

CASE STUDY

THE HISTORICAL DEVELOPMENT OF LONG BEACH, INDIANA

submitted by:

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I. INTRODUCTION

B. PURPOSE OF THE STUDY

The purpose of the case study research is to examine decisions made on a local level which have had an impact on the natural environment of a site occupied by the town of Long Beach, Indiana, adjacent to Michigan City. The vegetation, water table, and soil conditions of the town have been affected. These local decisions reflect similar decisions which were simultaneously occurring on the national scale, in many, many areas of the country.

Long Beach, with a population in 1980 of 2700, was selected for this study because it is a community of a size which affords analysis in the given quarter's time, and it is at the same time a community built on a very sensitive environment, the sand dunes of the Lake Michigan shoreline. This study should therefore be able to make logical deductions of the impact the development of the town has had upon the dunes.

The approach which I will pursue in tracing the historical development of the community will be to first explain the formation of the dunes through an outline of the glacial activity of the shoreline area. Also included in this section will be the identification of vegetation which existed prior to settlement in the area of Long Beach, as well as of the sub-surface soil conditions. Next, mention of the Indians who first inhabited the area will be made, followed by discussion of the first Europeans who came to the area, the explorers and fur traders. Owners of the land where Long Beach is established will be traced from the time the land was acquired by the U.S. Government in 1783 through its purchase by individual land speculators in 1836, from which point it then changed hands many

times before finally being sold to the founders of the Long Beach Company in 1914. These individuals in turn sold residential plots of land to the wealthy of Chicago for summer resort home sites.

The final thrust of this case study research will be to study the existing legal codes of the community, as they provide evidence of the most current community decisions (vs. private). Highlighted will be the contents of the present zoning ordinance and the subdivision control ordinance. These two regulating forces will be used in order to point out guidelines included in the law, and to emphasize those guidelines which are not, namely, those which deal with the care of the dunes themselves. In conclusion, problem areas with respect to vegetation, erosion, and the water table of the dunes will be outlined.

II. ORIGINAL CONDITIONS OF THE LAND

A. GLACIAL ACTIVITY (From: The Dunes of Northwestern Indiana, From Forty-first annual report of Department of Geology and Natural Resources, Indiana, 1916)

The dunes region of Northwestern Indiana consists of two parts: first, that occupying the portion of the old bed and shore of the so-called "Lake Kankakee," lying mostly south of the present Kankakee River and marsh; second, that portion of the old "Lake Chicago" bed and shore lying between the present Lake Michigan shore and the Valparaiso Moraine. The total width of the dune area from the present shore of Lake Michigan to the southern-most edge is almost 65 miles.

In order to grasp an understanding of the development of this entire dune region, it is important to provide a brief description of the "Lake Kankakee," and the "Lake Chicago" regions. It is within the area of the old "Lake Chicago" that the town of Long Beach is located.

The "Lake Kankakee" sand dune country in Indiana and Illinois covers more than 3000 square miles. More than 2000 square miles of this area are in Indiana.

When the last great glaciers advanced from the north, they moved to Northwestern Indiana in three great lobes, called the Michigan, Saginaw, and the Huron-Erie lobes. In their forward progression, they carried and pushed ahead great masses of rock, boulders, gravel, sand, and clay. As they pushed forward, holding these masses of materials, they came in contact with other masses, which they ground down with incredible force into finer and finer particles, stopping at the northern edge of "Lake Kankakee." This continued for a long period of time, for the great ice sheets had many advances and recessions due to changes in climate of those remote ages. The great masses of rock, boulders, earth, and clay that were being released from the melting ice deposited and formed the moraines.

The coarser sand was carried further out than the gravel, and the finer sand still further until it covered almost the entire lake bottom. Some of this sand formed beaches and now furnishes evidence of where the shore line of old "Lake Kankakee" used to be.

Sometime during the history of "Lake Kankakee" there was a sudden collapse of the barrier and the lake suddenly fell several feet. Some of the now exposed sandbars dried and were blown into dunes before vegetation covered and protected them from the winds. Some portions that were kept wet soon became covered with vegetation and are recognized as the old flat sandbars practically unchanged to this day.

When the Lake Michigan Ice lobe began to melt back beyond the moraine it had formed, the water between the lobe and the moraine formed a lake. This lake, as it was then, is now called "Lake Chicago." This lake found its outlet at a place called the Chicago outlet, southwest of Chicago.

The first beach formed by Lake Chicago is 59.5 feet above the present U.S. Government benchmark for Lake Michigan, which is 578.5 feet above the sea. The beach of a great lake is usually 3 to 5 feet above the ordinary level of the water in the lake; therefore, the water must have been about 56 feet above its present level. During its early period, a period of great length for its shore is well developed: its waters were quite active cutting away the moraine deposits along the shore, forming bluffs, and at other places depositing sand and gravel, making beaches. The beach at this level is now called Glenwood Beach. This beach and the two others may be seen on the map.

After remaining at or about this level for a long time, "Lake Chicago" suddenly or quite suddenly fell about 24 feet to what is known as the Calumet Beach, named so because it parallels the little Calumet River.

"Lake Chicago" fell again about 15 feet to what is known as the Tolleston Beach. The Tolleston Beach is about 20 feet above the present level of the lake. The ordinary water level of the lake at the time the Tolleston Beach was made must have been from three to five feet lower than the beach, or from 15 to 17 feet higher than it is now. When it found its new outlet, probably through St. Clair flats north of Detroit, the lake was lowered to about its present level.

The wearing down may have been interrupted but not discontinued, until the last fall. The sudden subsidence may, therefore, have been caused by falls being washed out or barriers giving away in the Chicago outlet. At each fall of the lake it left a great quantity of sand exposed, and as it was with the sand of the Kankakee, when left high enough to become dry, it was blown into dunes.

Along the Tolleston Beach the greatest quantity of sand was deposited, and between that beach and the present lake shore, large quantities have ever since been, and are now being deposited.

East of Gary the accumulation has been added to the Tolleston Beach and by the winds piled high into great dunes. The dune belt from Gary to Long Beach is from $\frac{1}{2}$ to $1\frac{1}{2}$ miles wide and the dunes are from 50 to 190 feet high.

The first ridge along the water's edge extends from the Gary Steel Mills in an almost unbroken line to the Michigan State Line and beyond. Back of the first ridge, the ridges vary in directions and enclose innumerable little valleys, which are from 10 to 50 feet above the level of the lake and contain from a few square rods to more than one hundred acres in area.

The current that comes down along the western coast of Lake Michigan washes away the western shore and carries the sand along until the current strikes the southern shore; here it and the other sand washed from the lake are cast upon the shore, dried by the wind and the sun and blown by the winds into dunes.

The formation of dunes is easily understood. As the wind carrying or driving along the sand meets an obstruction, such as a tree or shrub or clump of dune grass, its current is interrupted and in the lee of obstruction, some of the sand is dropped. A little pile or drift of sand accumulating in such a place is the beginning of a dune. The growing dune itself becomes an obstruction against and beyond which more sand lodges. The gradual slopes of the dunes are toward the windward sides and the steep slopes to the leeward sides.

When the dune stops growing, it is soon covered over with a great variety of "dune vegetation," having many plants which are found nowhere else in Indiana. This vegetation will preserve the dune for a while, but eventually a place may become bare by the uprooting of a tree, a snow slide, or the burrowing of some animal, causing a "blow out." This may increase until the whole dune is destroyed. The loose sand may again begin the process of developing a new dune, lodging itself in a felled tree, for example.

At many places along the lake, dunes are now being made, sometimes growing many feet in height and greater in area. This movement is known as the migration of the dunes. The dunes are not fixed, but moving.

Sometimes the windward side of a dune is very near a marsh or pond, this probably being made by a beaver dam or the closing of the outlet by the encroachment of another dune, the windward side formerly being dry.

B. SUBSURFACE/SOIL

The beach along the shore of Lake Michigan, near the dunes is four or five feet above the ordinary level of the water and is from fifty to one hundred yards wide, and like the beach of old "Lake Chicago," is composed of sand and gravel, mostly sand.

At the shoreline the sand is from eight to twelve feet deep and extends out until the water is twenty-five to thirty feet deep. Beyond this depth and at some places not so deep, clay banks may be found, evidently the remains of moraine deposits left by the retreating glaciers.

The soil beneath the dunes is alternating bands of clay and sand from five to thirty feet in depth.

C. VEGETATION

From an article published in the November 23, 1972, issue of the Long Beach Billows (a paper printed from 1922 to 1957), it was learned that the present golf course area was built upon rye fields (grass) and cranberry dunes. The History of LaPorte County, Indiana relates that the region bordering the lake was covered with white pine, which was lumbered early on. Also, sugar maple, jack and burr oak, buffalo grass, wild grape vines, huckleberries, american holly, bittersweet, cactus (with yellow flowers and fruit), horsetail (*equisetum hyemale*), orchids were found. In addition, there were tree species which included cottonwood, basswood, red cedar, white elm, and wild plum, and jack pines.

The wet marsh areas supported a variety of aquatic plants, rushes, lilly pads, wild rice, eel grass, and swamp blueberry, as well as being bordered by sedges, willows, herbs and alders.

III. INDIANS

Indians hunted mastodons on the shores of Lake Michigan soon after the last glacier receded. By the time the Europeans arrived, local tribes of the Algonquin language group of Eastern Woodland Indians were accustomed to travelling by birch bark canoe as far north as Hudson Bay and south along the Mississippi, possibly to its mouth. The Chicago portage was already a well-worn path.

The first Indian tribes who came to this area were seeking to secure the poisonous marsh plants for use in dipping their arrows. Arrowheads have been found in this area, but not pottery or other evidences of village life. These first Indians were members of the Algonquins.

Later, the Illinois Indians occupied much of the region, but these had been forced south by the Miamis and Weas. The Weas were later forced south along the Wabash by the Pottowattomies who came from Iowa. The game and fish, and fruits of plants, so abundant on the lands and in the lakes, supported them.

The Indians traded with the French and English traders who came to the lake's south shore and remained living in the area until 1838.

IV. FUR TRADERS

The European explorers who came to the Lake Michigan region used canoes as did the Indians. Lake Michigan, the last of the Great Lakes to be explored, was searched in 1634 by Jean Nicolet. Nicolet had been sent on a scouting and diplomatic mission by Champlain, the French Governor of Canada.

In 1655, Des Groseilliers visited Green Bay. Later in 1670 he helped to found the Hudson Bay Company. Marquette and Joliet helped to identify the "Great Water" in 1673, and Joliet may have investigated some of the marshes and dunes of the southern lake shore. Just four years later, in 1677, Cavalier and La Salle displayed a charter from France "to build vessels on the Great Lakes and the Mississippi." La Salle explored down the lake's east shore to Chicago and then continued down the Mississippi to the Gulf of Mexico. When he reached the Gulf, he claimed the river's entire drainage system for "his majesty, the most high, . . . Louis the 14th" of France. The French retained the territory until 1763 when it came under English control; however, the area had really been in dispute between the two powers for 100 years.

The voyagers adapted the design of the canoes to carry cargo, trading tobacco, wine, flour, gunpowder, blankets, pots and pans in return for furs. These were the most frequently seen voyagers on the Great Lakes from 1670 to the War of 1812, bartering furs in the wilderness for private firms in Montreal, (Hudson's Bay Company and Northwest Company), and Lake Michigan became a regular part of their route around the turn of the 18th century.

England gained control of the territory in 1763 after the French and Indian War. They had little interest in settling the area; they maintained their sole interest in the fur trade.

The port became an important physical element in the fur trading process. Michigan City, Indiana, got a fair share of the early shipping trade, too, despite the lack of a natural harbor. Boats anchored offshore, and canoes or barges ferried supplies into town, up Trail Creek.

The fur trade was the purpose for which the Europeans came into the area close to Long Beach. The Indians traded the furs from the area for other goods.

After the United States government gained control of the land in 1783 with the Revolutionary War victory, the fur trade declined rapidly while the timber business, farming, and fishing increased. The decline in the population of the beaver was also a factor in the decline of the fur business.

V. TRANSFER OF OWNERSHIP

The U.S. Government now had legal control of the Northwest Territory, despite the residence of the Indians upon the land. Faced with the task of allotting the land, the Confederation Government incorporated a variety of the New England land system in the land ordinance of 1785: surveyors set up townships six miles square and divided them into thirty-six sections of one square mile each (640 acres). It was to be auctioned at a minimum price of \$1 per acre, with a minimum purchase of 640 acres. This minimum amount of acreage was lowered in a series of revisions of the land ordinances, with a minimum purchase after 1832 of 40 acres, at \$1.25 per acre. (The Louisiana purchase in 1803 had given Congress settlement incentives.)

The land ordinance of 1785 also provided that title to a region be cleared by treaty with Indian tribes before the land could be surveyed and sold. This did not follow the actual practice, however; whites occupied the land long before the chiefs were called to treaty councils and the Indians actually had little choice. The U.S. Army could be called in if fraud or persuasion failed, to force the tribes out of their lands. (American Enviro Hist., Page 72).

The land upon which Long Beach is located was obtained from the Indians in such a forced way. Although the land was surveyed by the U.S. Government's public land office in 1829 (see map), the Sauk and Fox Indians of Northern Illinois were violent in their protests against the encroachment of white people upon their lands. With victory in a war which the U.S. had to fight to subdue the Indians, namely the Black Hawk War of 1812, the long struggle with the Indians for possession would come to an end. The Pottowattomie Indians were less resistant and neither

could understand the culture of the other: The whites' individual ownership of the land vs. the Indian's territorial claims. "A few years later, in 1838, the Pottowattomies were herded together and taken out of Indiana, their beloved home. In a march that resembled the march from Baatan of World War II, they were beaten, dragged, and left to die if they could not keep up with the soldiers who guarded them. Some 1500 Indians gathered for a last service in a church near Logansport, and the soldiers set fire to the church. . . .Old Chief Menominee had to be lassoed before he would leave. He cried out in protest to the soldiers, 'I have not sold my land. I will not sell my land. I have not signed a treaty. I will not sign a treaty. You make my young chief drunk with fire water and rob us. President Jackson would not make me leave if he knew the truth.'" (History of the Trail Creek Region by Munger, page 24). Little did he know of the prejudice of Jackson or the Indian Removal Act of 1830 which Jackson had signed.

The Indians were taken to lands across the Mississippi to Oklahoma where their descendents live today.

Immigrants, attracted by the new land laws, began arriving in this lake region in the 1830's. The Lighthouse was built in Michigan City in 1838. By the 1840's, passenger ferries were operating on regular schedules between Chicago and Buffalo, New York. One of the best known of these ferries was the "Great Western," a massive steamer 183 feet long and weighing 781 tons. "Like other steamers of its time, it burned wood instead of coal. When fuel ran low, the crew had merely to drop anchor, row ashore, and cut down enough trees to continue the journey." (Singing Sands Almanac, Vol. 3, No. 2, Mar-Apr. 1980. "The Ships that Sailed the Lake" by Mike Flynn).

Many thought that Michigan City was to be the "Chicago of the Midwest." Therefore, many who came were businessmen and speculators. "They who first peopled Michigan City were pushing, active, intelligent and enterprising men. Some of them became the heaviest businessmen at that time in the state. They were chiefly from the Eastern states, and with them, to suggest a business enterprise was to see it accomplished." (History of LaPorte County, by Packard. 1876.)

Among these "bright young men" of the day (who were emulating their elder speculator models) were many attempting a "new route to material success - speculation in land and town promotion. A sprinkling of new towns accompanied each wave of settlers. . . the process had started. . . in Ohio and Indiana." (Am. Env. Hist. Petula, page 85.)

The above factors motivated the settlement of the Michigan City area, which includes the town of Long Beach, as well as the type of people who came. The U.S. Government, again under Jackson and then Van Buren and Taylor, supported this type of speculative development through the Internal Improvements which they fostered. In Michigan City, Federal money was appropriated toward building a harbor. Twenty thousand dollars was appropriated by Congress in 1836 and 1887; \$60,000 in 1838-9; \$50,000 in 1849-52. Some \$237,500 more was plugged into the harbor project in the period from 1867-1876. Because of the interim periods between work on the harbor, during which rotting occurred, it never was completed. (History of LaPorte County, Packard.)

In the 1850's Great Lake steamers became large and ornate. There were marble fountains in the lounges and leaded stained glass domes over the parlors.

But by 1859, this heyday was over. Railroads were able by then to provide the same luxuries at less cost. Freight travel on the lake continued. Railroads which serviced the region included the Michigan Central Railroad (1850); the Louisville, Chicago, New Albany Railroad (1853); Michigan Lake Shore; and the Indianapolis, Peru, Chicago Railroad (1871). The railroads, which had begun under private ownership yet sponsored through government land grant incentives, continued the influx of immigrants from eastern cities to the area, an influx of people which had begun with the earlier ship transportation.

The land upon which the town of Long Beach is located was first purchased in three segments in 1836. This was six years after the original survey and two years before the Pottowattomies would cruelly be driven out. Receiving a patent deed from the U.S. General Land Office, on April 29, 1836, Benjamin Sterling purchased 80 acres; on July 18, 1836, David Sprague purchased 159.96 acres, and on August 6, 1836, Ithream Taylor purchased 188.49 acres. After this transaction took place, these individuals obtained warranty deeds from the LaPorte County Recorder's Office, paying \$150 on May 5, 1836 for the 80 acres; \$100 on January 8, 1838, for the 159.96 acres; and \$754 on September 22, 1836 for the 188.49 acres.

The land changed hands many times between the period 1836-1920 (date of Long Beach Company Incorporation); the price of the land was inflated many times with the intense land speculation going on at this time in the United States. Consequently, owners lost their land several times when taxes were not paid during the panics occurring roughly every twenty years.

The dune land was not compatible for use in farming, nor did Michigan City remain a strong port city. Had it been sustained as an important port of trade, increased growth of business and industry would have ensued, and the development of this land would probably have turned a profit with a different use other than that of housing. Chicago took the dominant role in trade not only in shipping on the lake but also in the trade and processing of meat raised in the drier regions of the southwest and sent from Chicago to eastern cities by rail. Chicago's development and accumulation of wealth for this new managerial class therefore greatly accelerated. The revenue generated from land speculation and excessive use of available natural resources made possible the industrialization of Chicago.

B. LONG BEACH COMPANY

Orrin S. Glidden, a baker from Michigan City, began buying up Long Beach land in 1909 and 1910, purchasing 20 acres first and then 188.9 acres for \$1,000, or \$5.30 per acre. He continued to buy other portions of the land in 1914 and in that same year designated the streets and avenues to the public for use in the "Long Beach addition to Michigan City." See this plan for the cottage plots with vehicular routes on the following pages. The town was a planned community, providing for future development of housing, open space, recreational facilities including an 18 hole golf course and horse trails, and public school facilities. The plan for Long Beach was probably developed by a landscape architect and modeled somewhat after the Olmsted design for Riverside, a subdivision in Chicago which was drawn in 1869. Likewise, other sections of the dunes shoreline were patterned after Long Beach once it was built. Duneland Beach, another residential community immediately adjacent to Long Beach on the north, was developed by Hoyt Miller in 1923. One difference between the design of Long Beach and Duneland Beach is that lots were not sold on the beach side of Lake Shore Drive, keeping the beach for use by all residents. Another community, Beverly Shores, began with the Bartlett Realty Company from Chicago in 1927. Gotto and Matthias, soon to become partners in developing Long Beach, also developed Michiana Shores, another residential community.

The physical design of these communities took its models from Riverside, as mentioned, and in general from the movement toward the naturalization of the cities, in the "City Beautiful" movement. The naturalists of the 19th century had an impact upon the cities, providing "natural" or

"country" scenery in congested urban areas. "The virtue and beauty of nature was thought of as an antidote to the social and physical ugliness of the industrial city." (Nature In Cities, by Ian Laurie, p. 58) New towns employed the romantic suburb concept with curvilinear roads, private gardens, and a central park. In addition, the early twentieth century sparked much interest in physical recreation and sport; thus the open space of the new towns tended to be related to specific sport and recreation uses. Horace Cleveland, a Landscape Architect, worked in Chicago from 1869 advocating park systems with connecting parkways and boulevards and basing design of towns on natural features of the area. Jens Jensen also worked in Chicago from 1900 on in a landscape architecture career. Jensen advocated contact with nature for people as being essential to well-being. Streams and ecological planting integrated with recreation facilities defined "nature" for him. From these designers and from this movement spread such suburban quasi-natural housing areas. The selection of sites for these areas was based on "existing natural attributes and features such as lakes, marshes, or rock outcrops" (Nature In Cities, p. 58) and Long Beach provided these attributes with the dunes. Since the population of Long Beach would be mainly upperclass, mobility from Chicago to Long Beach would not be a problem.

Several naturalists led an effort to have the dunes area incorporated as a national park. Jens Jensen endorsed this action, sending at least one letter to Congress. In it he suggested that the dunes should be preserved for the natural beauty and the inspiration they could offer to people. Excerpts from this letter follow:

The fine arts are of the man-made variety; but the inspiration or source from which they spring is found in the great outdoors. . .without this source creative art would be impossible.

The dunes of northern Indiana is one of the great expressions of wild beauty in our country. . .(to) those of us who feel the necessity of paying homage to this interesting region they not only charm with their hidden mysteries, but give us - who are imprisoned as it were in the brick and stone of a great city - a greater and clearer vision of the great out of doors.

In the dune meadows, in the bogs or tamarack swamps, or along hidden trails one feels the exquisite beauty of the hidden shrines of nature's great work.

Man becomes small and insignificant, indeed, in such environment. . . .He thinks, no doubt, about the necessity of this balance of mind, the need of knowing something about mother earth, her great beauty, mysterious life, and never-ending change. No one has more need of an intimate acquaintance with out-of-door life and the always changing charms of nature than those who grind away their lives in our mills, our factories, our shops, and our stores. The man in the factory turning out the same kind of work day after day during his entire lifetime needs something as a balance, something that will make his work more endurable, more cheerful, something that will broaden his vision and save him or his descendents from the destruction sure to follow the endless grind of his daily life.

Not yet aware of the process of dune development, Jensen advocates preservation for the beauty of the area itself. The act for the creation of the Dunes National Park was not passed by Congress however.

Suit was filed by a representative of the Pottowattomi Indians in the District Court of Chicago in 1914, seeking a "lis pendens" status for "the shore and submerged lands of the south part of Lake Michigan, which would include Long Beach. This "lis pendens" status of hanging litigation would have stopped development of much of this area. The case was dismissed.

Sale of lots in Long Beach began in 1917 when Theron F. Miller purchased four lots for an undisclosed sum. Glidden continued to purchase

other pieces of Long Beach land once the town plan was made, until in 1918 he formed a partnership with Orphie W. Gotto who then commenced to purchase other areas of land. Glidden and Gotto jointly sold six lots to the McCoy family on August 9, 1919, and after selling five more lots, from August 1919 to December 1920, they Incorporated the Long Beach Company. The Corporation was formed under the Voluntary Association Act of Indiana for the purpose of buying and selling real estate, with the principle place of business in Michigan City, Indiana.

Following the "Articles of Incorporation" the entire area of land, except the lots previously sold, were given from Gotto and Glidden in a warranty deed to the Long Beach Company.

These Articles of Incorporation were amended in 1922, decreasing the Board of Directors from four, Orphie and Belva Gotto and Orrin and Olive Glidden, to three. These three would elect from among themselves a president, vice president, and a secretary-treasurer. Orphie Gotto became president; Belva Gotto, vice president; and Clarence L. Matthias, the secretary-treasurer.

The Town of Long Beach was incorporated on July 5, 1921, by the Board of Commissioners of LaPorte County.

The conveyance of a deed for land sold in Long Beach was subject to "certain conditions and restrictions." These included: the price of the house, set at a minimum of \$2,500, a sizable amount in the 1920's; the installation of a septic tank; the setback and sidelot distances; the banning of use for any manufacturing or mercantile reason; the requirement that all residents be "caucasian gentiles," the deed being subject to nullification and voidance should a non-caucasian, non-gentile at any time occupy the premises. "Provided that the word 'gentile' herein used shall be construed in its present, modern, commonly understood meaning." (Abstract, p.164)

It was through this legislation that the prejudice and manifest destiny concepts existing in the culture were translated into physical design. In the United States individuals can discriminate unless a statute exists which forbids certain action. Discrimination continued in this manner in Long Beach and across the United State until the 1958 Supreme Court case

Shelley Vs. Kramer. This decision derived from a civil rights theory, eventually made into a statute outlawing all discriminatory restrictions in plats. If this statute did not exist, the discrimination could continue. Despite the illegality of the discrimination since 1958, the strong prejudiced attitudes in the area have remained and no progress toward integration has been made.

The people who Gotto and Glidden sought as customers of the lots, were this new wealthy class of Chicago. Long Beach would provide for them summer resort homes and the opportunity for lawn and beachfront parties, a large outdoor pool, called the Roman Plunge, an 18-hole golf course, and horse trails winding through the dunes.

Long Beach realtors reached their market through a huge promotional scheme. Tour groups were sponsored for Chicago's elite; upon the culmination of the tours, but before being returned to Chicago, high pressure sales coercion was utilized to induce lot purchases. Samples of the advertisements are included at the end of this section. The bias of the advertising towards the "improvement" of nature with the towns development and the elitist attitudes are evidenced.

As stated in a 1921 Long Beach Billows newspaper, "an organization of salesmen has been perfected by Mr. Gotto and the Eberharts (who would buy up Gotto's interest in the Long Beach Company that same year), which will reach not only into Chicago, where a loop office is maintained, but will take in the important cities of the middle west and south."

Because of the elitist promotion of the Long Beach Community, tensions began early between the people of Michigan City and Long Beach. Some of those tensions linger today, mainly among people of middle age or older now living in Michigan City.

An example of this promotion was documented in the Billows Paper in 1922. "About 25 carloads of Elks who were attending the Indiana Convention of the B.P.O.E. which was held in Michigan City. . .were piloted through Long Beach. . .they visited the Roman Plunge, clubhouse, golf course, and enjoyed the beauty of seven mile drive over the concrete pavements through the great dunes country." (Long Beach Billows, 8/12/22)

Thousands of shrubs, plants, and trees were set out in 1924, along with flower beds. People strove to achieve recognition for Long Beach as the "city of a million roses."

"Horseback riding in Vogue at Long Beach" headlined another promotional article discussing the exploration of dune trails:

No sport that the red-blooded man or woman loves is forgotten at Long Beach. Now comes the saddle horses galloping over the dunes - trotting along the old Indian trail that skirts the one-time cranberry bog transformed into a velvety green golf course. It is the great king of sports - the sport of the Arab and the Englishman.

And Long Beach offers miles upon miles of sandy trails through its interminable hills - trails that were blazed centuries ago by the Pottowattomies and the Kickapoos and have been kept open by the pioneer as he travelled through the dunes to the lake, founding new homes, new cities.

The old Kickapoo trail to the southwest of Long Beach is being cleared and freshly blazed for the riders. It will join the present trail from the stables along the southern line of the golf course. (Billows, 7/17/24)

Cottages advertised for rent boasted of being well-built, attractive, and practical and located on concrete roads and therefore easily accessible. The advertisements were successful because of their listing the modern conveniences of electricity, gas, and a pure water supply.

The elementary school was constructed in 1927, the same year the South Shore Railroad added "speed and convenience" on the line from South Bend through Michigan City to Chicago, with low summer rates.

With the depression, the Long Beach Company almost went bankrupt, but bounced back in the thirties. Beverly Shores, begun in 1927 just south of Michigan City and mentioned earlier, did not revive as fully as did Long Beach.

Beach resort features were advertised by radio to Chicago in 1932, giving day by day reports on beach activity and weather. At this time the water level in Lake Michigan was lower by 30 inches and the lights of Chicago could be plainly observed. (The Beacher, 11/23/72)

The Works Progress Administration sponsored several projects in Long Beach during the depression. One was a new road, begun under the FERA and finished by the WPA; another was "the laying of a concrete pipe in the drainage ditch which runs north and south through the summer resort." (Billows, 9/14/35) This project also filled the ditch which was 30 feet deep in some spots. The ditch was closed to the town center and about 300 feet of pipe laid between there and the lake front. Once this work was completed, construction of St. Lawrence Avenue at Stop 24 on top of the fill began, using 97 men, thirteen trucks, two skilled mechanics, and a time keeper. Also, being very progressive, the project planned to use a steam shovel. (Billows, 9/21/35) The creek, which was filled in and had been nicknamed Three Mile Creek, presented problems to the housing community when in at least "one winter the water backed up in the creek and by spring had washed out the pavement." (Billows, 11/23/72)

More plantings were conducted in 1934, with maples 15 - 20 feet tall, to "someday make an impressive entrance to the beach community along the winding lane from the highway." (Billows, 6/2/34)

By 1936, 425 dwellings were built, almost half of the 1980 total of 900. Unimproved lots totalled 1209. A recommendation was made this same year to improve the bridle paths by widening the "narrow, grass-grown trails." (Billows, 8/30/35) Some of the animals and a rare bird which inhabited the area included the Red Squirrel, Fox Squirrel and the Martin. It was shamefully reported in July of 1935 that children were shooting these with B-B guns.

Examples of the advertising tone during the roaring twenties follow.

C. RESIDENTIAL OWNERS

From post World War II to the present day, the Long Beach community has been not just a summer community but a home of year-round residents. The population of 2700 consists mainly of steel executives (employed at the three shoreline facilities: Bethlehem Steel, U.S. Steel, and Midwest Steel) and other professionals. The Bethlehem Steel Corporation announced plans to build its Burns Harbor plant in 1962, with employees and their families establishing homes in Long Beach. The dunes have been subject to the individual treatment of residential owners. Therefore, the "interminable dunes. . . a tangle that man could scarcely penetrate. . . nor cared enough about going beyond the first range of hills along the lake to try. . . were transformed through the years to include lawns, sand play areas, heated driveways, and a prevalence of retaining walls surrounding the new homes and driveways. Photos from this area illustrate the character. The lawns of individual residences bear resemblance to those of the mid-1800's in eastern United States, a style derived from English romantic landscapes.

VI. PRESENT LEGAL PROVISIONS

The existing legal codes in effect for the town of Long Beach are explicit in the Zoning Ordinance and Subdivision Control Ordinance. These two documents are evidence of current community decisions affecting the dune and town environment.

A. ZONING

The Long Beach Zoning Ordinance was put into effect in 1969. Its stated purpose is to set "minimum requirements in order to conserve the value of property in the Town of Long Beach and to the end that adequate light, air, convenience of access, and safety from fire and other damage may be secured, and that congestion in the public streets may be lessened or avoided, and to preserve the natural assets of the Flora, and the public health, safety, comfort, morals, convenience, and general welfare of the residents. . . ." The means through which the Zoning Ordinance strives to accomplish these goals are through the regulation on building structure, height, area, bulk and use; on the area of front, rear, and side yards; and on the type and intensity of land use and lot areas.

The above regulation, as condensed from the Zoning Ordinance, does not deal with the subject of the dunes. If the intention of the ordinance is to "preserve the natural assets of the Flora," legislation should have been included which would have dealt with the issues of treatment of the dune topography, of erosion of sand, and of vegetation. At present there is no such legislation. The Zoning Ordinance could be a tool which would implement positive action towards restoration and revitalization of the dunes as an integrated living organism. The area does have more character than many areas in Indiana because the dunes were preserved in the original plan, but their continued stabilization

and survival are dependent upon the care and treatment they receive today. Stronger regulation, for the purpose of preserving the integrity of the dunes and therefore of the community, is necessary. In order to accomplish this, studies would need to be conducted which would identify more specifically the eroded areas and the causes of erosion; the succession of vegetation upon the dunes; and the effect drainage has had upon lowering of the water table, which would also have an effect upon vegetation. From this maintenance procedures could be adopted.

In addition, the Zoning Ordinance also intends to insure that development of future subdivisions coordinate with the Master Plan. Since the Town was developed as a planned community, the older sections were designed with a sense of uniformity, maintaining a certain street character. Subdivisions which have been built to the southeast of these original residential areas, further back from the lake, could have been designed in a way which would have continued the character of the community, in road layout, in lot dimensioning, and in the vegetation pattern. The lack of physical similarity between the new and old areas also gives the impression of functional dissimilarity rather than of town integrity, as well as imparting a sense of disorientation.

B. SUBDIVISION CONTROL ORDINANCE

The Subdivision Control Ordinance, prepared by Schellie Associates, Inc., a subdivision of Clyde E. Williams and Associates, Inc., Indianapolis, passed by the town Board of Trustees in March 1970. This ordinance deals with principles and standards of design for streets, blocks, lots and building lines. It sets standards of material (concrete) and roadway widths (50 feet for local streets or cul-de-sacs). In these established criteria, no consideration has been given for balancing the character of the older areas with the new. Standards have been set which are uniform to standards set throughout the United States, and which do not allow for consideration of special local conditions such as pedestrian access to the lake, a wooded treatment of the land areas similar to the older areas, and care of the dune or soil resources. Just as the Zoning Ordinance is unresponsive to the land maintenance, so is the Subdivision Control Ordinance.

VII. PROBLEM AREAS

The problem areas of the dunes were briefly mentioned in the section which dealt with the Zoning Ordinance. Three will be identified: lowering of the water table; disruption of successional vegetation; and erosion of the dunes.

The marsh area behind the back dunes was drained in order to make the golf course. This drainage, plus the channelization of surface water in some areas of Long Beach, has reduced the amount of water percolating through the ground down to the water table, thus reducing its peak level. This has effected the nourishment of plants and has altered the species in the low areas between the dunes from mesic (wet) to more xeric (dry) species.

The vegetative successional stages have been interrupted also. The existing mature stand of White Oaks on the Back Dunes is not being replaced with understory species. With the introduction of lawn areas over a large portion of the dunes, reproduction, and therefore succession, has diminished.

Many areas of the dunes are suffering from erosion problems. When a tree or other vegetative cover dies on a dune, the sand becomes severely eroded. Due to the loss of cover, many areas in Long Beach are suffering from problems of erosion. The photos which follow illustrate some of these situations. In at least one instance, the dune was intentionally levelled in order to make a traditional child's play area with swingset and slide. This should not have occurred; not only is there the chance of a "blowout," but the visual and spacial integrity of the dune is destroyed. It should be remembered that it is the dunes which furnish the character of the town, thus maintaining the property values.

The lakefront is especially susceptible to sand erosion due to the forces of wind and water. Despite this fact, homes were built upon the primary dunes resulting in critical problems later occurring after severe storms. The lake water level itself has raised, further diminishing the width of beach.

The problems of erosion, vegetation, and water table are inter-related and further study should be made to understand their processes and to legislate (or educate the populace) for provision of their care.

VIII. EPILOGUE

This section will deal with tying together the case study of Spring Quarter's work to the work of Autumn and Winter Quarter.

To understand the relation of the Long Beach case study to the previous two quarters' work, the model which was developed must be explained. The model, shown on the next page, is a diagram explaining the process by which Ideological concepts are incorporated into the political and economic system, thereby establishing a unique cultural perception with resultant environmental impacts.

In Spring Quarter Long Beach was studied to provide specific examples which support this process. Examples of environmental impacts resulting from the political and economic structure in different periods of history have been given. Long Beach was influenced by the fur traders, the land speculators, the realtors, and the residential home owners. These individuals functioned within a given set of political and economic rules and as groups of people had impacts upon the land and the ecology of the dune environment.

A brief conclusion will now be drawn concerning both the model and Long Beach: The model has diagrammed a variety of ideological concepts with a rough approximation of the time they surfaced. It has omitted, however, one important concept--- ecology . It is ecological concepts which have been struggling to become incorporated into the political and economic structure of the society in the United States since the late nineteenth hundreds. These ecological concepts are based upon the multitude of scientific studies on soil, air, vegetation, and water which were and are still being conducted. This study has developed a pattern of political policy which is supported by the growing body

of natural science information. The legislation has been especially intense during two periods: the late 1900's and the 1970's.

What does this mean for Long Beach? Due to the extreme sensitivity of the dunes, there is a strong need for more ecological application of local legislation in land use policy. This ecological application would be based upon a more scientific understanding of the sand dune environment and would provide a plan for future care of the dunes. This step is vital if the dunes are to remain stable.