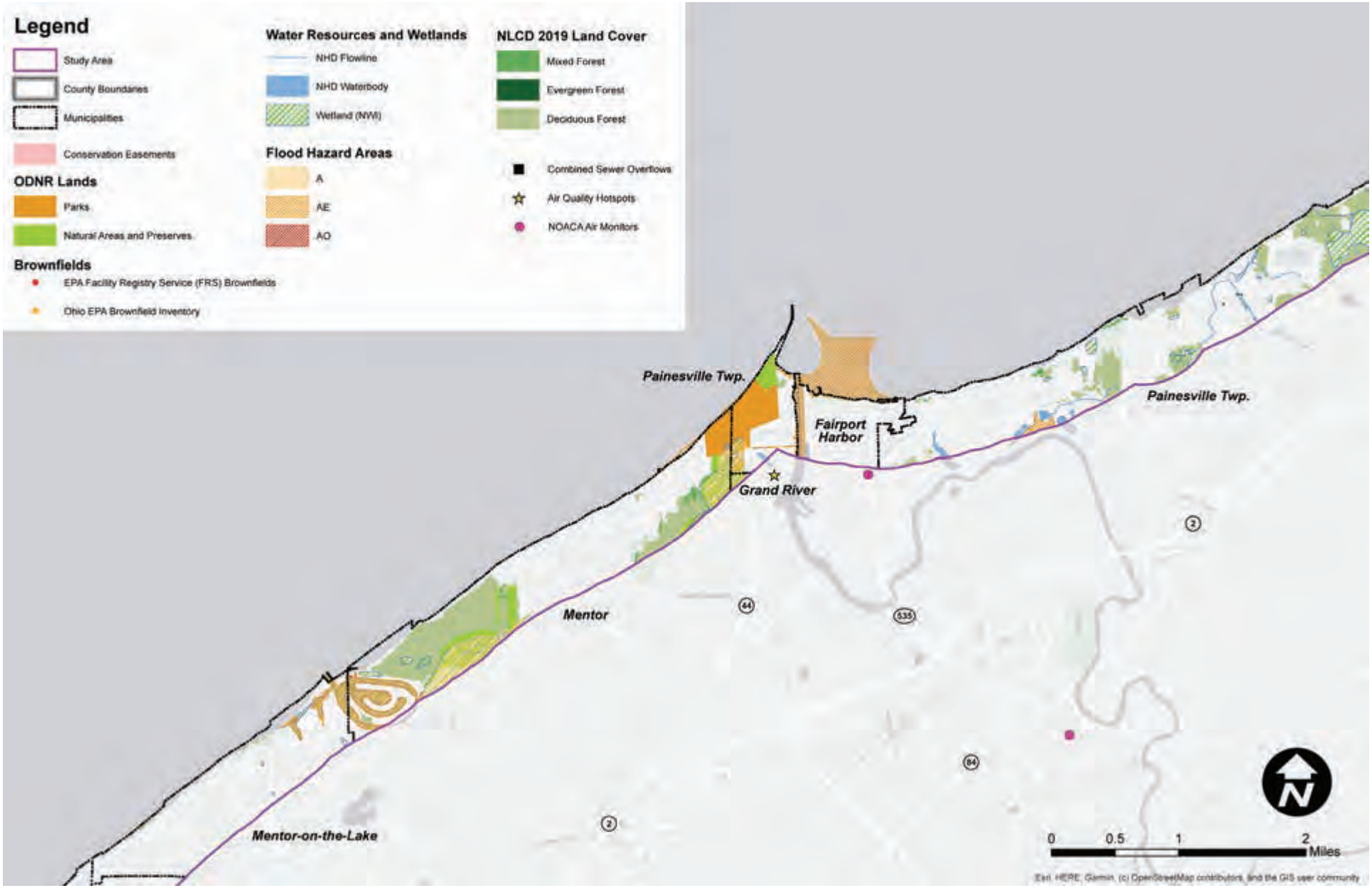


Figure C.13 | Lake-2

LAKE COUNTY MAPS

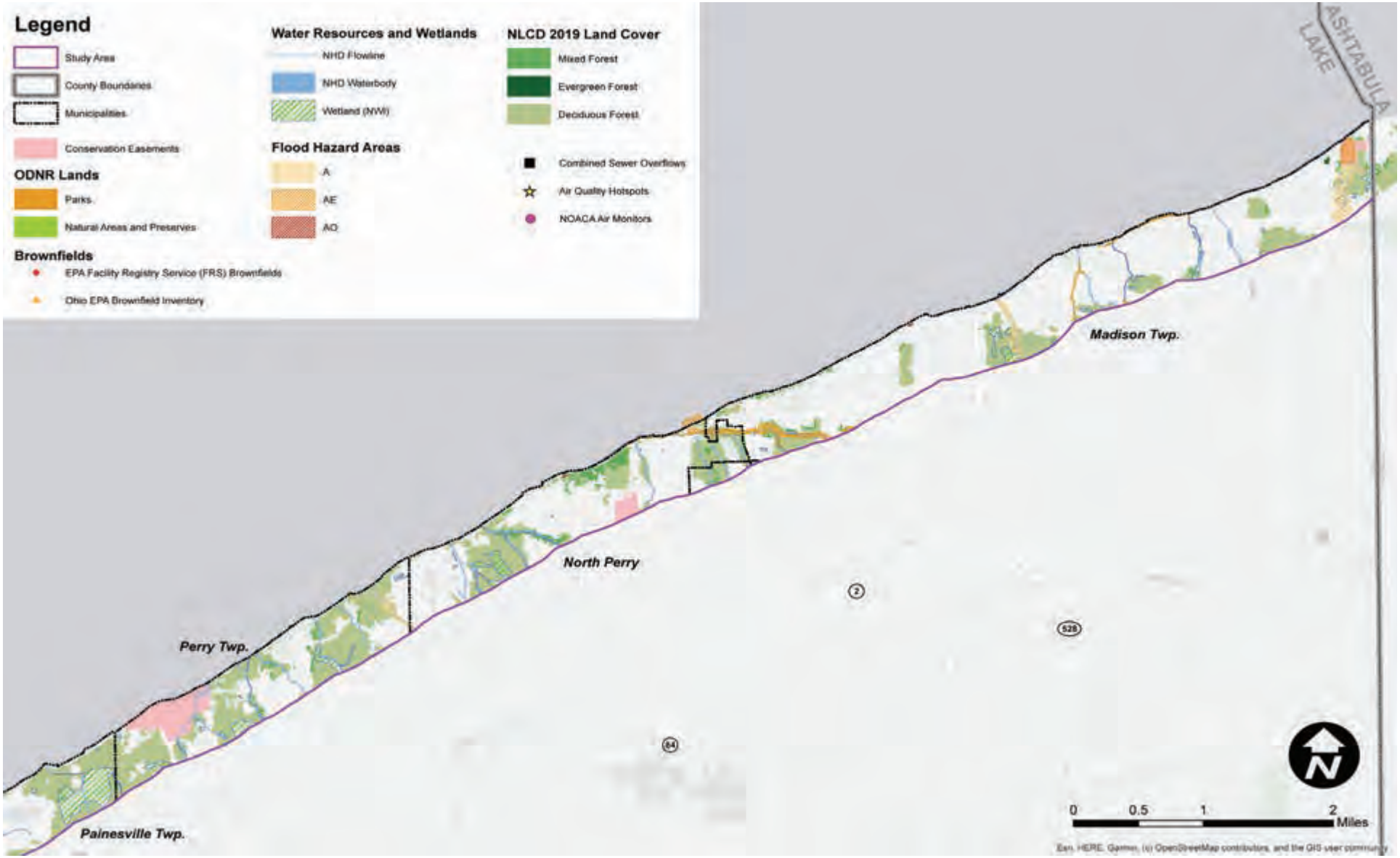


Figure C.14 | Lake-3

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APPENDIX

D.

TRANSPORTATION METHODOLOGIES

- Regional Draw to Lakefront Sites
- Trip Forecasting
- Parking Capacity

REGIONAL DRAW TO LAKEFRONT SITES

To estimate the visitation, mode, time of day, and other details about lakefront trips, the project team developed analysis goals. Each goal and approach is described below.

Goal 1: Categorize access points by estimated number of person-trip volumes.

After the public lakefront access sites were identified, the consultant team and NOACA obtained information on visitation volumes through a three-step process:

- Step 1: Visitor count data obtained from Lake, Cuyahoga, and Lorain County Metroparks was used as available and provided to the project team.
- Step 2: The project team reviewed completed plans to see if person-trips were estimated for current conditions.
- Step 3: StreetLight data was then gathered for all of the lakefront sites. StreetLight data about trips, by origin, mode, and time of day, were gathered across a 5-month average of warm weather months. Trips to lakefront parks from May through September 2019 were selected. Weekday and weekend data were pulled separately.

Goal 2. Map the current roadway access corridors and non-motorized facilities and routes to the lakefront access points.

For roadway access corridors, the team reviewed roads by functional class and traffic volume to select the major thoroughfares leading to the park, for parks with visitation of at least 100 trips per day.

For non-motorized access types, bike, pedestrian, and transit infrastructure near the existing lakefront parks was mapped and used to assess connectivity (see Goal 4).

Goal 3. Develop origin-destination data for motorized and non-motorized trips.

The team used StreetLight to analyze the origin-destination data for all of the lakefront parks by auto, walking, and biking modes.

Goal 4. Evaluate current infrastructure for biking, pedestrian, and transit access.

The project team inventoried the existing infrastructure at each lakefront park and evaluated the broader road and facility network near larger or more popular parks. Information was gathered including the location of park entrances, parking lots, nearby transit lines, and the condition and presence of multimodal infrastructure. These are summarized for many parks in Appendix A.

Detailed information on pedestrian crossings and transit stops on the east-west lakefront route were also gathered, as discussed in Chapter Three.

TRIP FORECASTING

To estimate visitation in the year 2050 for existing lakefront access points:

- A 0.5% regional growth rate provided by NOACA was applied to the 2019 StreetLight visitation data to forecast 2050 visitation.
- In this analysis, StreetLight data was gathered for all trips starting in the region's 121 ZIP codes that ended at a lakefront site. This analysis was repeated for auto based trips, bicycle trips, and pedestrian trips. The sum of all three modes was used as an approximation for average daily visitation for all of the following work.

To estimate visitation in the year 2050 for future lakefront access points:

- The following forecasting approaches were tested and compared to the existing 2019 StreetLight visitation data:
  - » The project team pulled the ***ITE Trip Generation*** manual for relevant land use codes including public parks (Land Use Code 411), marinas (Land Use Code 420), Recreational Community Centers (Land Use Code 435), and Multipurpose Recreational Facilities (Land Use Code 495). The available published models returned trip forecasts that significantly underestimated the visitation seen in the StreetLight analysis, likely due to the parks being in urbanized areas. Because of this, the ITE Trip Generation data approach was not pursued further.
  - » ***Various regression models*** using a combination of population within one mile, categorical variables for major amenity groups like sports fields, piers, and existence of local bike and pedestrian connections were created and tested against existing park visitation data. Population within one mile was the only variable that was significant across each model.
- A linear regression model with the parameters below resulted in the lowest average percent difference between the model output and the 2019 StreetLight visitation data for existing parks. This was used to estimate the visitation of future parks as if they were open in 2019.

$$V_{2019}(x)=0.094(x)$$

where:

V_{2019} = Estimated visitation if site were to open in 2019
x = 2020 population within 1 mile of the site

- A 0.5% growth rate was applied to the estimated visitation to forecast the 2050 visitation.

Approach assumptions and limitations:

- » This approach projects 2050 visitation from the estimated 2019 visitation using the 0.5% growth rate derived from the NOACA model.
- » This forecast for planned development of new lakefront access points does not account for changes in lakefront land use, consumer behavior, the built environment, or surrounding transportation development that could impact park visitation.
- » This model does not consider any variables regarding the propensity to visit local parks and uses the same regression model across the entire region, for parks of all sizes and offered amenities.

PARKING CAPACITY

To determine parking capacity at lakefront parks:

1. The number of available parking spots available at on-site parking lots were estimated using aerial imagery on Google Maps. Parking spots at nearby businesses, homes, or street parking were not considered in parking totals.

2. StreetLight was utilized to estimate visitation by automobile for distinct time periods for weekdays and weekends during a 5-month span of warm weather months (May through September) in 2019. The five time periods are defined as: Early AM (12:00 AM - 6:00 AM), AM Peak (6:00 AM - 10:00 AM), Midday PM (10:00 AM - 3:00 PM), PM Peak (3:00 PM – 7:00 PM), Late PM (7:00 PM - 12:00 PM).

3. Peak hourly vehicle visitation was calculated in three steps. This process was done for each analyzed lakefront access point:

    - » Average hourly visitation for each period was calculated by dividing the total visitation within the period by the period's length in hours.
    - » StreetLight estimates person trips, not vehicles. To account for this, the average hourly vehicle visitation for each period was calculated by dividing the total number of person-trips by 1.7, the FHWA's average vehicle occupancy factor.[1]
    - » Peak hourly vehicle visitation was set equal to the hourly vehicle visitation during each park's peak period.

4. Existing Parking Demand:

    - » The peak hourly vehicle visitation was compared to the number of available spots at each analyzed lakefront access point to determine if peak hourly vehicle demand was greater than the existing parking capacity.

5. Future Parking Demand:

    - » A forecast of the peak hourly vehicle visitation in 2050 was estimated using the average regional growth rate of 0.5% provided by NOACA.
    - » This forecasted average peak hourly demand is compared to the existing number of available spots at each analyzed lakefront access point to determine if an average hour during the highest visitation period is greater than the existing parking capacity.

Approach assumptions and limitations:

- » Vehicle visitation within a time period is uniform across the time period. This assumption is the basis for calculating peak hourly demand as the total visitation during the peak period divided by the total hours in the period.
- » Modal split for visitation to these Lakefront Access Points will persist. This assumption is a conservative estimate considering the great strides the Region is making to improve multimodal connections throughout the region and specifically around the Lakefront.
- » This approach doesn't consider parking for large events which would exceed the average peak.

1 "Average Vehicle Occupancy Factors for Computing Travel Time Reliability Measures and Total Peak Hour Excessive Delay Metrics (April 2018)." Www.fhwa.dot.gov, Federal Highway Administration, https://www.fhwa.dot.gov/tpm/guidance/avo_factors.pdf.