

CERTIFICATION AND REPORT TO
THE TOWN COUNCIL OF BEVERLY SHORES

CERTIFICATION TO: THE HONORABLE ELLEN HUNDT, CLERK-TREASURER
TOWN COUNCIL OF THE TOWN OF BEVERLY SHORES

FROM: GREGORY LYMAN, PRESIDENT OF THE PLAN COMMISSION
ELLEN HUNDT, PLAN COMMISSION RECORDING SECRETARY

DATE: June 5, 2023

DIGEST: Approval of the Proposed 2023 Comprehensive Plan

PURPOSE: An Amendment and update to the 2012 Comprehensive Plan. Attached
is the Proposed 2023 Comprehensive Plan.

SECTIONS AFFECTED: Title XV, Chapter 156.

Date of Plan Commission Action: June 5, 2023, following a Public Hearing on June 5, 2023.

Action taken by Plan Commission: Vote to Approve the Proposed 2023 Comprehensive Plan and
forward the Plan to the Town Council for consideration.

Vote: In Favor: 7
Against: 0

Ellen Hundt, Plan Commission Recording Secretary



Gregory Lyman, Plan Commission President



TOWN OF BEVERLY SHORES
A Comprehensive Plan

BY THE BEVERLY SHORES PLAN COMMISSION

Approved by the Plan Commission on June 5, 2023

Gregory Lyman, President

Joseph Kapacinkas, Vice President

John Blackburn

Donna Norkus

David Phelps

Larry Stanton

Bob Young

Ellen Hundt, Town Clerk-Treasurer, Recording Secretary

June 5, 2023

TABLE OF CONTENTS

Introduction	1
Core Objectives	1
Physical Site Conditions	1
History	1
Population/Demographics	3
Civic and Volunteer Organizations	5
Fiscal Limitations	5
Land Use Policy	6
Housing	7
Climate	9
Air, Land and Water Conditions within the Town	10
Lake Michigan Water Levels and Beach Erosion	18
Local Economic Activities in the Commercial District	21
Public Safety	23
Capital Planning	24
Recreation and Recreational Facilities	24
Partnering with Indiana Dunes National Park and Not for Profit Groups	26
Green Space and Natural Lands	27
Policies and Initiatives to Protect and Conserve the Natural Lands	28
Utilities	28
Education and Schools	29
Transportation	30
Summary of Recommendations:	32
APPENDIX A ZONING MAP	35
Appendix B: Great Marsh Trail Map	36
Appendix C: Beverly Shores Town Trails map	37
Appendix D: SHLT trails	38
Appendix E: National Park Map	39
Appendix F: Beverly Shores Beaches	40

Introduction

The Comprehensive Plan is intended to provide the Town's objectives for future development. It provides a statement of policy for land use development and a statement of policy for development of public ways, public places, public lands, public structures, and public utilities. This comprehensive plan is an update to the 2012 plan and provides a description of the current conditions in the Town and identifies priorities that Town government, community organizations and residents can work on together. The Plan Commission will annually review the progress on these priorities and identify potential next steps.

Core Objectives

- Ensuring public safety
- Maintaining low population density to protect the fragile dune environment
- Protection of the Town's natural environment
- Supporting collaboration between Town government and the Indiana Dunes National Park
- Supporting collaboration between Town government and Town community organizations
- Enhancing the lives of residents and visitors
- Continued development of a long-term capital plan with strategic partners.

Physical Site Conditions

The Town of Beverly Shores is a municipality located on the shores of Lake Michigan in Porter County, Indiana. Beverly Shores is bounded on the north by the National Park, except for the Town beaches on Lake Michigan, on the east by the National Park, Michigan City, and the Town of the Pines, on the west by the National Park and Indiana Dunes State Park and on the south by unincorporated Porter County. Beverly Shores is comprised of "the Island", "the Strip" (that includes the Commercial District), the Government Center and "the Lakeshore". The Island comprises approximately 652 acres, including roughly 100 acres of municipally owned property. The strip encompasses approximately 56 acres and comprises the commercial district and many residential properties within the commercial district.

Additionally, the Island has a unique physical setting; it is cut off from the Strip and Government Center. The Indiana Dunes National Park (The Indiana Dunes National Lakeshore and the Indiana Dunes National Park are referred to as the National Park) separates the Island from the Government Center and the Strip. This portion of the National Park that was once a part of Beverly Shores is approximately 1,600 acres more than two times the size of the remaining areas of the Town. Within this 1600 acres the Town continues to own the platted roads throughout and East Lake Shore Park, an 8.85-acre tract. The Island is surrounded by the National Park on all four sides, except for the Town beaches on Lake Michigan on the north side, as such, the Island is totally land locked and cannot be expanded.

History

Beverly Shores owes its existence to land speculation activities during the 1920s. In May 1927, Chicago real estate developer Frederick H. Bartlett purchased 3,000 acres of lakefront lands from the estates of local owners. The development, which included 4.5 miles of frontage on Lake Michigan, stretched from the western edge of Michigan City to the eastern boundaries of the Indiana Dunes State Park. Bartlett conceived of his new holdings as an urban resort community and during 1927 began selling property in

the eastern half of his development extending from the LaPorte-Porter County line westward to Lake Shore County Road. Most residents and prospective buyers rode the Chicago, South Shore and South Bend interurban to the Lakeshore train station at Central Avenue, now destroyed.

In the summer of 1929, the western portion of the development, extending from Lake Shore County Road to State Park Road or Kemil, was opened for sales. A second train station was constructed on Broadway, north of U.S. Highway 12. Thousands of Chicagoans rode special excursion trains to Beverly Shores, where they were met by salesmen in private automobiles and given a tour of the community, served refreshments, and encouraged to purchase one or more lots.

During the Great Depression in 1933, Frederick H. Bartlett sold all his northwest Indiana properties to his younger brother, Robert Bartlett. Robert touted the community and its attractions with the promotional flair of a born salesman. He constructed a school, a seasonal hotel with botanic gardens, a championship 18-hole golf course with clubhouse, a beachfront casino, a riding academy, and a theater. In 1935, Robert Bartlett purchased 16 structures from the 1933-34 "A Century of Progress", Chicago World's Fair, and moved them to Beverly Shores. Four of the buildings from the Homes and Industrial Arts exhibit of the fair were barged across Lake Michigan and relocated to their permanent site on the lakefront. These houses include the House of Tomorrow, the Florida House, the Rostone House, and the Armco-Ferro house. The Cypress Log Cabin was dismantled at the fair site and trucked to Beverly Shores. All five of these structures are now located within the Indiana Dunes National Park. Currently, the National Park leases these properties to Indiana Landmarks which subleases each house to a family who has previous experience in historic preservations and who can show the financial ability to complete the restorations. Restoration has been completed on four of the five homes. The House of Tomorrow is still in the process of restoration with the U.S. Department of Interior. The only other remaining World's Fair structure, the Old North Church replica, is a privately-owned residence.

By 1946, the Robert Bartlett Realty Company had sold most of its property and moved on to concentrate on developments in suburban Chicago. It deeded the streets and six beach sections to the property owners; it also sold them the Administration Building and the hotel indoor parking garage. Complying with procedures governed by Indiana State statutes, a special census was conducted; the Town divided into wards and an election for or against incorporation was held in December 1946. The community was incorporated as a State of Indiana town on January 2, 1947.

Though thousands bought lots, few built homes. The Depression and World War II impeded the community's growth. The lack of municipal water and sewer system also contributed to the Town's slow development. In the 1950s and 1960s, a slow pattern of building began with about half of the residents living in Town on a full-time basis and the remainder owning summer homes.

In the mid-1960s, a movement to include Beverly Shores in the proposed Indiana Dunes National Lakeshore began. When Congress authorized the National Lakeshore in 1966, two-thirds of the Town's acreage became part of the park. In 1971, another effort was started to include the remainder of the Town in the Lakeshore. In 1980, after nine years of Congressional consideration, a parcel of land bordering the Town to the south became part of the National Lakeshore, but the center of the community, the Island, and land bordering U.S. 12, the Strip, were excluded. The uncertainty of inclusion or exclusion of the Island and Strip affected building in these areas during the 1970s, and early 1980s. After the public became aware that the Island was not going to be included in the National

Lakeshore Acquisition Plan, the Island experienced modest growth in the 1990s and 2000s. In 2019 the Indiana Dunes National Lakeshore was changed by legislation to the Indiana Dunes National Park.

Beverly Shores adopted its first zoning ordinance in 1947. The ordinance was largely amended in 1969. The Camiros LTD/ Frankel Associates consulting firm carried out a further planning study in 1978. In 1983, Ordinance 208, establishing zoning and subdivision regulations was adopted. In 2010 codification of all Town Ordinances was completed by American Legal and placed on the Town’s website, The Town Code is updated regularly at: <https://codelibrary.amlegal.com/codes/beverlyshores/latest/overview>.

Population/Demographics

There has been little change in the character of the Town’s residents between 2010 and 2020. The primary reason given by residents for living in Beverly Shores continues to be access to nature in quiet solitude with proximity to metropolitan Chicago. Its natural resources and location are the community’s greatest attractions.

The current resident population of the Town is 599. This is slightly down from 2010 Census, of 613 residents, but the population has been stable since 1990. There was significant new construction in the 1990s which coupled with the National Park leasebacks created an aberration in population in the 2000 census. * There are currently 503 single-family residences, and seven grandfathered multi-family residences for a total of 510 residences in the Town.

Table 1 clearly shows the community is “graying” or aging over the 1980-2020 period with an increase in the median age from 38.4 to 62.4 years of age. On the other hand, 2020 census showed a fifty percent increase in the number of children from the 2010 census. This reflects the highest number of children under 18 since the 1980 census. There were six births from residents in 2020. (Source: 2016-2020 American Community Survey)

* When the National Park was created affected homeowners received fair market value for their property as determined by a commissioner and in some cases also received a twenty-five-year leaseback to occupy the property. This leaseback permitted the owner to continue to occupy the residence as long as it continued as a single-family residence. The unused portion of the leaseback could be sold and some of the leasebacks were extended beyond the twenty-five-year term. As a result, a single family occupying a leaseback as a resident would continue to be counted in the census data until the expiration of the leaseback. All the leasebacks expired before the 2010 census, explaining some of the decrease in population between the 2000 and 2010 census.

TABLE 1
SELECTED POPULATION CHARACTERISTICS
BEVERLY SHORES

1980-2020

Source US Census. Numbers in paratheses represent the percent of the total

BY SEX	1980	1990	2000	2010	2020
Male	461 (53.4%)	312 (50.1%)	358 (53.3%)	308 (50.2%)	271(45.2%)
Female	403 (46.6%)	310 (49.9%)	314 (46.7%)	305 (49.8%)	328(54.8%)
TOTAL	864	622	672	613	599

BY AGE	1980	1990	2000	2010	2020
Under 18	161 (18.6%)	79 (12.7%)	60 (8.9%)	60 (9.8%)	90(15%)
18 to 64	595 (68.9%)	398 (64.0%)	466 (69.35%)	344 (56.1%)	260(43.4%)
Over 65	108 (12.5%)	145 (23.3%)	146 (21.7%)	209 (34.1%)	249(41.6%)
Median Age	38.4	47.8	50.4	59	62.4

Although the demographics of the community did not substantially change between 2010 and 2020, there has been significant change over the past 40 years.

- The population has grown older, with the median age increasing from 38.4 in 1980 to 62.4 years in 2020
- The percentage of residents over age 65 has increased substantially
- The balance between permanent full-time residents and part-time residents has shifted from about 50/50 in 1980 to 2/3 full-time in 2020; the total number of residents has decreased from 864 to 599
- The racial makeup of the community continues to be predominately White, 90.6%, Mixed Race, 5.84%, Black, 1.67%, and Hispanic residents at 3.17% make up the balance of the population in the 2020 data
- The ethnic make-up of the community is diverse, representing nineteen different countries of ancestry, with the largest percentage of residents claiming ancestry of German (29.9%), Irish (17.5%), Polish (13.9%), English (9.3%) and Lithuanian (9.1%) in 2020 (Source: 2016-2020 American Community Survey)
- A substantial portion of residents are relatively new to Beverly Shores with 34.5% living in their current homes for ten years or less and approximately 65% twenty years or less; 42 houses changed ownership in the last two years. (Source: 2016-2020 American Community Survey).

Civic and Volunteer Organizations

Given the severe limitations on municipal finance (see discussion below), civic and volunteer activities are essential and critical to the basic functioning of the Beverly Shores community. Activities such as senior luncheons, community beautification, cultural efforts, and firefighting/EMS would not exist without dedicated citizen volunteer effort.

Volunteer groups include the Association of Beverly Shores Residents (ABSR), the ABSR Community Foundation (ABSR CF), American-Lithuanian Club of Beverly Shores, the Beverly Shores Environmental Restoration Group (ERG), the Depot Museum and Art Gallery, the Dunes Women’s Club, Friends of Beverly Shores (FOBS), and the Police Action League (PAL). These groups contribute significantly to beautification, cultural/recreational events, staffing of the gallery/museum, and senior citizen support. These organizations play major roles in the fabric of this community. Without their efforts and those of other volunteers, this community, as we know it, would not exist.

Fiscal Limitations

As a result of the creation of the National Park, the Town lost 2/3 of its acreage and approximately 30% of its population from the 1970s along with the loss of the corresponding tax base. The Camiros LTD/ Frankel Associates 1978 study predicted that the Town would be challenged by this loss of tax base. Coupled with this loss were changes to the Indiana Tax Code that limited the Town’s ability to raise revenue. The maximum levy that the Town can impose through property taxes has been generally frozen since 1973. A governmental unit’s growth in assessed value no longer determines the limits of a maximum levy growth (or the “Maximum Levy Growth Quotient”) per year. Beginning in 2003, governmental funds are controlled by the limits of maximum levy and are not allowed to exceed 6% per year based on the average growth in Indiana non-farm income for the past six years. As a result, the Town has little expectation of a revenue increase from property tax.

Assessed valuation and taxing history within Beverly Shores for years 2012 to 2020 are summarized in Table 2. The method that the state uses in calculating assessed valuation of real estate changed to a market value approach, but there are tax caps placed on the amount of property tax a taxpayer must pay for non-debt related expenses (unless a waiver for capital projects is approved by referendum): 1% for resident single family residential, 2% for residential rental and non-resident single family, and 3% for commercial and industrial taxpayers.

**TABLE 2
BEVERLY SHORES PROPERTY TAX ASSESSMENT AND RATES**

	2012	2013	2014	2015	2016	2017	2018	2019	2020
Assessment	163,025,024	174,026,836	169,431,392	184,227,266	180,582,075	187,433,060	187,584,568	185,280,182	185,571,570
Tax Rates	1.7045%	1.3965%	1.3588%	2.0377%	1.9662%	1.7893%	1.8368%	1.9587%	2.0365%
Total Taxes	2,778,761	2,430,285	2,302,234	3,753,999	3,550,605	3,353,740	3,445,553	3,629,083	3,779,165
Town %Total Tax	28.42%	32.88%	30.14%	23.59%	28.56%	27.44%	24.25%	29.9%	31.34%
Town Levy	789,693	799,131	693,991	885,396	1,014,150	920,297	835,501	1,085,000	1,184,504

	Town	Airport	Library	School	Township	County	Total
2020	0.6383	0.0097	0.0692	0.8464	0.0160	0.4569	2.0365
2019	0.5856	0.0080	0.0690	0.8265	0.0196	0.4500	1.9587
2018	0.4454	0.0079	0.0680	0.8497	0.0195	0.4463	1.8368
2017	0.4910	0.0079	0.0675	0.7635	0.0209	0.4385	1.7893
2016	0.5616	0.0077	0.0677	0.8687	0.0211	0.4394	1.9662
2015	0.4806	0.0081	0.0730	1.0064	0.0200	0.4496	2.0377
2014	0.4096	0.0081	0.0834	0.3797	0.0209	0.4571	1.3588
2013	0.4592	0.0078	0.0824	0.3639	0.0199	0.4633	1.3965
2012	0.6370	0.0074	0.0800	0.6881	0.0212	0.4230	1.8567

Notes

1. All dollar figures rounded to nearest dollar
2. Assessed Valuation: Porter County Gateway
3. Tax Rates: Auditor of Porter County Gateway.

Land Use Policy

The location of the Town of Beverly Shores on the southern shore of Lake Michigan within significant dunes dictates the essential components of the Land Use Policy. The physical setting is the most unique feature of the Town and much of the planning initiative to date has been and continues to be directed to its preservation.

The fragile dune ecosystem and biodiversity of the Town’s ecosystem is given great emphasis in the Comprehensive Plan as a major developmental factor. Nearly the entire Town is within a mile of Lake Michigan and as such is within the critical dune protection area. It is because of the fragility of the dune ecosystem that the housing density remains low. Any major municipal improvements (water, sewers, etc.) are not reason for increasing housing density. The Comprehensive Plan, building codes and zoning ordinances should work together to promote land preservation and conservation, and to maintain the present low density. Orderly development should be consistent with these land preservation, conservation, and low-density goals to minimize the impact to the fragile dune ecosystem. The Town residents strongly support these goals. Residents and Town officials alike have been instrumental in acknowledging the special natural environment in Beverly Shores, including the designation as an Indiana Audubon “Bird Town Indiana” and Beverly Shores designation as a “Dark Skies” community by the International Dark Sky Association, the only community designation in the state of Indiana and one of only three in the Midwest.

The topography of the Town is quite varied compared to most of Northwest Indiana. It is precisely this variation which gives rise to the uniqueness of Beverly Shores and the challenges faced in developing and living within the dunes’ environment. It includes poorly drained level areas and gentle and steep dune slopes. Where human activities have disturbed slopes, considerable effort has been expended to prevent slumping of the dunes. Steep slopes are subject to slumping, are a hazardous area for road or construction cuts, and are perilous for winter driving. The Town’s building and zoning codes are intended to protect the dune environment.

The Island is zoned residential and consists of single-family houses. There are seven remaining grandfathered multi-family residences. The Town has enacted Bulk regulations for the residential district including maximum building height of 35 feet, minimum parcel width of 100 feet, a minimum building parcel size of 20,000 square feet, including a minimum of 15,000 square feet of at least moderately well drained soil, maximum floor area based upon the building parcel size, setbacks and a lot coverage maximum of 30%. The Town has placed restrictions on building on steep slopes, building near wetlands and on the removal of trees. The Town believes these requirements are critical to protect the fragile dune environment within the Town. Indeed, the residential district is entirely within a half mile of Lake Michigan and is situated within significant fragile dunes. The Beverly Shores community's most significant characteristic, its low population density, results from the Town's unique physical setting and physical site conditions and requires the maintenance of the 20,000 square foot minimum building parcel size with appropriate soil characteristics to permit adequate drainage and minimize damage to the fragile dunes' topography.

The Island should continue to be maintained as a single-family residential area. In 2011 the Indiana Supreme Court upheld a neighboring community's interpretation that its residential zoning ordinance prohibited short-term rentals in the residential district. The Plan Commission sought public input on whether the Beverly Shores residential zoning regulations should be amended to permit residential rentals within the residential district. It is the Town's strong belief that short-term rentals of less than 30 consecutive days should not be permitted in the residential district. Beverly Shores is a small, lakeside community and is surrounded by the National Park. The Town, with limited resources, already struggles to control the problems caused by the large influx of visitors during the summer season. Short-term rentals would further exacerbate these problems which could overwhelm the residential district. Short-term rentals are inconsistent with the stated purpose most residents mentioned for locating in the Town: for access to nature in quiet solitude. Short-term rentals also present possible safety concerns to residents. In 2018, the state of Indiana enacted legislation to limit local communities' regulation of short-term rentals, however, the statute grandfathered existing local codes, thereby preserving the Town's restrictions. Long-term rentals to a single-family with adequate restrictions are permitted. The Town believes that long term rentals do not present the same problems and are consistent with the overarching goal in this Plan to promote low-density single-family residences as the primary use and goal in the residential district. All new housing should be single-family dwellings and be compatible with existing development and the dune topography. The "Strip" should be developed as a combination of small-scale commercial/retail uses possibly mixed with limited residential uses. Orderly growth of low-density single-family dwellings throughout the Island and commercial development in the Strip should be promoted in accordance with the Town zoning ordinances and market conditions. Ordinances should be strictly enforced to protect the dune environment and maintain the low-density character of the community.

Housing

Beverly Shores housing stock is overwhelmingly single-family residences. Multi-family dwellings have diminished from 60 in 1980 to seven units in 2022. Following a surge of building between 1990 and 1992 when 37 new residences were built, the number of new homes has averaged about four per year. From 2015 to 2021 the average dropped to three new construction per year with a total of 18 building permits issued for new single-family homes. (Source: Town building permit records.) Because there has been relatively little new construction, the housing stock in Beverly Shores has aged appreciably. In

2020, 79% of all homes were at least 40 years old. Housing is also more substantial. The summer and weekend “cottages” have been replaced by more extensive homes. While Beverly Shores still has a seasonal (summer/weekend) population, its magnitude has diminished. As such, homes are increasingly occupied by permanent residents and are of all-season construction. While there once were several commercial uses in the Island, primarily in the form of restaurants or delis, they have disappeared for one reason or another and new commercial uses are prohibited under the Town Code.

Home values have increased substantially. The median value of a Beverly Shores home rose from \$66,400 in 1980 to \$518,000 in 2020. From 2010 to 2020 the median price of a single-family home increased by 42%, from \$364k to \$518k. Approximately 100 building permits for new homes were issued from 1992 to 2020. A study undertaken by the Plan Commission estimated that there are only about 25 buildable lots currently remaining within the island. Because of the lack of new building sites, the major source of future new housing will be tear-downs or major renovations of older houses.

The information below summarizes housing characteristics within Beverly Shores for the 1980-2020 period. These data are taken from respective US Census reports for 1980 through 2020, American Community Survey 5-Year Estimates and Town Building Records. Not all data was available for each census year. Medium Housing value Source: datausa.io

TABLE 3: BEVERLY SHORES HOUSING CHARACTERISTICS

MEDIAN HOUSING VALUE	1980	1990	2000	2010	2020
	\$66,400	\$130,000	\$238,000	\$364,000	\$518,000

HOUSING OCCUPANCY	1980	1990	2000	2010	2020
Owner Occupied	249	236	289	272	295
Renter Occupied	124	64	51	40	21
Vacant	n/a	20	33	31	30
Seasonal	n/a	171	151	184	156
TOTAL		491	524	527	502

HOUSING TYPE	1980	1990	2000	2010	2020
One Unit Structure	405	449	500	505	502
Two Or More Units	60	39	21	22	8
Mobile Home	0	3	8	0	0

HOUSING AGE	1980	1990	2000	2010	2020
1-10 Years	n/a	n/a	15%	6%	6%
11-20 Years	n/a	n/a	12%	14%	6%
21-40 Years	n/a	n/a	26%	9%	28%
Over 40 Years	n/a	n/a	47%	71%	60%

PERSONS/UNIT	1980	1990	2000	2010	2020
	2.31	2.07	2.08	1.96	2.4

Given the limited number of buildable parcels, the Town's intention to sustain the low-density nature of development, and the prohibition of commercial development within the Island, it is reasonable to assume that with current conditions, little will change from current "Island" land use.

Recommendation: The Beverly Shores community's most significant characteristic, its low population density, results from the Town's unique physical setting and physical site conditions and requires the maintenance of the 20,000 square foot minimum building parcel size with appropriate soil characteristics to permit adequate drainage and minimize damage to the fragile dunes' topography. The Town should commit the resources necessary to maintain the Town's capacity to enforce the Building and Zoning Codes.

Climate

Beverly Shores lies within a humid continental climatic region. The presence of Lake Michigan has a moderating effect on the climate of the area. For example, the normal frost-free growing season in the coastal region of southern Lake Michigan ranges between 170 and 190 days, while the normal frost-free growing season in the Kankakee River basin south of the coastal region is less than 160 days. Maximum precipitation has traditionally occurred in the months of May and June, and minimum precipitation normally occurs in January and February. Recent studies have predicted future changes in these weather patterns linked to Climate Change. *

The proximity of the Lake to the Town has historically resulted in a micro-climatic decrease in precipitation. Although these climatic factors tend to produce localized rain and snow, "lake effect" precipitation, in the "LaPorte weather anomaly", Beverly Shores is only infrequently subject to this "lake effect" precipitation. Climatological records for Beverly Shores during the past ten years show average annual precipitation of approximately 26 inches per year, less than the area and national average. Mean annual temperature is 49.73 degrees Fahrenheit. July is generally the warmest month with average monthly temperature of 72.3 degrees, and January is the coldest month with average monthly temperature of 27.28 degrees.

Climate changes resulting from the buildup of greenhouse gases will affect the quality of life in Beverly Shores as elsewhere. While climate models show a range of temperature and precipitation scenarios for the region, all have it getting warmer and resulting in more extreme weather occurrences. Predictions as to the consequences of this warming trend include loss of native plant and animal species; changes in forest cover including replacement of oak savannah by grassland; disruption of bird migration patterns; loss of wetland habitats due to altered hydrology and an increase in exotic species which are generally more tolerant of extreme conditions. These ecosystem changes will affect the area more than most

*Studies have recently been completed by the Indiana Climate Change Impacts Assessment, which is overseen by Purdue University Climate Change Research Center and comprised of a Steering Committee and several topic-oriented Working Groups. These studies indicate that average annual precipitation for Indiana is increasing seasonally during the winter and spring. Conversely, summers and autumns are trending toward less precipitation. In addition, their report shows changes in rain intensity and duration, along with frost-free days and growing seasons. These changes in climate, especially in Indiana, will impact natural hazards and how municipalities prepare for them.

other places because the dunes and wetlands are already a refuge for many species of plant and animals that have been extirpated from more developed areas. Climate change means that protecting the Town's valuable native forest and wetland habitats will become both more difficult and more essential. Community based not-for-profit groups have informed residents about invasive plants and established workdays to eradicate invasive species. These groups and the Town have encouraged residents to plant native species. Mosquito populations and their associated diseases are expected to increase if conditions become both warmer and wetter. Tick population has also increased, and Lyme Disease cases in Porter County have doubled since 2010.

Air, Land and Water Conditions within the Town

Air Quality

The Environmental Protection Agency, EPA, and the Indiana Department of Environmental Management, IDEM, regulate and monitor several air pollutants and when unhealthy levels exist, regulatory programs are implemented to abate and reduce the anthropogenic causes. Pollutants such as lead, fine particulate, mercury, and carbon monoxide all exist at safe levels. The pollutant of greatest concern to the Town's community's public health is ground-level ozone.

Ground level ozone is not emitted directly into the air but is created by chemical reactions with nitrogen oxides (NO_x) and volatile organic compounds (VOCs) in the presence of sunlight. Ozone formation is promoted by strong sunlight, warm temperatures, and light winds; elevated levels predominantly occur during the hot summer months. Since ozone is formed in the ambient air, control of ozone focuses upon the reduction of precursor emissions (NO_x and VOCs). NO_x is formed from the high-temperature reaction of nitrogen and oxygen during combustion processes in sources such as electric utility boilers, industrial fuel-burning sources, and motor vehicles. VOCs include many industrial solvents and coatings, as well as the hydrocarbons (HCs) that are emitted by motor vehicles as evaporative losses from gasoline and tailpipe emissions of unburned HC.

Ground level ozone is associated with several adverse health and environmental impacts including respiratory impairment, particularly in asthma-suffering people, and damage to crops and vegetation. The health-based standard EPA set for ozone has periodically been tightened over the years after periodic review of new studies showing adverse health impacts. The 1997 standard of 0.080 ppm was strengthened to 0.075 ppm in 2008 and then to 0.070 ppm in 2015.

Porter County is part of the greater Chicagoland metropolitan area and currently the area is in attainment with the 2008 8-hour ozone standard of 0.075 ppm. Because air moves without regard to boundaries, solutions to pollution must be regional and multi-state to be effective. Northwest Indiana Regional Planning Commission, NIRPC, is one critical regional government component to develop and implement transportation plans necessary to address ozone.

Recently, there has been progress in comprehensively reducing ozone-forming emissions. In 2019 the EPA re-classified the area's non-attainment to serious from moderate. However, in 2020 and again in 2021 IDEM submitted documentation to the EPA which it believes demonstrates Porter and Lake counties in Indiana have met the standard. The demonstration lists several regulatory measures IDEM implemented to reduce pollutants from sources and continuous air monitoring in Porter County (Ogden Dunes and Valparaiso) show that ozone complied with the 8-hour ozone limitation of 0.075 ppm

throughout the period of 2013 - 2019. On May 20, 2022, the EPA approved the plan and redesignated Indiana to Attainment in the Federal Register: Air Plan Approval; Indiana; Redesignation of the Indiana Portion of the Chicago-Naperville Area to Attainment of the 2008 Ozone Standard, NOX RACT Waiver, and Serious Plan Elements.

On the horizon, IDEM must determine what new strategies will be needed to address the latest ozone standard adopted in 2015 (0.070 ppm). As a reference of future abatement measures that may be needed, the monitoring in 2020 showed that the air quality exceeded the standard of 0.070 ppm on six days at Porter County monitoring locations.

Hydrology

Hydrology is an important consideration in the Town due to the reliance upon septic systems for waste treatment, the shallowness of the local surficial aquifer, the high-water table in many areas, and the complicated hydrology of dune and swale complexes. The area's natural hydrology has been altered by development which reduces the area that is available for water to naturally infiltrate the soils, and runoff from paved surfaces that creates soil erosion and water pollution concerns. The Town's drainage ditches have also altered the area's natural hydrology.

There are several natural interdunal ponds and wetlands within the Town. Some low-lying areas of the Town have had standing water that appeared after heavy rainfall. However, beginning in 2006, an unusually high-water table caused these areas to become more numerous, much larger, and lasting for longer periods of time (months or year-round). In 2011 a study was commissioned and found that record rainfall during the period of 2006- 2009 was the principal cause of the higher water table and increase in surface water in the island. (<http://pubs.usgs.gov/sir/2011/5073/SIR20115073> Indiana Dunes) In 2021 the water table dropped significantly and some of the standing water disappeared in the low-lying areas, evidence that there is still a cyclical factor in the water table.

The Town lies upon unconsolidated and consolidated bedrock groundwater aquifers. Due to the availability of a prolific, surficial unconsolidated aquifer and the extreme limitations of the underlying shale bedrock, the consolidated bedrock aquifer is generally not used as an aquifer resource. Of most interest is the surficial unconsolidated aquifer which is an unconfined (i.e., water table) aquifer nearest the surface.

Unconsolidated deposits of glacial sands and gravels are the principal source of groundwater in Beverly Shores as well as Porter County. Five unconsolidated aquifer systems have been mapped and defined based on geologic environments and aquifer characteristics in Porter County but only one (Calumet Aquifer) underlies Beverly Shores.

Calumet Aquifer System

The Calumet Aquifer System consists of fine- to medium-grained sand with dispersed lenses of gravel. Beds of interlaminated silt and clay, and deposits of peat and muck confine the aquifer in small areas. This system is underlain by a relatively impermeable clay and till unit that in places exceeds 100 feet in thickness. Static water levels in the Calumet Aquifer System vary accordingly to surface elevation. Areas of marsh and low relief in Beverly Shores have static water levels that are frequently less than 15 feet below the surface. However, static water levels can be as much as 100 feet below the crests of high dunes. Ponds and marshes in the interdunal depressions define areas where the water table intersects

the ground surface. Saturated thickness of the Calumet Aquifer System ranges from less than 5 feet to about 40 feet in areas containing broad water-table mounds. Due to the clay unit, a confined water-bearing zone lies below the surficial aquifer and served as a source for a small number of residential artesian wells existing prior to a municipal water supply's expansion to the Town. Some residential artesian wells may still exist.

The Calumet Aquifer System has not been developed significantly because of its proximity to Lake Michigan, an abundant surface-water source. Indeed, most wells drilled during the Town's initial development have been plugged after the advent of connection to the Michigan City public drinking water supply in 2004. However, the aquifer system is utilized as a source of water by a few domestic and small commercial facilities, approximately 41 sites remain on wells. (Source: Town records) Domestic wells typically produce about 5 to 20 gallons per minute (gpm). The aquifer is highly susceptible to surface contamination because there is no clay cap across most of the aquifer, a lack of clay separator beds, storm water runoff from developed land and roads, and a Town totally dependent on septic tank systems at each residence and enterprise.

Coldwater, Ellsworth and Antrim Shales Aquifer System

The *Coldwater, Ellsworth and Antrim Shales Aquifer System* consists of a consolidated bedrock aquifer that underlies Beverly Shores and most of Porter County. This system is generally not utilized as a source of water because of the typically low permeability of shale, and the Calumet Aquifer is commonly abundant in the overlying deposits. Water wells utilizing the Coldwater, Ellsworth and Antrim Shales Aquifer System penetrate approximately 100 to 150 feet of unconsolidated material and are completed into more than 50 feet of shale. However, only the upper 25 feet of the shale has typically been made permeable due to post-Devonian weathering, jointing, and fracturing. Static water levels in the shale range from 40 to 80 feet below the surface. The Coldwater, Ellsworth and Antrim Shales Aquifer System is capable of supplying some domestic users requiring less than 10 gallons per minute (gpm). There are no registered significant groundwater withdrawal facilities in this system.

Watersheds

In Beverly Shores, surface drainage in streams, ditches, wetlands, off impervious surfaces, and from groundwater springs and seeps is conveyed into three watersheds, or drainage basins:

- Watershed along Lake Michigan. An irregular area between the lakeshore, and somewhere between Lake Front Drive and Beverly Drive. Beverly Shores groundwater is directly connected with, and discharges directly into Lake Michigan only in this watershed.
- Derby Ditch watershed (4.64 square miles). An irregular area that includes the section bordered by appx. Lake Shore County Rd., East State Park Road or Kemil, Beverly Dr., and just south of US12. Also includes several residential areas north of Beverly Dr. between Derby and appx. Merrivale, and a roughly 3-mile-wide area between US12 and US20, west of Broadway.
- Kintzele Ditch/Brown Ditch watershed (12.7 square miles). An irregular area bounded roughly by South Franklin St. in Michigan City, Lake Shore County Rd., Beverly Drive and Porter Co 1600 North.

Several wetlands and interdunal swale areas are not connected by direct surface flow to these three watersheds. Instead, these low-lying areas drain to the subsurface sand and seep into the watersheds

at points downgradient. One example is the seasonal drainage from a mesic prairie near Montana/Alyce Ave.

(The following drainage basin maps are from the USGS report "Chemical and biological quality of streams at the Indiana Dunes National Lakeshore, Indiana, 1978-80", Hardy, 1984. Note: the maps are different scales)

Derby Ditch Drainage Basin

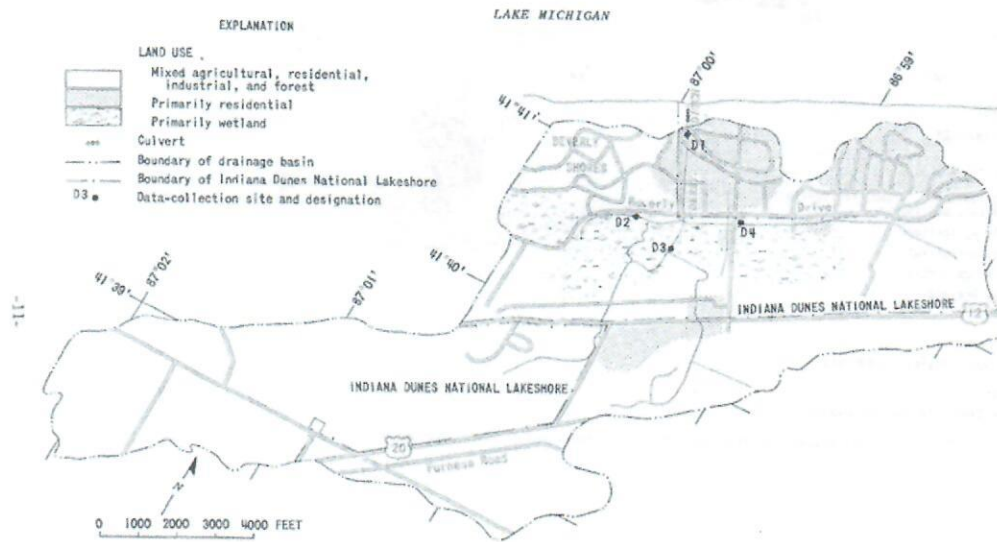


Figure 5.-- Data-collection sites and land uses in the Derby ditch drainage basin.

Kintzele Ditch Drainage Basin

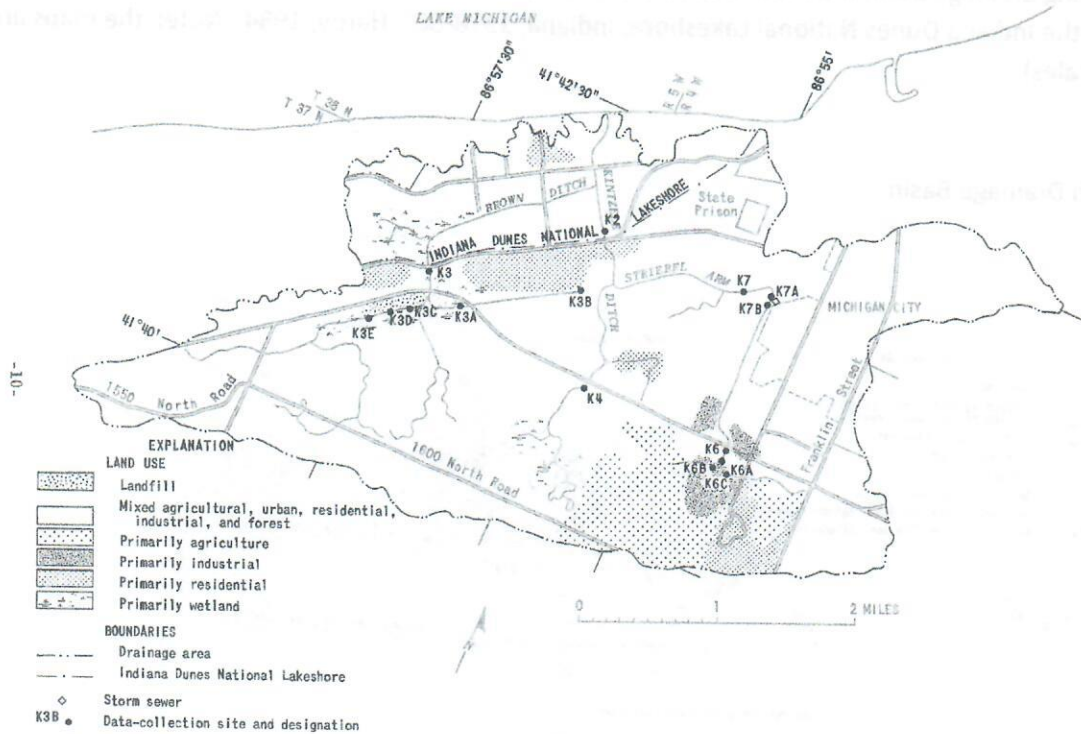


Figure 4.-- Data-collection sites and land uses in the Kintzele ditch drainage basin.

According to a study conducted in Beverly Shores by the Indiana Geological Society during the 1990s, areas of noticeable, but limited, impacts from septic effluent exist in Town, generally associated with the more highly developed areas. The study suggests that higher septic system density, a high-water table, and improper septic system construction, operation or maintenance increase the impacts on groundwater from septic effluent discharge. The study also found that widespread bacterial contamination of the groundwater from septic effluent discharge was not the cause of ditch and beach contamination.

Soils

The predominant soils within the Town, as classified by the United States Soil Conservation Service are Oakville, Maumee, Adrian and Houghton Muck. The Oakville soils are sandy and very porous. The Adrian and Houghton Muck soil types are deep, very poorly drained soils in bogs within lake plains. They have severe limitations for soil absorption wastewater systems and are generally found in the lowland areas of the Town. County regulations do not allow for soil absorption systems in this soil. The Maumee soil is somewhat poorly drained soil having severe limitations for soil absorption systems. County regulations require one-acre building sites for soil absorption systems and the Valparaiso soil is somewhat poorly drained soil having severe limitations for soil absorption systems. This soil is found in some areas along US 12.

Current Town ordinances mandate that individual sewage disposal systems and water wells shall be located and installed in accordance with the State of Indiana and Porter County Board of Health regulations. These regulations allow for excavation of these soils to create a large enough level area to install a sewage disposal system.

Sewage disposal in the Town is processed by individual soil absorption systems including septic tanks, drywells, drain fields or seepage pits. Soils have a major impact on the effectiveness of these systems, and the consequences of continued reliance upon these systems. According to the Porter County Health Department, the soil conditions present and the type of systems utilized (dry wells) are considered to be a serious public health threat. The use of dry wells was banned in 1991, as they are a major source of groundwater contamination. Dry wells are still in service on most properties in Beverly Shores (more than 400 of the 510 residences were built before 1992 and are assumed to be on dry wells or other banned systems); the authority of the Porter County Health Department is only with new home construction or repairs of existing septic systems. Due to the extreme slope properties, the Porter County Health Department recommends maintaining the 20,000 square foot minimum lot size per home site Town ordinance requirement.

The Town has adopted by ordinance the County ordinance regulating the installation, construction, maintenance, and operation of private sewage disposal systems. State health standards have been made part of that ordinance and the Town supports their strict enforcement in the interest of its citizens' health. Under state law the Town cannot otherwise regulate septic system installation or maintenance. The housing stock is aging, and these septic systems degrade over time. The U.S. EPA reports that nationally at least 10 percent of onsite systems have stopped working, and some communities report failure rates as high as 70 percent. State agencies report that these failing systems are the third most common source of groundwater contamination. EPA recommends that typical residential septic systems should be inspected at least every 3 years by a professional and tanks should be pumped every 3 to 5 years. The Town should help educate the Town's residents to follow these guidelines. The Town should encourage the county to adopt an ordinance requiring regular maintenance of all septic systems consistent with the EPA recommendations. The Town should also encourage the county to adopt a requirement that septic systems be inspected and determined to be operable prior to sale of any property, like other surrounding counties.

The Town continues to explore options for a sewer system(s). Traditionally it was thought that a sewer system would be too costly for many reasons but most important the need for numerous lift stations resulting from the many hills created by the dunes. New technology has started to emerge. Vacuum sewers and individual lift stations or grinders are just a few of the approaches that have been successful in other environmentally fragile areas of the country. These new approaches might permit an incremental, less costly approach and need to be explored as possible solutions. Neighboring lakeside communities have installed sewer systems or have begun to install systems. Rising Lake Michigan water levels have placed added stress on the use of septic near the lake or in low lying areas. Since approximately four-fifths of septic systems in the Town rely on septic approaches no longer permitted and many of these houses do not have sufficient property or sufficient well-drained soil to even install a new system if their current septic fails, this will become an increasing problem in Town and a long-range plan is needed to address it.

Recommendation: Develop a plan for providing sewers or other sewage disposal systems for the Town. Provide information to property owners and encourage them to inspect and maintain current septic systems. Encourage the county to pass legislation requiring the inspection and periodic maintenance of septic systems.

Surface water drainage

Surface water in Town consists of the (manmade) pond at Lituanica Park and standing water in some low areas and in drainage ditches. Areas currently considered flood-prone include: the immediate lakeshore area, some low (predominantly wetland) areas, and sections of some roadways.

Prior to the development of Beverly Shores, ditches were constructed to drain areas with a high-water table, making them suitable for housing. The Town still relies upon this drainage system, which consists of a (mostly) interconnected series of open ditches, culverts, and buried drain tile. These series of ditches, etc. eventually drain into either Derby or Kintzele ditch, both of which drain into Lake Michigan.

The 2012 Comprehensive Plan stated concerns regarding the high-water table and drainage issues. Due to limited funds, maintenance of the drainage system had often been delayed or neglected in residential areas. In non-residential areas, maintenance had been neglected for significant periods of time. Culverts occasionally become clogged with debris and vegetation and there was standing water year-round in many areas. The Town has begun to address the degraded condition of the Town's drainage system, particularly on the west side of Broadway with replacement of portions of the tile and culverts and increased regular maintenance.

More recently, the Town has implemented a program of periodic drainage system maintenance. From 2011 to 2019, over \$114,000 was spent to replace and repair culverts and clean out culverts. Areas addressed included W. Fairwater to Derby Ditch, W. Service Ave., Four Corners, and other locations. In 2020, the failure of the Derby Ditch culvert under Lake Front Dr was revealed. Sections of the 48" diameter culvert separated and became flattened out to ellipses. The failure was probably caused by an over pipe weight of eleven feet of earth, heavy vehicle traffic, wave action, and recent heavy rainfall events. In 2021, the Town replaced the steel culvert with a concrete culvert under the road and to its outlet at the beach.

The National Park Service began restoration of the Great Marsh south of Beverly Drive in 1999. The restored portion of the Great Marsh is approximately 600 acres and extends from Lake Shore County Road to Kemil Road and is a part of an approximately 10-mile wetland, the largest interdunal wetland on the shores of Lake Michigan. A primary focus was to plug some ditches that once openly drained Beverly Shores. In addition to ditch plugs, spillways were installed at Broadway and Beverly, and at Derby and Beverly. The spillways control the flow of water, allowing water to discharge but preventing the water level from dropping below a certain nonadjustable level. The Great Marsh is a component in the Town's drainage system. Hydrologic impacts from the restoration include:

- An increased retention of water and increase of water levels in the restoration area (note that the upper level of surface water in the Great Marsh is the water table).
- A decreased rate of water flowing through Derby Ditch. This was done to increase the retention time of water in the wetland to allow the wetland soils to absorb contaminants.

- An alteration of the Town's drainage system in the restoration area: Ditches in the Great Marsh that once connected ditches in the island with Derby Ditch have been replaced with large pools of water to which ditches in the island discharge. Excess amounts of water in the marsh discharge through spillways into Derby Ditch.

In 2013 the USGS and the National Park Service released a report of the effect of the Great Marsh restoration on the surface water surrounding Beverly Shores. * The study concluded that the restoration was providing some level of treatment for the water running into Lake Michigan at the Derby Ditch drainage basin, but there remains a low-level impact from the Town's septic runoff.

Eastern Great Marsh Restoration:

The National Park Service is implementing an Environmental Assessment to evaluate alternatives and fund restoration of the eastern Great Marsh in a similar fashion to what was done west of Lake Shore County Rd. The planning area for the project is 300 acres bordered by Lake Shore Co. Rd. eastward to Kintzele Ditch, between Beverly Drive and the Town of Pines. A future plan may include restoration from east of Kintzele Ditch to Michigan City to a point 2120 ft, east of the LaPorte county line.

Current drainage is through a jurisdictional (flood control) ditch, Brown Ditch, which conveys water from interdunal wetlands south of the Great Marsh. Brown Ditch extends through the eastern Great Marsh terminating at the jurisdictional Kintzele Ditch. Smaller ditches within the Great Marsh south of Brown Ditch convey water to Brown Ditch, rapidly draining them. The construction of Brown Ditch which runs east-west, Kintzele Ditch which runs north into Lake Michigan, and tributary ditches within the Great Marsh has removed historic wetland hydrology.

The assessment has identified promising alternatives to break down berms in abandoned roadways south of Beverly Drive, add culverts under Central Avenue, and cut off drainage from tributary ditches south of Brown Ditch. These diversions and added spillway controls would have the benefit of spreading out water flow from Brown/Kintzele ditches into the wetland area. Flow attenuation will improve water quality by promoting sedimentation and exposure to sunlight. Contaminants and nutrients will be utilized by wetland vegetation. A pool level of 598 ft MSL is projected to be two to three feet lower than Beverly Drive and will not increase the potential of the Town of Pines to flood.

A wet mesic prairie will be restored between Lake Shore Co. Rd. and Kansas Ave (abandoned). East from Kansas, 30 to 40% of the tree canopy will be reduced. The 154-acre area south of Brown Ditch is overgrown with invasive species that must be removed and replaced with wetland plantings suitable for the wet mesic prairie, wet meadows, and shallow marshes that historically existed.

Recommendation: Maintain the town's drainage system to prevent flooding and improve water quality.

* Organic Wastewater Compounds in Water and Sediment in and near Restored Wetlands, Great Marsh, Indiana Dunes National Lakeshore, 2009–11

<https://pubs.usgs.gov/sir/2013/5186/>

Lake Michigan Water Levels and Beach Erosion

Historical Background

Another environmental phenomenon of concern to the Town is that of beach erosion. Significant fluctuation in lake levels occur and are an ongoing concern. From 1927-1956 the rate of erosion, as measured by retreat of the bluff scarp, was between two and four feet per year depending on exact location. In 1997 the Plan Commission held special meetings to discuss the East Unit National Lakeshore Development Plan. At that time, due to high levels and the ensuing erosion, it was felt that erosion was a critical issue facing the community. It was felt this issue was not properly addressed because a beach nourishment plan had not been given top priority. The continued erosion initially abated (because of lower lake levels) but then greatly accelerated in 2019 and 2020.

A revetment 13,200 feet long was completed by the Army Corps of Engineers as a temporary measure in 1974 and was augmented with 227,000 cubic yards of beach sand. This sand was removed by erosion and an appropriation of \$1.5 million was made for an additional 80,000 cubic yards of beach nourishment in the summer of 1981. The Corps of Engineers placed another 920 feet of revetment in six specific locations from Broadway to Drexwood in 1998.

On Nov. 12, 2004, the Army Corp of Engineers completed a study titled The Evaluation of Dredged material management plan for Michigan City. This report stated that sedimentation at the Washington Park marina and pier was related to poor planning. In order to correct the poor planning of the marina location, one recommendation of the report is a bypassing plant for the east fillet and a pipe under the marina or pier to Mount Baldy. No action has been taken by Michigan City since the study was completed.

On November 12, 2010, the Indiana Dunes National Lakeshore announced plans for public meeting for a Shoreline Resolution Management Plan and Associated Environmental Impact Statement (E.I.S.) at Indiana Dunes National Lakeshore. Four meetings were held and, again, the placement of a permanent slurry pump at the Michigan City harbor was deemed as the best permanent solution. The Indiana Dunes National Lakeshore's planning process timeline was for more meetings in 2012 and beyond.

In November 2014, the National Park Service approved The Shoreline Restoration and Management Plan for the entire NPS lakefront from Michigan City's Trail Creek to US Steel in Gary. The Plan was broken down into reaches. The Reach that contained the Town of Beverly Shores was Reach 2. Although the placement of a permanent slurry pump was originally deemed the best permanent solution, the Park proposed a submerged cobble berm. There was a negative response to this proposal. The Park then developed a hybrid of beach nourishment through dredging and using gravel and rock from an upland source. Since 2014 the water levels have risen dramatically, and no progress has been made on beach nourishment within the Town. NPS began a beach replenishment demonstration at Central Avenue in the Fall 2020 intended to test whether sand nourishment is the most effective and environmentally appropriate solution to beach erosion. Although the demonstration created additional beach at National Park Central Avenue Beach, it had little impact on the Beverly Shores' beaches.

The revetments installed by the Army Corp of Engineers prevent natural replenishment of the beach through undercutting of the bluff scarp. There are three important reasons for finding a long-term solution to the beach replenishment problem: (1) the present method of replenishment is very

expensive, (2) loss of the revetment would mean the loss of Lake Front Drive which is the only means of access to many of the homes fronting upon it, and (3) continued erosion would mean loss of the town's public beaches.

The public roadway is under extreme pressure from the rising water levels of Lake Michigan. The water levels have been rising since 2014. In 2018, 2019 and 2020 the Lake Michigan water level rose to historically high levels. As a result, the roadway and utility services embedded in the roadway became imperiled in late 2019. Part of the NPS parking area at Lakeview collapsed onto the beach in 2020. The Town began an emergency program to reinforce Lake Front Drive beginning in the fall of 2019 and continuing throughout 2020. The road was reinforced by placing large boulders at the high-water mark and stacking the boulders approximately 15 feet above the water level. The area was graded back toward the road and then tiered with smaller rock, sand and a mesh combination. Some in-kind public assistance was provided by other governmental units in the form of GIS, drone images, surveying work, and labor, but no county, state, or federal financial assistance has been provided to help the Town in this program. The Town formed a Redevelopment Authority that was enabled to issue \$5 million in lease revenue bonds. Following a year-long effort to reinforce the shoreline and roadway from further erosion, the disturbed areas have been stabilized with erosion control blanketing, seeding, and marram grass plantings in most of the reinforced areas. The Town has already started maintenance on the new improvements, and it is believed regular maintenance will be required to preserve the protection provided by the improvements. The high-water levels will continue to tax the Town's limited resources and complicate long-range planning approaches. The Town does not control the beach or Lake access, except at the Town beaches and road right of ways.

Current Conditions

As a result of the National Park's and Army Corp.'s failure to act on beach replenishment and the historic rising of the water levels, beach erosion has become much worse. When the last Comprehensive Plan was adopted in 2012 there was a continuous beach along the Lake Michigan shoreline within the Town boundaries. Most of the prior beach has disappeared with rising water levels. Currently there is a beach remaining in only a few isolated areas, mostly toward the west side of the Town and East Lake Park. Additionally, because of the emergency road stabilization program there is no beach access over the boulders which are approximately fifteen feet above the current lake level. Additional planning will have to consider beach access at the Town controlled sites.

The Town contracted in 2021 for an engineering study from the Smith Group to identify the problems and suggest long-term options to protect the road, improve beach access, and protect the dunes. This study has been recently completed. A copy of the Master Plan Report is found on the Town website at beverlyshoresindiana.org. The Smith Group has identified the following:

- The Michigan City breakwater acts as a block to sand movement from the East, resulting in the Central Beach and Mount Baldy area acting as the primary supply of sand to the Beverly Shores area. Analysis of the sand needed to maintain the beaches along Lake Front Drive indicate that an annual supply of 180,000 to 200,000 CY/year is needed; the Central Beach/Mount Baldy Area has supplied approximately 80,000 CY/year, resulting in a significant deficit which would need to be supplied through annual beach nourishment. Regular beach nourishment comes with fiscal and implementation challenges and has not been implemented on a regular basis by the National Park Service and/or Army Corp. of Engineering.

- Recent high lake levels and storm waves caused significant erosion of the beaches and dunes along Lake Front Drive, resulting in damage to Lake Front Drive in some areas and putting other areas at risk for damage. The persistence of these high lake levels also has another impact on the shoreline. As lake levels rise and the beaches erode the resulting shoreline is lower in elevation. As the erosion reaches the dunes and rock revetments it continues to lower the shoreline elevation, creating deeper water depths immediately adjacent to the dune and rock revetments. Purdue University has been studying the Beverly Shores shoreline since 2018 and has measured this lowering of the shoreline elevation in the Derby Ditch area. This study has shown that the slope of the shoreline has steepened, meaning the shoreline is still eroding in response to the high lake levels. This lowering of the shoreline elevation allows larger and more damaging storm waves to reach the shoreline and has the potential to destabilize the rock revetments, undercutting them from below, increasing the vulnerability and risk of failure to Lake Front Drive.
- As a result of the sand deficit, the lowering and steepening of the shoreline, the beaches may not recover to the widths previously seen or potentially may not return at all in some areas. Even if the lake level significantly drops the Beverly Shores shoreline and Lake Front Drive will continue to be vulnerable to damage without the implementation of shoreline stabilization strategies.
- Without action the shoreline will continue to erode, and the vulnerability of Lake Front drive will increase. If this vulnerability is not addressed, access to property and homes across from the shoreline is at risk. A total of 76 properties and 48 structures along Lake Front Drive are at risk of losing access.

It is the hope of the Town that something other than funding more studies will be accomplished by the federal and state agencies. The Army Corp of Engineers has jurisdiction over all areas below the high-water mark. The National Park has control of the beach and dunes up to the roadway, except for the seven Town controlled beach access points. While the Town has stabilized the lakefront dune and protected Lake Front Drive from falling into the lake, the Town cannot address the larger issue of rising lake levels and the lack of beach nourishment.

With completion of the engineering study resulting in the Beverly Shores Master Plan Report it is even more apparent that successful implementation of recommended strategies is dependent on working cooperatively with area partners, the most important being the National Park Service. The Town has begun participating in discussions with the Great Lakes and St Lawrence Cities Initiative (GLSLCI) with an eye towards strengthening these relationships and developing a cohesive strategy for tackling erosion and shoreline restoration issues experienced along the entire southern coast of Lake Michigan. Working with strategic partners like NPS, NIRPC, LMCP, the Indiana RDA and neighboring coastal communities under the guidance of GLSLCI will lead to success in addressing coastal flooding and erosion issues experienced through the area and securing the funding so desperately needed to provide long-term solutions while protecting the work already completed.

The Master Plan is a starting point. It provides the roadmap needed to explore improvements beyond those addressing the recent emergency. Future improvements should consider restoration and protection of beaches while providing restoration and development of access points for public

enjoyment of the lakeshore. Additionally, opportunities for protecting and enhancing Town infrastructure should be incorporated into future plans.

In addition to considering future improvements, it is imperative that the Town work towards protecting the improvements already completed. The Town should identify a responsible party for monitoring the condition of improvements along the Town's entire lakeshore which includes, at a minimum, developing an annual inspection program. The monitor should report to the Town Council so that a coordinated approach will be taken.

The lakefront is one of the Town's greatest assets and its protection and development need the full attention of town government. The Town Council needs a vision for the lakefront and then needs to champion that vision with the town's residents, neighboring communities, IDNP and state and federal officials. The vision for the lakefront needs to be shared by the Park Board and all Park Board actions need to be aligned with advancing the vision. Lakefront stewardship may require a new committee and possibly paid staff to provide the expertise and attention needed to implement the vision. This could include monitoring the status of the lakefront, identifying funding opportunities, preparing grant proposals, and coordinating with potential partners.

Recommendation: Implement both short- and long-term lakefront restoration recommendations to protect and improve the Town's entire lakeshore. Appoint a monitor to inspect the Town's lakeshore who should report to the Town Council on a regular basis so that a coordinated effort can be implemented to accomplish these goals, to protect the work already completed and raise the necessary resources. Work with strategic partners such as the NPS, NIRPC, LMCP and neighboring communities to accomplish a solution throughout the area and to secure the funding so desperately needed to provide long-term solutions.

Local Economic Activities in the Commercial District

The Commercial District is currently comprised of all properties along US Highway 12: from Lake Shore County Road on the east, to the Town's western boundary (roughly Derby). Commercial development in this area has to date been largely ad hoc, with the result that there are currently only a few retail businesses within the Town's borders: a gas-station/convenience store, camp store, liquor store, art store/office supply, antique stores, an office building, and a restaurant. There are proposals for other businesses in the early planning stages. There are also a handful of seasonal businesses that operate in the summer months. The remaining commercial properties (along US 12) are currently occupied by residences, non-retail activities (art studios and workshops), derelict or undeveloped sites. The small number of active businesses is partially a result of the challenges facing owners attempting to develop sites along the corridor, including small (shallow) lot sizes paralleling the South Shore right-of-way, poor soil conditions for septic installations, State Highway department regulations for road egress/ingress, parking limitations and discontinuity in the street facade—caused by the intermixing of businesses with residences and vacant properties. Lack of public parking along the commercial strip is also a significant problem for the development of potential business. Businesses in Beverly Shores also deal with a highly seasonal market.

The last comprehensive plan recommended in part that the Town consider:

- Allow small scale mixed-use residential/business development in the commercial district.
- Develop strategies to reduce truck traffic and control speed limits to enhance public safety.

- Encourage development of small-scale businesses, which would minimally impact the visual character of US 12, through Beverly Shores and create a “theme” in the Commercial District.
- Update the Permitted Uses to include businesses that would offer unique services and/or convenience to Beverly Shores residents.
- Impose limitations on the style and scale of signage in the commercial district.
- Improve pedestrian and bicycle access to and along the commercial strip as a means of reducing traffic congestion.
- Encourage centralized, hidden, shared parking that might be used by multiple businesses, as a way of minimizing the visual impact of multiple parking lots and reducing tree removal.

Little progress has been made on these recommendations. Since the last comprehensive plan, a crosswalk has been installed across US 12 on the west side of Broadway, the permitted uses were reviewed, and the signage requirements were amended. On the other hand, septic, parking, and safety on and access to US 12 continue to create large obstacles for potential merchants. Lack of suitable land continues to be a major obstacle. There are very few parcels in the commercial district that have sufficient land for commercial use that are not currently used as residential property. The only real opportunities for new economic development within the Town’s current boundaries are from Broadway to Lake Shore County Road along US 12, an area of less than a mile, but even in this corridor many of the properties are residential. Additionally, on the south side only that portion of the property within 150 feet of US 12 is within the Town boundaries. There are sites that would meet the requirements for commercial development in unincorporated Porter County adjacent to Beverly Shores, but those properties would have to be annexed by the Town.

Difficulties notwithstanding, Beverly Shores should be attractive to businesses. The Town has the only commercial district located within the boundaries of the National Park. US Highway 12 is a major tourist route along the southern Lake Michigan shoreline. The residents typically rely on regional businesses in Chesterton, Michigan City (or even Chicago) for their primary shopping or service needs, however, the popularity of established local businesses indicate that sufficient demand exists for local commerce. Businesses that offer convenience and/or unique goods and services to Town residents, visitors to the National Park, and neighboring Duneland communities can be successful and benefit Beverly Shores.

Several changes are occurring that present the Town with an opportunity to increase development in the Commercial District. The Northern Indiana Commuter Transportation District (NICTD) is in the process of building a double track to improve South Shore train service to South Bend and Chicago, this coupled with added visitors drawn to the National Park will increase the demand for services. As a part of the double tracking improvements, the Regional Development Authority (RDA) is exploring a Transit Development District (TDD) with the Town, a state program to help the communities affected by double tracking increase commercial opportunities. TDD and TIF districts give the Town an opportunity to raise resources to fund commercial activity within the Town, which would otherwise be difficult because of a lack of resources.

Input from the Town residents suggest that the residents are open to additional commercial activity consistent with the character of the Town that would provide:

- Convenient access to essential goods and services for the residents
- An attractive entry-point for visitors to the Town and the National Park
- An expanded tax-revenue base

At the same time Beverly Shores seeks ways to encourage additional activity in the Commercial District, it is imperative that consideration be given to development that is in scale and compatible with the tranquil character of the Town and surrounding National Park.

Recommendation: In the interest of encouraging appropriate and commercially viable businesses in the Commercial District, the Town should:

- ***Continue to regularly review the permitted uses and signage in the Commercial District to ensure compatibility with the needs and aesthetic of the Town***
- ***Work with the state highway department to ensure pedestrian and bike safety on US 12 and to slow traffic through the Town***
- ***Work with the RDA to identify resources to support improvements to the Commercial District, particularly sewers, pedestrian walkways, bike paths and parking***
- ***Work with property owners in unincorporated Porter County to voluntarily annex their properties for potential commercial sites in the Town.***

Public Safety

The Town of Beverly Shores maintains 24-hour police service, with qualified and trained police personnel, both full time and part-time, and is also served by a modern 911 center operated by Porter County. The Town currently has three Ford Hybrid Explorers and a Ford pickup truck for use by the police. PAL provides additional financial support for the Police Department.

The Volunteer Fire Department has sixteen active firefighters, 13 of whom are trained to the level of Emergency Medical Responder (EMR), Emergency Medical Technician (EMT) or Paramedic. The Department is on call 24-hours per day for medical, rescue and fire emergencies. As the population of the Town has aged and the number of available volunteers has diminished, this will continue to be a challenge for the Town. The total active roster is down from a 23-person roster in the 2012 update and down from 18 EMR and EMT as of that time. The Department is currently certified as a basic life support, non-transportation facility. As of the fall of 2020, the Department maintains two Fire Truck/Pumpers, a Tanker Truck, a Rescue/Brush fire vehicle, and one other vehicle as well as a boat for lake rescue activities.

Public Safety costs absorb a high percentage of the Town's budget and as a result the Town relies on community organizations to supplement these expenditures by obtaining grants or otherwise raising funds for the purchase of equipment. Since the last comprehensive plan, the following grants were obtained by the ABSR Community Foundation:

- National Fire Protection Association (NFPA)-compliant Self-Contained Breathing Apparatus (SCBAs) to replace its stock of outmoded, non-compliant SCBAs
- Six Automated External Devices (AEDs) for the Beverly Shores Police Department
- A rescue boat for the Beverly Shores Volunteer Fire Department.

Recommendation: Continue to make 24-hour police and fire protection a high priority for the Town.

Capital Planning

The Town has several public structures: Administration Building, Fire Station and Police Station Complex, Community House – “Our House,” Community Utility Building, Beverly Shores Depot Museum and Gallery (leased), Rebora Shelter and Broadway Plaza Parking Lot and The Lituanica Park Warming House.

Generally speaking, the public structures are aging, and a plan needs to be updated to maintain, modify or replace these structures as needed. The Town Council established a Capital Planning Committee consisting of:

- One member from the Town Council
- One member from the Plan Commission, who is not a council member
- One member from the Park Board
- One member from the Police Department
- One member from the Fire Department
- One at large member of community, and
- The Clerk-Treasurer.

Since the last update of the Comprehensive Plan, the Administration Building was refurbished. Additionally, a community utility building was constructed to store Town equipment, as well as for use by not-for-profit groups within Beverly Shores. The library at the Community House was rebuilt. The impetus for these improvements came from a coalition of local non-profit organizations--The Association of Beverly Shores Residents (ABSR), ABSR Community Foundation, Beverly Shores Depot Museum and Art Gallery, Dunes Women’s Club, Environmental Restoration Group (ERG), and Police Action League (PAL)—that provided money for the fund drive led by the ABSR Community Foundation (ABSR CF). ABSR CF secured generous donations from residents and businesses to complete the three projects. With the lack of public resources available for the Town, this private fundraising and grant funding likely will be the model for future updates to Town structures. Additionally, the development of a lakeshore resiliency plan with strategic partners may produce additional funding sources for infrastructure in the Town. (See the discussion in the Lake Michigan section)

Although the Town owns a Community House on Service Avenue it is largely made up of a small library and a couple of small meeting rooms from an old house. The Town needs a more extensive community center for meetings and gatherings.

Recommendation: Continue to develop and implement a long-term capital improvement plan and provide a five-year capital budget. Continue to partner with local not-for-profit groups to help raise funds for these projects. Develop a plan for a more extensive Community Center.

Recreation and Recreational Facilities

The Beverly Shores Train Station, the 4.5 miles of Lake Michigan beaches, the Town Parks and Trails form the principal tourist attractions of the Town. The renovated Beverly Shores Train Station, on the National Register of Historic Places, is used both as a train station by NICTD and as the Town’s history museum, regional art gallery, and gift shop attracting both residents and others from Northwest Indiana. Currently, NICTD leases part of the building to the Town, which subleases it to The Beverly Shores Museum and Art Gallery, Inc., a 501(c) (3) non-profit governed by a volunteer board of directors.

There are many recreational opportunities in the Town including walking trails, biking trails, and park lands for various activities. Town residents also have the use of National Park facilities such as: campground, hiking, biking, picnicking and nature related activities. Intensive uses such as snowmobiling, jet skis and off-road vehicles are not allowed in the National Park area on the beaches or in the Town. Given adequate snow conditions, the terrain is excellent for sledding, snowshoeing, and cross-country skiing. Other specialized recreation resources such as golf courses and indoor facilities are reasonably accessible to residents.

Town Parks

Lituanica Park: A park of approximately 15 acres that consists of an inland, interdunal pond and the surrounding land, containing a playground, tennis court, basketball court, picnic area, Lithuanian memorial and passive nature study areas, and the warming house. Lituanica park has adequate playground equipment, a tennis court, Frisbee golf course and a basketball court, and meets the Town's needs for this type of recreation. The warming house hosts a variety of community functions. Several residents have proposed stocking the pond for casual fishing and adding a second court for pickle ball.

Rebora Plaza and Bracken Beach: (formerly known as Broadway Park) Constitutes Beverly Shores principal beach facility. Primary facilities include parking for approximately 30 cars and beach access/pavilion. The parking lot also serves as a plaza for outdoor community functions. The stairway to the beach was rebuilt in 2022 after the prior one was destroyed by the high water. All funds were raised by the Friends of Beverly Shores, a local volunteer group.

East Lake Shore Park: An undeveloped tract on the east side of Town contains a beach access corridor and beachfront. East Lake Shore Park is comprised of approximately 8.85 acres located between Beverly Drive and Lake Michigan on both sides of Kintzele Ditch. The original survey showed approximately 240 feet of beach width on this tract, as the water level has risen, the beach frontage of the tract has increased to approximately 360 feet of beach width because of the irregular shape of the tract. The Town believes that East Lake Shore Park and East Lake Shore Beach are under-utilized and that a long-range plan needs to be developed either to upgrade these properties for use by the residents or to provide other strategic uses. The number of Town beaches has greatly diminished in the last ten years, East Lake Shore Park has one of the few extensive beaches left in the Town.

Town Beaches and Road Right of Ways

- Derby Avenue Public Beach (100-foot width)
- Rebora Plaza and Bracken Beach (600-foot width)
- Shore Avenue Public Beach (75-foot width)
- Beach Avenue Public Beach (75-foot width)
- Drexwood Avenue Public Beach (150-foot width)
- Drake Avenue Public Beach (150-foot width)
- East Lake Shore Park (360-foot width of beach)

These beaches provide Town residents access to the beach unencumbered by National Park Service regulations. They can also provide storage and launching for limited numbers of small non-motorized watercraft. Since 2020, because of high lake levels, the Town prohibited storage of any watercraft on Town beaches.

In addition to the beaches, the Town also has a road right of way at Town roads that end at the lakefront; examples are East State Park Road right of way (100-foot width) and Lake Shore County Road right of way (50-foot width). The Town maintains parking areas along some of the Town beaches and in the Town road right of ways such as Reborra Plaza with thirty spaces and smaller parallel parking areas along Lake Front Drive at Derby Avenue, Shore Avenue, Beach Avenue and golf car parking at Drexwood Avenue and Lake Shore County Road. Each of these smaller locations have approximately six spaces.

Town Trails

There is a network of Town trails that are maintained by volunteers and local not-for-profits. Many of these trails are located on Town street rights of way within the boundary of the National Park. The Town, through volunteers, has maintained these rights of way and they are commonly used for hiking and cross-country skiing. These rights of way connect into the National Park Dune Ridge Trail from the Kemil and Dunbar parking lots, creating more than five miles of public trails. The National Park also has opened the Great Marsh Trail that is approximately one mile in length with two access points off Broadway south of Beverly Drive. The network of Town street rights of way east of the Island is used for hiking and biking and is also maintained by volunteers.

Recommendation: Develop a short-term and long-term plan to increase access to town-owned beaches including East Lake Shore Park. Continue to maintain Town parks, beaches, and trails.

Partnering with Indiana Dunes National Park, Not for Profit Groups and Other Strategic Partners

The National Park is integral to the Town's comprehensive plan. All residential property in Beverly Shores is no more than about four blocks from the National Park. The National Park properties include parking areas, beach access, and facilities along or near Lake Front Drive at Lakeview, Dunbar, Central Beach, and Kemil Beach visitor areas; the Century of Progress historical district on the lakefront; the Great Marsh south of Beverly Drive; the Great Marsh, Calumet, and Dune Ridge trails; the Campground south of U.S. Hwy 12 at the terminus of Broadway, the Calumet Trail (bikeway) parallel to U.S. 12, and all land in the Town's corporate boundary east of Montana Avenue and west of Derby Ditch.

All these locations are open to the public and used year-round. The National Park has recently enacted entrance fees for the park property adjacent to the Town. The National Park had 2.2 million visitors in 2020. A key reason for popularity is its interwoven boundaries to an urban megapolis. This level of visitation has undoubtedly increased with park designation in 2019 (from the former Indiana Dunes National Lakeshore).

Beverly Shores coordinates frequently with the National Park on law enforcement matters, traffic and roadway use, and remediation of the shoreline. Planning to ensure efficient, accessible, and safe visitation is crucial to the well-being of the community. Town residents greatly utilize park facilities and integrating the community with park amenities is a desirable objective. Parking lots owned and managed by the park are nearby and accessible.

Recent discussions between the Town and the National Park have identified several mobility-related enhancements that could be further developed and implemented. Enhancements identified could include the following. Portions of West Beverly Drive are now closed, a bikeway/hiking trail with pocket parking lots at each end could be constructed. Pull-over 15-minute lookout parking areas could be designated in the Great Marsh area along Beverly Drive and on Lake Front Drive west of the Century of Progress. The Calumet Trail is being evaluated by regional planners from the standpoint of creating the east-west Marquette Trail, an interstate bikeway and hiking trail. In November 2021, the U.S. Dept. of Transportation awarded \$17.8 million (of the \$23 million requested) to NWIRPC to finish construction of the Marquette Greenway, including routing across Porter County. On November 16, 2021, the Town Council of Beverly Shores provided a letter to Porter County, in support of the county's grant application to the Indiana Dept. of Transportation to secure the remaining funding needed. The current route preference across Beverly Shores is through National Park-owned land and Town abandoned ROW north of the existing Calumet Trail and near Service Ave. in the Town's government district.

Each of these transit developments would be beneficial to the community's residents and visitors. Additionally, these or similar improvements would both increase the accessibility of Beverly Shores and the park to visitors and would route and channel visitors, especially non-motorized visitors, in a more organized and safe manner. As discussed in the Lake Michigan section, other strategic partners have started to work with the Town on an area wide solution to help protect and increase access to the Lake Michigan lakefront.

Shirley Heinze Land Trust (SHLT) owns substantial land that is open to the residents for hiking and birdwatching. SHLT owns 375 lots comprising some 90 acres in the Town mostly along the Great Marsh. The property includes several marked and maintained walking trails. SHLT also does substantial stewardship of its property to remove invasives and replace them with native species.

Recommendation: Partner with the National Park, SHLT, and other interested groups to encourage preservation of and increased public access to natural areas, and to develop West Beverly as a public trail with limited parking. The Town should also partner with the National Park and other strategic partners for lakefront restoration, protection and beach access.

Green Space and Natural Lands

Despite the success of the 1982 building regulations in protecting green space in Beverly Shores, the Plan Commission's land study identified a number of lots that are large enough to meet the 20,000 square feet building requirement, even though a large percent of these lots are not likely to meet soil suitability and/or Town Ordinance requirements. One means of removing the ambiguity surrounding the status of these lots (and potential regulatory disputes about their status) is to encourage owners to donate these properties to the Town of Beverly Shores. The Town has determined that it can further the dual goals of avoiding such regulatory disputes and conserving the Town's green space and fragile dunes ecosystem without having an impact on the Town's tax base by creating a Green Space Initiative to encourage such donations.

The Green Space Committee's primary purpose is to encourage and assist owners to consider donating property to the Town to protect natural and open areas, and to conduct due diligence on behalf of the Town with respect to the property to be donated. In performing these roles, the Green Space

Committee informs a prospective donor that the donor may designate the donated property as either public park or as permanently protected green space. The Green Space Committee is further charged with the responsibility to inform the Town Council about the stewardship needs of prospective donated property and about whether the property that has been donated is being properly stewarded. Because the Green Space Committee lacks both a regulatory mandate and budgetary funds to perform stewardship tasks itself on donated permanently-protected property, it seeks to steward that property through conducting volunteer work/study days and other volunteer opportunities through strategic partnerships with community-based not-for-profit organizations, including BSENG. Through such partnerships, Town-owned permanently-protected green space will be properly stewarded, Town residents will learn about proper stewardship of land, and Town residents will learn more about the Green Space Initiative. Since the creation of the Green Space Initiative, the Town has accepted twenty-two lots as permanently protected green space.

Policies and Initiatives to Protect and Conserve the Natural Lands

Beverly Shores must also continue its efforts to preserve its uniquely rich and dynamic bio-diverse geological setting by vigorously enforcing its protective ordinances (Section 155.130 on Sand Mining, Section 155.131 on Dune Topography, including the Steep Slope Protection in Sections 155.141-145, and Section 155.220 on Wetland Protection). In addition, the Town should continue to monitor beach erosion and promote beach nourishment programs. Town government must also face up to its responsibilities for wildlife management to preserve vegetation, natural contours, and all the scenic qualities of the sand dunes and all its associated geographic elements, which are so unique and valuable to the community. The Town should strive to be a more sustainable community, considering the environmental, social and economic impact of daily decisions, making ongoing efforts to minimize the ecological footprint and working in a cooperative spirit to inform residents in the process.

Recommendation: Enforce current ordinances to protect, conserve and sustain the natural environment in Beverly Shores. Work with the National Park, ERG and other partners to monitor and manage the deer population and remove and prevent the spread of invasive species.

Utilities

Drinking Water

In 2004/2005, the Town installed municipal water, to replace private wells. The immediate reason for installing public water was a response to several residents whose wells went dry. Long-standing concerns about water safety (particularly boron) as well as aesthetic problems (i.e., color, odor) caused by tannin in the well water were also factors. While replacement of private wells with municipal water is optional for residents, most residents have replaced their wells. Transition to municipal water has been estimated to have a minor impact on the Town's water table, though this could be more significant in low areas depending upon water usage and topography. There are currently 510 homes in the Town, 39 homes have not connected to municipal water. Water service is provided by the Michigan City Department of Water. The water originates from Lake Michigan.

Recommendation: Encourage continued transition of all water sources intended for drinking from wells to the municipal water system.

Refuse Disposal

Refuse disposal is provided weekly by a private contractor with curbside recycling every other week. User fees are set annually by the Town to cover the cost of this service.

Internet, Cable TV, and Telephone

Cable TV service as well as “Broadband” Internet service is provided by Comcast and other providers. Telephone service is provided by ATT and other providers.

Electricity and Natural Gas

Electricity and natural gas are provided throughout the Town by Northern Indiana Public Service Company (NIPSCO). Natural gas is generally available but new users may have to pay the cost of extending service to a residence. Service is from a 12”, 55-psi main running parallel to U.S. 12. A 4” line runs down Broadway and local 2” lines run from that. Service was originally not looped back to the line. In 2020 NIPSCO made some changes as a part of the emergency work on the beachfront to loop the service embedded in Lake Front drive.

Power outages are a reoccurring problem in the Town. Although there are a number of factors that contribute, aging equipment and the number of trees near power lines are significant factors. The community has indicated its support for burying utility lines if it can be accomplished for a reasonable cost. Burying utility lines would help reduce the number of power outages. The Town Code provides that all utilities installed in connection with any improvements for which a building permit is required shall be installed underground.

Recommendation: The Town should work with NIPSCO to identify and update weak links in the power grid and bury power lines where feasible to help alleviate the number of power outages.

Education and Schools

Since the mid-nineteen sixties Beverly Shores has been within the Michigan City Area School Corporation (MCASC) schools for grades K-12. In 2020, MCAS received a rating of C from the Indiana Department of Education, and the high school had a B rating (up from a F rating in 2011). The Duneland School Corporation which serves Chesterton received a B rating and the high school had an A rating. Discovery Charter School which had a rating of “meets expectations” under the 2018-19 IDOE accountability system. Under Indiana law, school districts in Indiana may accept applications for transfer from students from neighboring districts, but Duneland has not accepted transfers since 2018.

Students from Beverly Shores attend a variety of private schools in the area while some residents who might otherwise consider Beverly Shores as primary residence choose to instead remain in other communities or in Illinois because of available school options. The recently enacted Indiana Choice Scholarship program allows many residents the choice of free or significantly reduced tuition at private schools, including those with religious affiliation.

There are currently no Beverly Shores residents enrolled in MCASC, the continued improvement of the district schools should be a Town priority. The Dunes Women’s Club has worked with Pines School for several years and several residents volunteer in MCAS schools. Town organizations should seek out opportunities to volunteer, mentor and provide other support to the schools.

There are several state and private institutions of higher learning within an hour or two of Beverly Shores. They include, but are not limited to: DePaul University, Illinois Institute of Technology, Indiana University, Loyola University of Chicago, Northwestern University, Purdue University, University of Chicago, University of Illinois, University of Notre Dame, Valparaiso University, Calumet College of St Joseph and several community colleges.

The Plan Commission contacted parents in Beverly Shores in 2022 to determine where their children were attending schools and found that at least the following schools had students from Beverly Shores:

- Notre Dame in Long Beach
- Queen of All Saints in Michigan City
- Renaissance Academy in LaPorte
- Montessori school in Chesterton
- 1 family grandfathered into Duneland system
- Several students from Beverly Shores attend Discovery Charter School
- Chicago area schools

Recommendation: Increase K-12 public school options for Beverly Shores students. Encourage volunteer activities to continue to improve the Michigan City schools.

Transportation

The area surrounding Beverly Shores is located at the center of the nation's land transportation network. There are excellent port, rail, and highway links nearby. Local air service is available in Gary and South Bend. The South Shore provides rail service to Chicago and as far east as South Bend. NICTD is in the process of constructing a second track to provide faster service to Chicago and South Bend. There is a train station located on Broadway near route 12 for access for Beverly Shores residents.

Roads and Maintenance

Routine maintenance, repaving, snow plowing, tree removal or trimming, and mowing are contracted out. All are somewhat hindered by narrow streets and difficult topography.

Even with the low density of the community, road maintenance costs are high in part due to the high traffic volume created by National Park visitors. Because of the National Park, the arterial roads carry a higher volume of traffic than they otherwise would, increasing their rate of deterioration. Few of the Town's roads have an adequate foundation. The majority are either laid on sand or peat moss. There is the continuing need to maintain present roads. In recent years the Town has supported road paving and maintenance with 25% local funds and a 3 to 1 state match through the state Community Crossing Grant. There are many platted roads within the Town that are not paved and will not be paved because of the natural environment surrounding these roads. Efforts are made to conform to the dune topography. This results in some steep grades with limited visibility and curves.

In general, Beverly Shores' roads are adequate. Many collector and local access roads are classified as one lane but carry traffic in both directions. Due to frost heaving and the characteristics of the soils, road shoulders may be non-existent, in poor condition, or unsuitable for vehicle support. However, given the present and projected low housing density and restricted speed limit, the present and platted

roads provide suitable access/egress for the residents. Additionally, the roads add to the characteristic charm and quaintness of the Town. There is an informal weight limit of five (5) tons on the thoroughfares. Enforcement of the weight limit is difficult.

The roads are divided into arterials, collectors, and local roads. Arterials are those roads that carry local as well as outside traffic including visitors to the National Park. The pavement on arterial roads is approximately twenty-one (21) feet wide; arterial roads include: Broadway, Lake Front Drive, Lake Shore County, East Lake Park, Central, Beverly Drive and US 12. Collectors are those roads, which are local in nature, but also serve the function of providing access from the arterials to the local neighborhoods. As such, these roads carry somewhat greater traffic than the local roads and can be expected to see more two-way (passing) traffic. The paved portion of these roads is approximately fifteen (15) feet wide. Local roads are the remaining roads within the Town. They simply provide local residential access. Many of the local roads are unpaved, but the Town Code requires in the case of new construction that an unpaved or platted unopened road be improved.

In the absence of other compelling considerations, limited Town road rehabilitation resources should be first directed to arterials, then collectors and finally to local roads.

The most notable adverse impact of traffic circulation within the Town is the impact of National Park visitors. This beleaguers the Town's fiscal road maintenance constraints. Roads can only be paved and maintained as funds permit. Conflicts arise when National Park visitors park in resident designated areas. The present National Park visitor parking sites are: Lakeview (25 Spaces), Dunbar (24 spaces), East State Park/Kemil (96 spaces) and Central Avenue (68 spaces). The National Park recognizes these impacts, and its East Unit National Lakeshore Development Plan (1997) proposed to minimize them by phasing its development to avoid direct impact.

The East Unit National Lakeshore Development Plan (1997) also proposes to minimize the intrusion of automobiles by encouraging the use of public transportation and by confining large parking areas to the edges of the park. The Plan also proposes to encourage railroad and municipal transit lines in Gary and Michigan City to strengthen their service and provide better access to the park.

Due to visitor impact, the Town notified the National Park in 1976 that the National Park should assume responsibility for the maintenance of the Town's approximately 40.85 miles of roads. To date the National Park has not provided much help for the Town in maintaining its roads.

Recommendation: The Town should consider changes in traffic patterns and parking during summer months to address increased National Park traffic. The Town should work with the National Park on support for road maintenance.

Summary of Recommendations:

- The Beverly Shores community's most significant characteristic, its low population density, results from the Town's unique physical setting and physical site conditions and requires the maintenance of the 20,000 square foot minimum building parcel size with appropriate soil characteristics to permit adequate drainage and minimize damage to the fragile dunes' topography. The Town should commit the resources necessary to maintain the Town's capacity to enforce the Building and Zoning Codes.
- The Town should develop a plan for providing sewers or other sewage disposal systems for the Town; provide information to Property Owners and encourage them to inspect and maintain current septic systems; and encourage the county to pass legislation requiring the inspection and periodic maintenance of septic systems.
- The Town should maintain the Town's drainage system to prevent flooding and improve water quality.
- The Town should:
 - Implement both short- and long-term lakefront restoration recommendations to protect and improve the Town's entire lakeshore.
 - Appoint a monitor to inspect the Town's lakeshore who should report to the Town Council on a regular basis so that a coordinated effort can be implemented to accomplish these goals, to protect the work already completed and raise the necessary resources.
 - Work with strategic partners such as the NPS, NIRPC, LMCP and neighboring communities to accomplish a solution throughout the area and to secure the funding so desperately needed to provide long-term solutions.
- In the interest of encouraging appropriate and commercially viable businesses in the Commercial District, the Town should:
 - Continue to regularly review the permitted uses and signage in the Commercial District to ensure compatibility with the needs and aesthetic of the Town
 - Work with the state highway department to ensure pedestrian and bike safety on US 12 and to slow traffic through the Town
 - Work with the RDA to identify resources to support improvements to the Commercial District, particularly sewers, pedestrian walkways, bike paths and parking
 - Work with property owners in unincorporated Porter County to voluntarily annex their properties for potential commercial sites in the Town.
- The Town should continue to make 24-hour police and fire protection a high priority.
- The Town should continue to develop and implement a long-term capital improvement plan and a five-year capital budget; continue to partner with local not-for-profit groups to help raise funds for these projects; and develop a plan for a more extensive Community Center.
- The Town should develop a short-term and long-term plan to increase access to Town-owned beaches, including East Lake Shore Park, and continue to maintain Town parks, beaches, and trails.
- Partnerships are critical to the preservation and enjoyment of the surrounding natural areas. The Town should partner with the National Park, SHLT, and other interested groups to encourage preservation of and increased public access to natural areas, and to develop West Beverly as a public trail with limited parking. The Town should also partner with the National Park and other strategic partners for lakefront restoration, lakefront protection and beach access.

- The Town should enforce current ordinances to protect, conserve and sustain the natural environment in Beverly Shores and work with the National Park, ERG and other partners to monitor and manage the deer population and remove and prevent the spread of invasive species.
- The Town should encourage the transition of all water sources intended for drinking from wells to the municipal water system.
- The Town should work with NIPSCO to identify and update weak links in the power grid and bury power lines where feasible to help alleviate the number of power outages.
- Although the Town cannot control the public school designated for Beverly Shores residents, the Town should work to increase K-12 public school options for Beverly Shores students and should encourage volunteer activities to continue to improve the Michigan City schools.
- The Town should consider changes in traffic patterns and parking during summer months to address increased National Park traffic. The Town should work with the National Park on support for road maintenance, parking and traffic management.

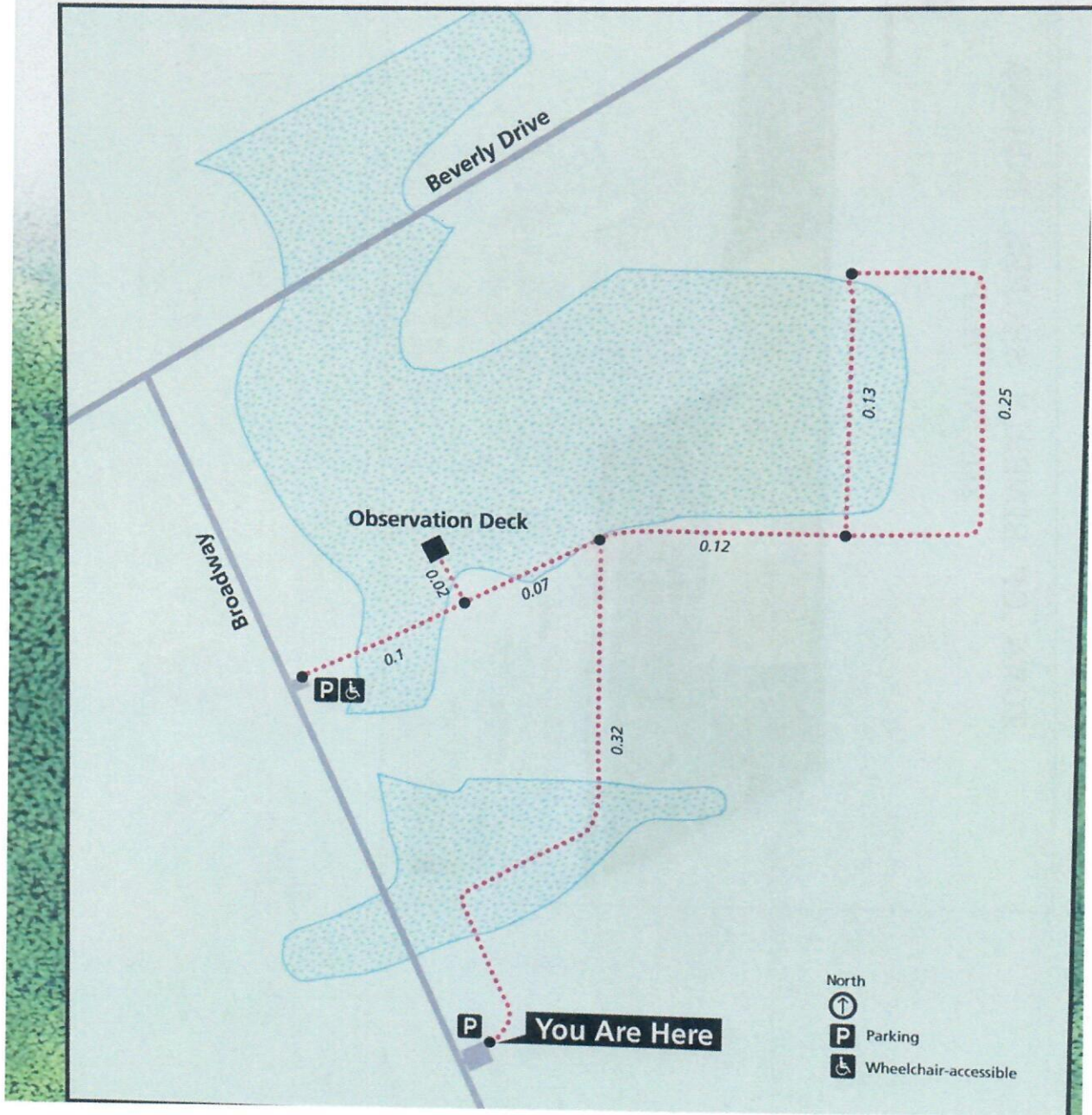
APPENDICES

- A. Beverly Shores Zoning Map
- B. National Park Great Marsh Trail Map
- C. Beverly Shores Town Trails Map
- D. SHLT Trails Map
- E. National Park Map
- F. Beverly Shores Town Owned Beaches Maps
 - 1. Derby Avenue Beach.
 - 2. Broadway Beach, now known as Rebora Plaza and Bracken Beach.
 - 3. Shore Avenue Beach.
 - 4. Beach Avenue.
 - 5. Drexwood Avenue Beach.
 - 6. Drake Avenue Beach.
 - 7. East Lake Shore Park Beach.

Appendix A: Zoning Map



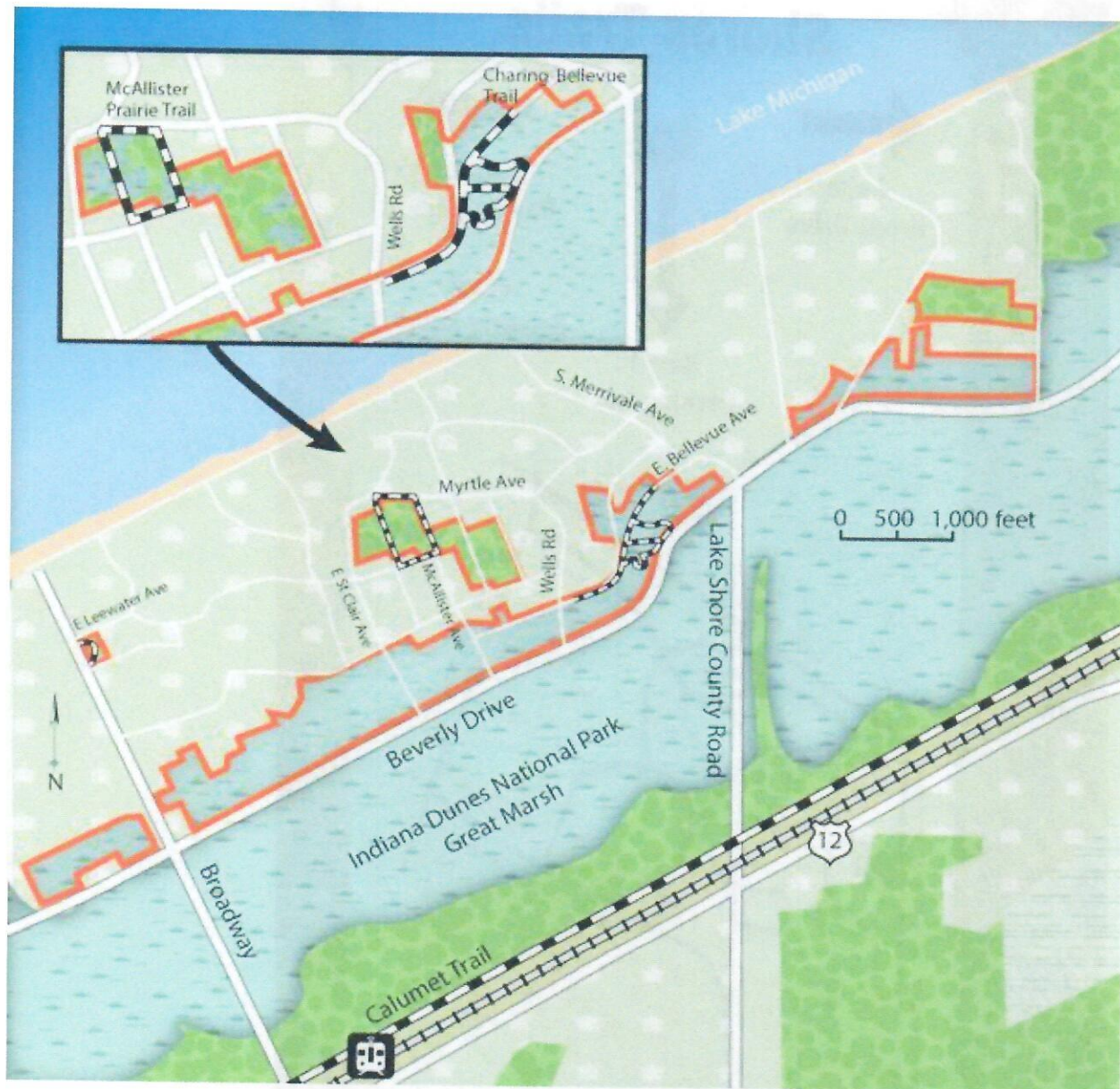
Great Marsh Trail



Appendix C: Beverly Shores Town Trails map



Appendix D: SHLT trails



Appendix E: National Park Map



Appendix F: Beverly Shores Beaches

1. Derby Avenue Beach: 100-foot width, page 41.
2. Broadway Beach, now known as Rehora Plaza and Bracken Beach: 600-foot width, page 41.
3. Shore Avenue Beach: 75-foot width, page 42.
4. Beach Avenue: 75-foot width, page 42.
5. Drexwood Avenue Beach: 150-foot width, page 43.
6. Drake Avenue Beach: 150-foot width, page 43.
7. East Lake Shore Park Beach, located east of Central Avenue, approximately 360-foot width, page 44.



