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**[Sawyer Harbor PUD, Door County, 10/72
(conveying the final element of a preliminary
feasibility study for 650 acre planned unit
development on Sawyer Harbor, known as
Idlewild)].**

Landmark Research, Inc.

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Landmark
Research
Inc.

October 27, 1972

Mr. John Mendonca
129 W. 24th Ave.
Oshkosh, Wisconsin 54901

Thomas L. Turk
James A. Graaskamp

Dear John,

We are pleased to convey the final element of a preliminary feasibility study for the 650 acre planned unit development you are proposing for Sawyer Harbor in Door County, on the shore of the area referred to as Idlewild.

The feasibility study forwarded to you on May 5, 1972 did not contain a detailed analysis of the marina and this report provides an initial demand and marketing proposal for the marina. In our May 5th letter of conveyance we stated "Marinas may be good business but cannot afford to pay much for a site so marina lands are valued at a net loss for purposes of this study". An initial assumption was that a marina operator could pay \$1500 per slip for a bulkheaded site and with a possible 125 slips, that assumption suggested a market value of \$188,000. However, the sewer, water, and bulkheading costs allocated to the 25 acre site were considerably more and therefore the marina site represented negative income to the developer. However, that price now seems very optimistic as an Idlewild marina operator would not probably enjoy the volume of boat and motor sales or major repair work necessary to justify \$1500 per slip.

As a result of the attached study we would recommend that only 12 acres of land be allocated to the marina with the balance of the site used to support the resort inn commercial area or an installation such as the proposed maritime museum. Furthermore, this study concludes that the income potential of the marina will not be enough to provide both an incentive for an experienced operator and a proper return on capital invested in improvements such as dock, structures, and site development. The recommendations choose to subsidize the operator at the expense of a return on fixed capital improvements for the first 5 year period.

A full marina is not feasible for a period beginning 1975 on its own profit potential. Nevertheless, a marina is very much needed to provide marketing punch for both the resort inn to be opened in 1975 and the second home residential values of the project.

Therefore, it is recommended that the marina development as defined in this report be included as one of the condominium components of the resort-hotel development package which would provide \$250,000 of the capital improvement budget as equity money. An additional \$100,000 loan on marina improvements could be carried by slip rental income,

which would also pay real estate taxes and maintenance. The improved marina would then be leased to an operator who would provide his own equipment and inventory at a rent equal to actual slip rentals of the marina as set by the resort-hotel management. Investors in a resort motel pool investment share would be able to take advantage of the tax shelter generated by the marina while slip rentals should come close to covering required debt service and fixed charges.

After 1980 residential development in the area and emergence of public identification of Idlewild as a prestige resort should permit slip rentals to advance to a more profitable level and conversion of the marina to a semi-private yacht club operating at a modest margin above break even for expenses established by its pro-rata share of resort expenses under the condominium agreement.

At this writing the exact siting and shape of the bulkhead line had not been determined by others so that capital budgets and operating characteristics could only be sketched on the barest assumptions. Demand analysis and merchandising analysis are appropriate for conditions and consumer behavior in 1972 but the degree to which the economy and cultural patterns will sustain consumer interest in large boats by 1975 and beyond is most speculative. There is increasing concern for more equitable income distribution, environmental impact, and national priorities on the use of capital. Cash-flows are therefore on an order-of-magnitude basis and risk analysis in terms of variance is inappropriate.

The four elements of feasibility above are only a portion of the total problem of feasibility. Physical-technical constraints of the site and general physical planning have been the responsibility of others and so cost estimates by the authors cannot be regarded as more than reasonable approximations. Therefore this report has no responsibility for issues of engineering feasibility as it relied upon the owner and his engineering facts were not available or supplied. Moreover the economic projections and forecasts provided by the study are subject to the limiting conditions of an economic forecasting in times of economic and price instability and the preliminary character of the owners plans. Legal-political limitations were not the responsibility of this report as the owner retained control of preliminary discussions with regulatory authorities and the researchers were not privy to his negotiations relative to harbor dredging or other related matters.

Our associate in this report, Peter Hitch, and myself remain available to discuss the contents of the attached report as you may require.

Sincerely yours,


James A. Graaskamp, Ph.D., SRA, CRE
Urban Land Economist

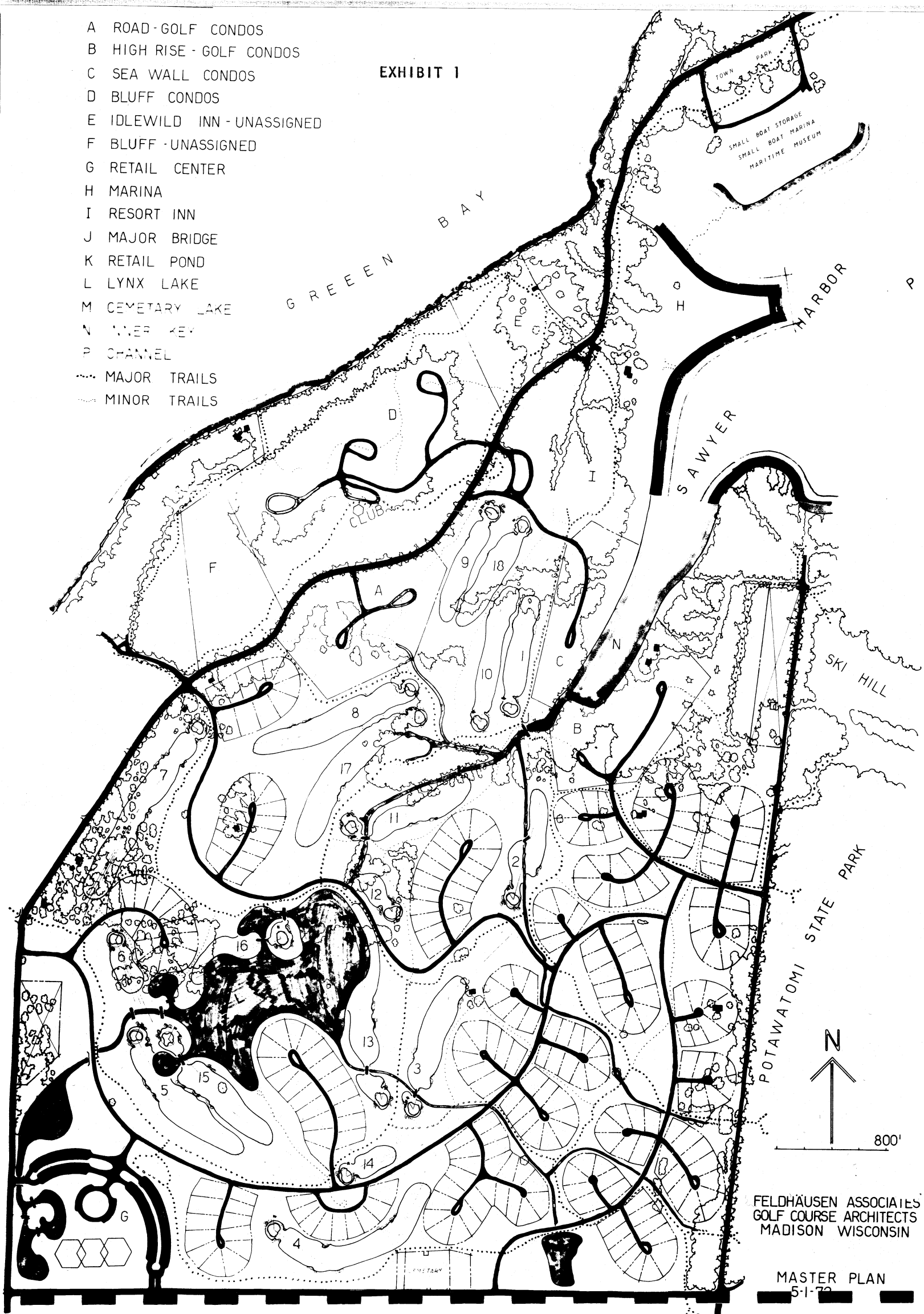
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TABLE OF CONTENTS

SECTION I	<u>Page No.</u>
MARINA SITE AND SITUS FACTORS	
A. Marina Project Location	1
B. Marina Project Site Attributes	1
C. Linkages of Sawyer Harbor Site	2
SECTION II	
A DEMAND MODEL FOR BASIC MARINA SERVICES	
A. Components of Demand Model	4
B. Existing Demand and Supply	4
C. Potential Increases in Demand Benefiting Idlewild	4
D. Potential Demand for Idlewild Captured from Existing Marinas	6
E. Potential Transient Large Boat Demand	7
F. Small Boat Demand (under 25 feet)	7
G. Summary of Demand for Boat Slips	8
SECTION III	
CONVERSION OF GENERAL DEMAND FOR BOAT SLIPS TO MARINA MERCHANDISING REVENUE	
A. Marina Development Strategy	9
B. Basic Marina Improvements to be Leased	9
C. Pricing Slip Rentals	11
D. Rental Revenues from Slip Rentals	11
E. Potential Revenues for a Marina-Operator Lessee	12
SECTION IV	
CONCLUSIONS AS TO MARINA FEASIBILITY	13
APPENDIX A	
HOW WISCONSIN'S YACHT FLEET COMPARES WITH OUR NEIGHBOR STATES from <u>A Program for our Recreational Waters</u> , by The Department of Natural Resources.	

EXHIBIT 1

- A ROAD - GOLF CONDOS
- B HIGH RISE - GOLF CONDOS
- C SEA WALL CONDOS
- D BLUFF CONDOS
- E IDLEWILD INN - UNASSIGNED
- F BLUFF - UNASSIGNED
- G RETAIL CENTER
- H MARINA
- I RESORT INN
- J MAJOR BRIDGE
- K RETAIL POND
- L LYNX LAKE
- M CEMETARY LAKE
- N RIVER KEY
- P CHANNEL
- MAJOR TRAILS
- MINOR TRAILS



FELDHÄUSEN ASSOCIATES
GOLF COURSE ARCHITECTS
MADISON WISCONSIN

MASTER PLAN
5-1-72

SECTION I

MARINA SITE AND SITUS FACTORS

A. Marina Project Location

The marina facility described in this report is one proposed for the Idlewild planned unit development area which surrounds Sawyer Harbor at the Green Bay entrance to the Sturgeon Bay canal, bisecting Door County in northeastern Wisconsin. The Idlewild project master plan and feasibility of its resort inn, golf course, single family lots, and condominium components has been analyzed in an extensive report transmitted to John Mendonca on May 5, 1972 by Landmark Research, Inc.

B. Marina Project Site Attributes

The proposed site for marina development is some shoreline and a peninsula of man-made land on rock and sand from harbor bottom contained within bulkheads as suggested in master plan in Exhibit 1 on which it is identified as Area "H". Bulkhead lines are tentative but would provide a site of up to 25 acres adjoining the resort inn grounds to the north, a shallow bay to the south to be conserved as a fish spawning area, and the road on the west.

Sawyer Harbor has almost flawless protection from the winds. Sherwood Point screens out western and all northern wind from Green Bay, the prevailing track, while the high bluffs on Potawatomi State Park and several small islands shelter its southern and eastern shore so that wind exposure is limited to a very few degrees from the east as illustrated by Exhibit 2. The fetch distance at this point would produce a maximum wave height of 2 1/2 feet.¹ Protection from the wind and the existence of Sherwood Point also eliminates the threat of damaging ice flows for pilings, bulkheads and similar structures. The location of Sawyer Harbor on the Green Bay side of Door County moderates the climate and the water temperature which are significantly cooler on the Lake Michigan shore. Indeed, Door County's famous apple and cherry orchards dominate the side of Sturgeon Bay facing the marine harbor.

The detail of harbor borings and bottom conditions are provided in Exhibit 3. Capital budgets for the resort inn include installation of the bulkhead and some dredging to provide a depth at the bulkhead of 5 feet at low water and 9 feet at high water of the Lake Michigan water line cycle (See Exhibit 4). Sawyer Harbor would present some limitations to stationary keel sailboats exceeding 4 feet in draw. These boats typically moor in the harbor rather than at the dock as their keels weathervane and ride the swells more easily than motor yachts. Nevertheless marina demand will relate primarily to motor yachts.

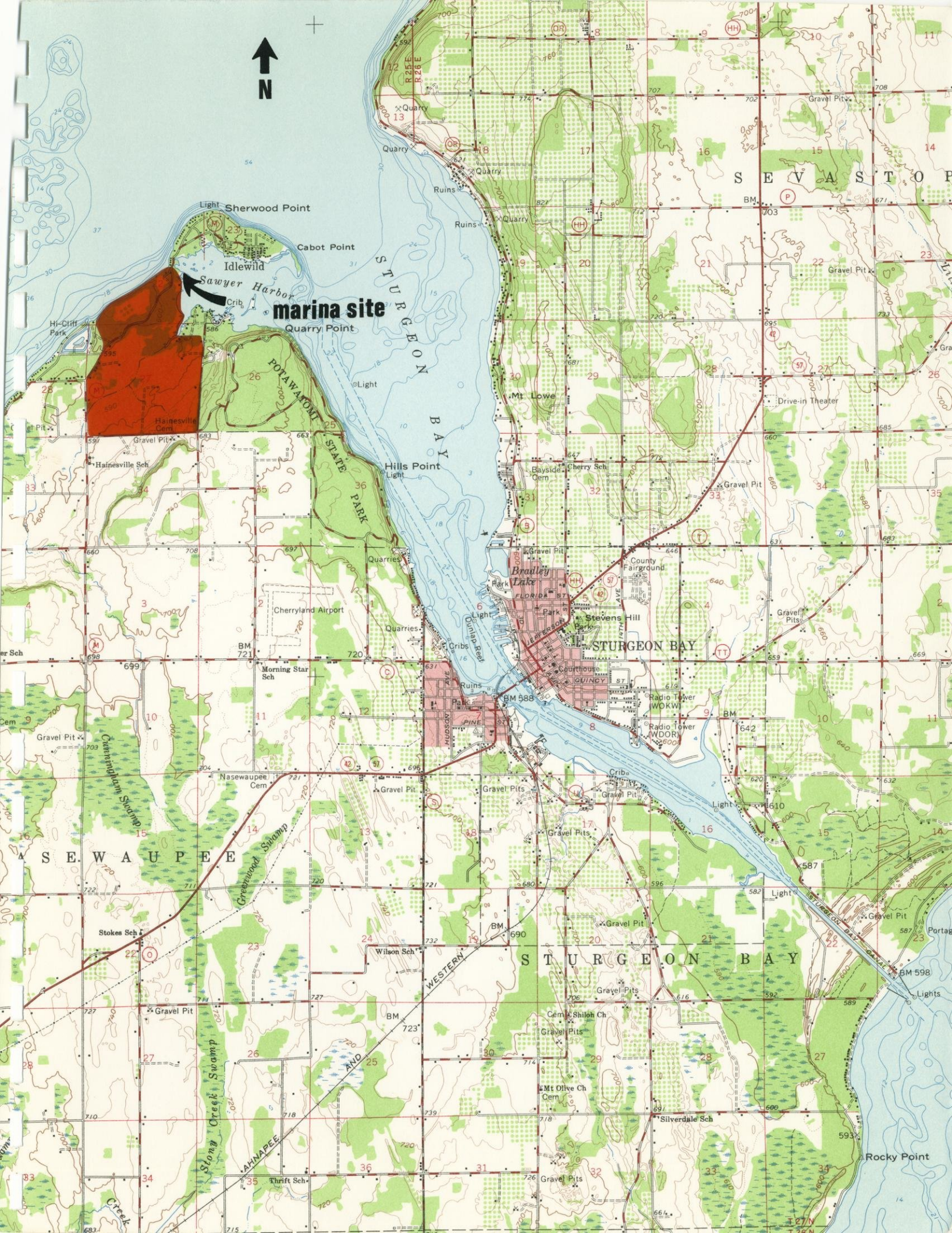
¹See page 18, Marinas--Recommendations for Design, Construction and Maintenance, Charles A. Chaney, 1961.

$$H = 1.5\sqrt{F}$$

F = Fetch distance in nautical miles

H = Wave height

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C. Linkages of Sawyer Harbor Site

The Sawyer Harbor site has strong linkages to centers of Wisconsin yachting activity as well as to recreational opportunities on land. The Sturgeon Bay canal is a heavily traveled pleasure boating course connecting Lake Michigan to Green Bay, thereby avoiding a circuitous 150 mile boating trip of Door County known as Death's Door since sailing days of old. Green Bay connects to the city of that name and the Fox River access to Lake Winnebago which is a prime market for cruising type boats. The canal to Lake Michigan is a corridor to the Milwaukee and Chicago area yacht club flotillas. At the center of the Sturgeon Bay canal is the city of that name which is a major shipbuilding and repair center. It is the home of Palmer Johnson Inc., a world recognized builder of sailing yachts. The number and size of yachts in the area is detailed further in the section on demand.

On the land side Sawyer Harbor has incomparable linkages. It would be contiguous to a major resort inn with restaurant and other retail facilities as well as a 18 hole golf course. One side of the harbor represents Potawatomi State Park, a major facility with all manner of trails, picnic grounds and play fields. The harbor itself is of great natural beauty which is important as much of the boaters' time is spent at anchor. It is only a short driving distance to all of the resources of Door County. For the city yachtsman who must commute to his boat for weekends there is Cherryland Airport, a county owned and operated facility with a 3600 foot runway within three miles of marina. It can accommodate most private aircraft including jets and maintains 24 hour runway lights and beacon.

While the site has direct access to recreational opportunity, the more important question is its linkage to potential consumers of appropriate means. These markets will be found largely among the residents of the Fox River Valley, eastern shores of Wisconsin, Milwaukee-Madison metropolitan areas, and the northern tier of Illinois counties, particularly the Lake and Cook County areas of Chicago.

The subject tract is five miles from State Highway 57-42 via County Trunk M, and Highway 57 is a two lane, often crowded linkage to the base of the peninsula and Highway 141. The vacationer from the south can reach Highway 57 by following the meandering highways along the Lake Michigan shoreline 42-141, or a slightly more efficient, heavily travelled four lane Highway 41 which connects each of the communities in the Fox River Valley, to Milwaukee and Chicago to the south. Thus the site is 40 miles (1 hour) by car from Green Bay, 140 miles (3 hours) from Milwaukee, 175 miles (3 1/2 hours) from Madison and 230 miles (4 1/2 hours) from Chicago. Several Wisconsin studies have indicated vacationers, particularly second home owners, prefer a four hour drive at most and preferably something closer to two and three hours. However, a study of Door County tax rolls indicates that as many as 80 percent of seasonal home lot owners reside in the Chicago area so that the Door

Exhibit 3

DATA SHEET

SAWYER HARBOR

STURGEON BAY, WISCONSIN

<u>Boring #</u>	<u>Surface Elevation</u>	<u>Elevation of Lake Bottom</u>	<u>Elevation of Upper Weathered Rock Surface</u>	<u>Elevation of Hard Rock Surface</u>	<u>Depth Low Water</u>	<u>Depth High Water</u>	<u>Amount of Dredging Necessary</u>
#1	97.26	85.3	81.3	(3)	7'	12'	None
#2	97.26	90.3	85.1	84.8	6'	11'	4'
#3	97.26	88.0	82.3	(3)	6'	11'	2'
#4	97.46	90.6	(2)	87.3	6'	11'	5' (2' of bedrock)
(See boring #21 - evidence that large rock may have been struck)							
#5	97.22	91.2	82.2 (1)	(3)	6'	11'	6'
#6	97.17	92.0	88.8	86.6	5'	10'	5'
#7	97.33	92.3	88.6	87.8	5'	10'	5' (1' of bedrock)
#8	97.25	92.0	91.0	88.3	5'	10'	5' (1' of bedrock)
#9	97.40	91.9	90.5	89.9	5'	10'	5' (3' of bedrock)
#10	96.71	91.7	(2)	82.3	5'	10'	5'
#19	97.30	91.1	84.3	82.1	6'	11'	5'
#20	97.22	89.2	79.9 (1)	(3)	6'	11'	4'
#21	97.44	89.4	80.9 (1)	(3)	6'	11'	4'

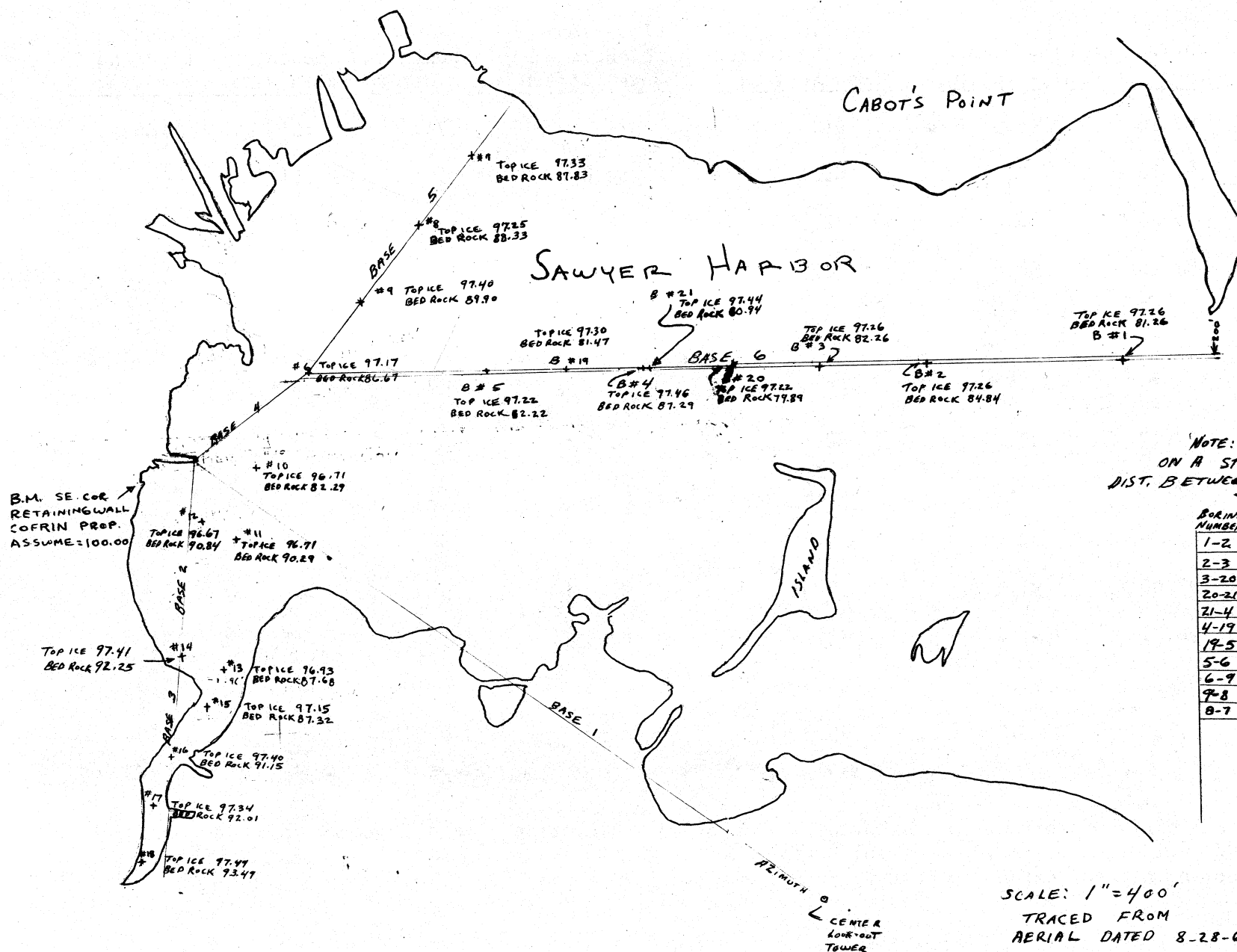
(1) = Boring did not extend to weathered rock material - Elevation given is maximum depth of boring.

(2) = No weathered rock noted over solid bedrock.

(3) = Boring did not extend to refusal depth.

BORINGS

MADE 3-15 & 16 OF 1972



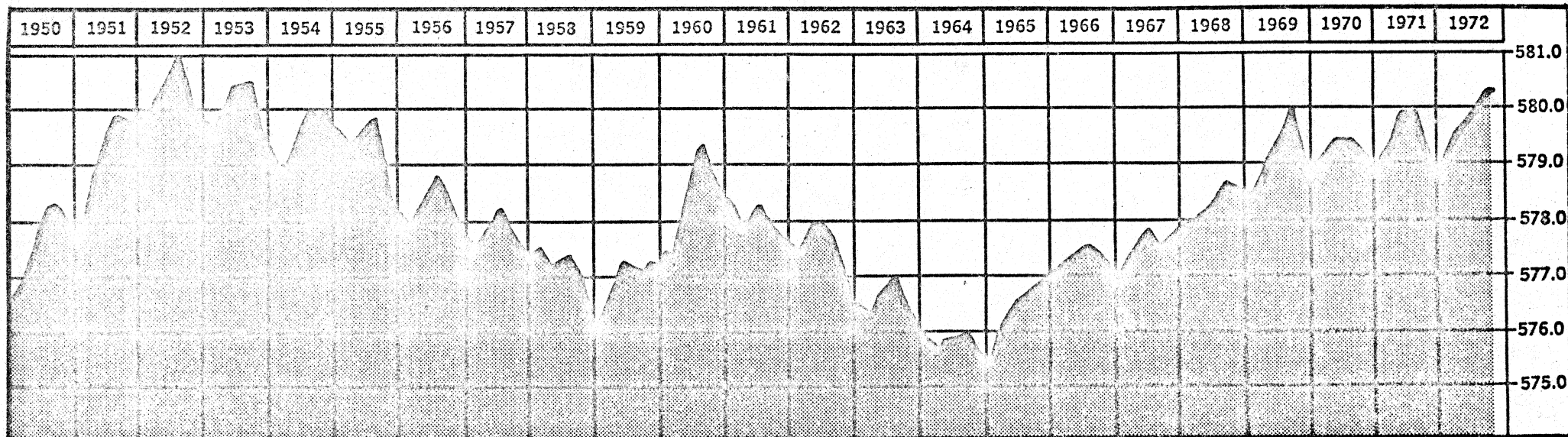
NOTE: BASE 5 & 6
ON A STRAIGHT LINE
DIST. BETWEEN SHOWN BELOW.

BORING	BETW. NUMBER	DIST.
1-2		1000'
2-3		550'
3-20		450'
20-21		430'
21-4		20'
4-19		400'
19-5		400'
5-6		900'
6-9		446.5'
9-8		491.5'
8-7		442.0'

SCALE: 1" = 400'
 TRACED FROM
 AERIAL DATED 8-28-67

EXHIBIT 4

The Rise And Fall of Lake Michigan's Water Level (1950-72)



County image would seem to offset the fact that it is a good distance from the Chicago market. Nevertheless, the road linkages as they exist represent some resistance to market access.

Presently the state plans to upgrade and extend Highway 141 from Milwaukee as an Interstate 57 to Green Bay, but completion is from four to seven years away. As this highway holds close to the eastern shore of the state, it would reduce driving time significantly and tie directly to the expressway systems of metropolitan Milwaukee and thence to Chicago on existing interstate systems. In addition, the state is planning some improvements to Highway 57 from Green Bay to Sturgeon Bay. On the southern anchor Highway 57 passes the new state University of Green Bay, where it has been expanded to four lanes to the junction with Highway 54 to Algoma. The single bridge at Sturgeon Bay is to be replaced as the main 57 artery by a second bridge which will locate Highway 57 two miles east of its present bridge providing less congested access from Sturgeon Bay and points north to the subject site. At the same time the bridge will be four lanes, presaging additional lanes for Highway 57 south to Green Bay at a date yet to be established. For purposes of this study it is assumed that the first stage of the resort inn and golf course would be operational in 1975. However, peak demand for Idlewild is probably contingent on completion of Interstate 57 in a period from 1977-1979.

4

SECTION II

A DEMAND MODEL FOR BASIC MARINA SERVICES

A. Components of Demand Model

To measure potential demand for a marina at Idlewild on Sawyer Harbor by 1975 and thereafter, three sources of boat slip contracts were identified.

1. Potential increase in number of boats over 25 feet in length which summer in Door County.
2. Capture of existing marina slip customers dissatisfied with present arrangements.
3. Transient boat traffic cruising the Door County area.

It should be noted that the demand model is concerned with larger inboard craft as the majority of smaller boats will be trailered or stored in a dry marina facility at the marina. At this point the demand model is focusing on the need for slips on the assumption that other marina retail sales will be primarily derivative from the number of units docked. The potential demand must then be reduced by a capture rate that is the percent of the demand potential which the marina might reasonably achieve. The quantity of demand for boat slips must then be converted to a revenue estimate to judge whether net cash revenues will be sufficient to cover debt service requirements on the capital budget.

B. Existing Demand and Supply

Existing supply and demand analysis of the major commercial marinas in Door County provides an initial index of effective demand as each enjoys a full occupancy and many have waiting lists. Each marina has chosen a different balance between full summer leases and overnight dockage for cruising boats as indicated by Exhibit 5. Only two of the existing commercial marinas in Door County have any significant potential for expansion, representing an expansion potential from 90 to 100 berths. Should the Army Corp of Engineers build extensive new breakwaters at Fish Creek, Sister Bay or near Sturgeon Bay, the expansion potential might change over the long run but that would require a sharp change in its present policy.

C. Potential Increases in Demand Benefiting Idlewild

The permanent summer fleet of boats over 25 feet in length numbered about 250 during the summer of 1972. Since Idlewild would appeal primarily to inboard sailors, it is useful to look at Wisconsin registrations of inboards in excess of 26 feet which ran as follows:

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Year	<u>1965</u>	<u>1966</u>	<u>1967</u>	<u>1968</u>	<u>1969</u>	<u>1970</u>	<u>1971</u>
Fleet Size	1063	994	1196	1380	1263	1438	1550
% Change from previous yr.		- 7%	20%	15%	- 9%	14%	8%

The rate of growth can be seen to shift with economic conditions and growth declines in 1971 as Wisconsin reached a severe shortage of dock capacity. The Wisconsin pattern above indicates a yearly average increase of 7%.² There is considerable evidence that the average rate of growth has been retarded by a shortage of big boat facilities. (See Appendix A for a summary of A Program for Our Recreational Waters, State Department of Natural Resources, Madison, Wisconsin).

For example, if Door County were to experience only 7% growth per year beginning in 1973, the big boat flotilla would represent at least 310 commercial slips by 1975 -- an increase of 57 slips. Should there be no increase in 1976 followed by two good years as the cycle suggests, another 45 to 50 boats by 1978 would have offset the existing expansion potential of the most conservative forecast. However, Door County planners themselves saw an existing potential for inboard boats of 400 as early as 1968.

As indicated in Exhibit 6 taken from A Program for Our Recreational Waters, State Department of Natural Resources, Madison, Wisconsin, the potential unsatisfied demand on this basis would be 400 potential minus 250 existing or 150 boats! If existing marinas provided 90 expansion units, spillover demand for a minimum facility at Idlewild might approach 60 boats. More conservatively Idlewild might capture 30% of this 150 unit potential growth in the demand-supply gap or 45 boats, a number which correlates closely with the increase in boats after 1975 assuming a simple average increase of 7%.

Neighboring Brown County and the City of Green Bay represent a second major potential source for inboard boat demand. The Green Bay Yacht Club is presently facing removal in the path of Interstate 57 construction. Green Bay offers considerable river frontage for docking of private boats but the Fox River is polluted and large scale marina activity is non-existent with Al Zeller and Son, Inc. and a small boat marina near the University of Wisconsin-Green Bay called the Eagles Nest. The Idlewild Marina would be 45 minutes driving time from the Green Bay market area. This potential must be undefined as too small to detect with statistical inference.

²Charles A. Chaney, Marinas-Design, Construction and Maintenance, National Association of Engine and Boat Manufacturers 1965, page 30 suggests a 10% yearly increase in the fleet can be anticipated.

EXHIBIT 5

BOATS OR SLIP CAPACITY OVER 25' AT MAJOR COMMERCIAL MARINAS IN DOOR COUNTY

<u>Marina</u>	<u>Permanent Boats</u>	<u>Transient Slips</u>	<u>Total Slips</u>	<u>Mooring</u>	<u>Expansion Potential</u>
Palmer-Johnson Sturgeon Bay	20	15	35		
Baudhuin's Yacht Har. Sturgeon Bay	120	15	135	10	50 (EST)
Snug Harbor Sturgeon Bay	4	4	8	20	
Fish Creek Municipal Fish Creek	24	7	31	15	
Egg Harbor Municipal Egg Harbor		8	8		
Alibi Dock Fish Creek	33	17	50		
Ephraim Yacht Har. Ephraim	26		26	15	
Anderson's Dock Ephraim	6		6		
Anchor Marine Sister Bay	13		13		
Bailey's Harbor Yacht Club Bailey's Harbor	4	60	63		40 (EST)
Total Slips	250	126	375	60	90

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The Army Corp of Engineers indicates sailboats represent 20% of all pleasure boats. However, the forecasts above are based solely on inboards and no predictions are made as to the attractiveness of Sawyer Harbor for large sailing craft pending final settlement of bulkhead locations and mean depths of anchorages.

The growth in the number of large lots presumes income tax laws will continue to permit such luxury and the cultural pattern of upper income families will still value the ostentatious large boat. There is some reason to believe that social trends toward more natural outdoor enjoyment as well as ecological considerations will favor sail rather than motor and small boats for dry marinas rather than wet marinas. These possibilities are difficult to assess other than to reduce the risk by staging development of the marina.

D. Potential Demand for Idlewild Captured from Existing Marinas

A survey was mailed to 86 large boat owners identified by their boat registration numbers as they were moored at Door County commercial marinas. 45% replied to a student prepared questionnaire (Appendix B) only two of which were negative to the Idlewild planned-unit development concept. Of the 250 boats in the present Door County large inboard fleet, 42% were willing to consider relocating when and if the Idlewild project were built. Assuming only 25% of these favorable responses might actively follow through it might have been possible to capture some 25 boats in 1972 or more than 30 boats from the expected 1975 fleet of 310. Survey revealed much discontent with shower and shore facilities, dock security, and attitudes of Door County marina operations. Thus, a new facility should provide extensive key showers for the boat owner, tight fencing to hold public back from slips, and a service attitude designed to "soft sell" the Idlewild concept rather than marina profit lines.

One analyst of marketing of marinas points out that "most boat owners rarely use their boat, or when they do, it is for a short period. The real aficionados belong to yacht clubs and take their sailing seriously in racing class boats. Intense fishermen are a minority. The balance vary from the fellow who keeps a \$35,000 floating bar, but never goes to sea, to the family who cruises on the good days. A small percentage, probably not over 5%, lives on board. The point here is that yachtsmen are still landmen and the more clublike features provided, the more attractive the marina." "...the marina operator should bear in mind that the yachtsman sheds more than his business suit when he puts on his dungarees. In contrast to apartment dwellers, boaters are inclined to be gregarious. Besides quickly picking up the sailors habit of swapping tall tales, he seems to have a great curiosity about the other man's boat. No real yachtsman would admit to being satisfied. Their sense of competition is open to exploitation by a marina (sales) operations...The marina that can reduce the cruising time to the racing course, fishing grounds, or cruising water has a considerable advantage over its competitor located further away. Five miles per hour is good

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EXHIBIT 6

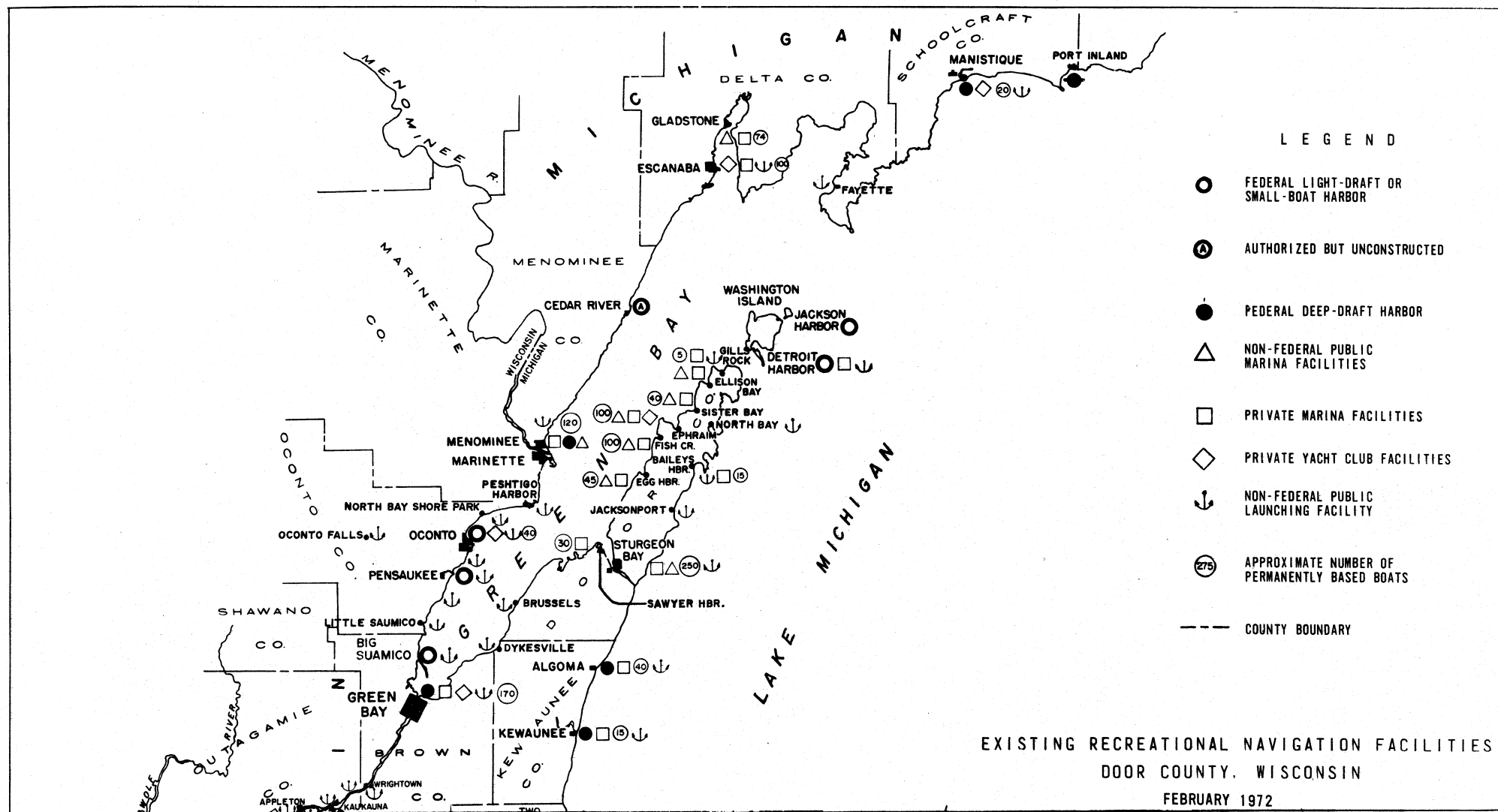
LAKE MICHIGAN SHORE INBOARD BOAT FACILITIES*

County	Existing Space	Potential** Boats	Actual Inboards (Registered)	Difference Gap (2) - (3)
Marinette	60	202	21	181
Oconto	47	130	12	118
Brown	200	387	174	213
Door	265	401	88	313
Kewaunee	0	64	15	49
Manitowoc	0	245	42	203
Sheboygan	53	309	56	253
Ozaukee	?	187	55	132
Milwaukee	760	3002	576	2426
Racine	115	830	113	717
Kenosha	285	846	103	743
Totals	1,785	6,603	1,255	5,348

*Table 6 from A Program for Our Recreational Waters by the Department of Natural Resources, Bureau of Commercial Recreation, October 17, 1968.

**Potential is defined by comparing boat ownership per high income household in Wisconsin to comparative ownership ratios in neighboring states.
See Appendix A.

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auxiliary speed for sail and ten miles per hour is common for most cruisers. Thirty minutes to an impatient sailor are enough to tempt him to change berths."³

The Idlewild marina has its own clubhouse, the resort pool and amenities, and the golf course for the gregarious yachtsman and is closest to the Green Bay cruising ground. It is only at a disadvantage to Sturgeon Bay and Algoma marinas relative to the best lake trout fishing in Lake Michigan.

E. Potential Transient Large Boat Demand

The analysis of existing commercial marinas in Door County indicated considerable difference in their policy for reserving slips to accommodate the large boat on a cruise. For example, Bailey's Harbor Yacht Club with facilities in the grand tradition devoted most of its slips to transients or cruise club excursions from Chicago and elsewhere. There is some reason to speculate that the uncommitted space may also reflect some reluctance on the part of yachtsmen to anchor on the colder lake side of the peninsula or at a greater driving distance north of Sturgeon Bay than necessary. On the other hand Baudhuin's Yacht Harbor in Sturgeon Bay handles transient business by using the slips of summer contracts while these contract boats are on cruise. Nevertheless, the position of Idlewild on the Sturgeon Bay canal within easy cruise of Green Bay and within a short walk of Idlewild Inn and golf course suggest considerable demand from cruisers. Indeed, cruising slips will represent 20% of slip requirements for summer contract boats as compared to 33% for all of Door County.

F. Small Boat Demand (under 25 feet)

Coho and lake trout fishing has led to considerable popularity of motor launches with inboard-outboard equipment in the 18-22 foot range for use on Lake Michigan. A review of aerial photos of Sturgeon Bay Marina indicated that the small boats might represent 20% of the fleet at anchor. In addition, the Idlewild project makes provision for 350 single family lots and as many as 400 condominium units by 1980 and many of these owners will have boats which they will leave in the water for the summer. A relatively small number of slips are reserved for these boats as the boat ramp at the marina and a dry marina facility would permit most of these to be stored on land. With extensive development of single family lot and condominium parcels in Idlewild Complex by 1980, demand may justify installation of a dry marina building and lift in lieu of further additions to slips in 1977 and 1979.

³William B. Rick, Planning and Developing Waterfront Property, Technical Bulletin 49, Urban Land Institute, June 1964, pp 21-22.

EXHIBIT 7

SUMMARY OF BOAT SLIP DEMAND FOR IDLEWILD MARINA

		<u>1975-76</u>	<u>1977-78</u>	<u>1979-80</u>		
Estimated Potential Demand						
		<u>Assumption for Revenue Estimate</u>	<u>Assumption for Revenue Estimate</u>	<u>Assumption for Revenue Estimate</u>		
Capture from Existing Marinas	25		30	40		
Growth Factor	$\frac{+ 45}{70}$	52	$\frac{+ 48}{78}$	$\frac{+ 51}{91}$	90	
Transient Boats 20%	$\frac{+ 14}{84}$	$\frac{+ 14}{66}$	$\frac{+ 15}{93}$	$\frac{+ 15}{85}$	$\frac{+ 16}{107}$	$\frac{+ 15}{105}$
Small Boats 20% (under 25 ft)	$\frac{+ 14}{98}$	$\frac{+ 14}{80}$	$\frac{+ 15}{108}$	$\frac{+ 15}{100}$	$\frac{+ 16}{123}$	$\frac{+ 15}{120}$

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G. Summary of Demand for Boat Slips

In Exhibit 7 a conservative summary of the potential demands listed above is provided for the 1975 market assuming that existing marinas expand to absorb market growth until that time. Demand units are first forecast for 1975, that is the targeted opening date for the resort inn and golf course. Anticipating the time necessary to re-establish public awareness of Idlewild and Sawyer Harbor and the deferred impact of the opening of Interstate 57 to Green Bay by 1977 at the earliest, the proposed number of slips is held well below potential demand until 1979. The proposed number of slips represents a staging in units of 20 beginning with 80 in 1975 and going to 120 by 1979. These slips and their expected revenues then form a basis for predicting derivative and total revenues for the marina.

SECTION III

CONVERSION OF GENERAL DEMAND
FOR BOAT SLIPS TO MARINA MERCHANDISING REVENUEA. Marina Development Strategy

Revenue from marina development will reflect the strategy of the Idlewild resort developer and the profit centers to be retained by the marina investor. As reference to Exhibit 8 will suggest the number of amenities and services which might be found at a marina are limitless but the great majority reflect a return to retail management ability rather than a return on capital and location. It is assumed for this preliminary feasibility study that the developer wishes to avoid responsibility for the retail and service operation of the marina. On the other hand the developer needs the amenities and waterfront romance of a private marina to enhance the draw of the resort inn adjacent to the marina. Therefore, it is recommended that the developer provide the basic dock, floating slips, ramp, dock master and clubhouse structure and site improvement to be leased to a marina operator at a price equal to the summer slip rentals through the summer of 1980, at which time the lease could be renegotiated. The lessee would provide all of the retail stock, personnel, and service equipment necessary for operation. The lease would prohibit certain facilities such as to bar and restaurant which would compete with the Idlewild resort only 100 yards or so away. Since the developer would construct the facility, he would retain direct control of design and structure placement to harmonize with the grounds of the adjacent resort inn. In addition, the lease would provide the operator of the resort with additional control on exterior boat storage, building expansion or other matters which would affect the overall appearance and attractiveness of the project. The initial lease might be in the neighborhood of five years in term or through the summer season of 1980 in order that the developer would retain additional leverage for control of marina operator attitudes to customers. As will be shown the marina is an investment in an amenity to increase total development values more than a profit center for the developer in itself.

B. Basic Marina Improvements to be Leased

The original master plan allocates roughly 25 acres to the marina site and assigns a value of \$188,000 to this general parcel but only 12 acres is needed for the marina with parking for ultimately 150 cars, some winter storage and future space for a dry terminal. Due to the bedrock bottom of Sawyer Harbor all docks are assumed to be of floating construction and a preliminary estimate by Meeco Marinas Inc. of Coldwater, Michigan estimated their costs at \$1200 a unit plus 15% for utilities except sewer to each slip. The clubhouse or dock master's building is essentially a key-lock shower building and locker facility

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EXHIBIT 8

A SURVEY OF AMENITIES AND SERVICES DESIRED BY BOAT OWNERS IN A MARINA

	<u>Important</u>	<u>Desirable</u>	<u>Unimportant</u>
Fuel	93%	1.2%	.9%
Water	89.5	6.5	0.0
Ice	71.7	17.2	2.3
Repairs & Maintenance	65.9	24.1	1.6
Tide and Weather Info	62.7	23.6	2.0
Electricity	61.4	23.6	5.8
Marina Supplies	52.2	34.8	3.3
Garbage Collection	48.0	27.2	13.0
Parking	45.3	27.2	11.1
Showers	35.7	33.4	14.6
Credit Card Privileges	34.8	33.9	15.4
Phone Connection	34.8	30.8	17.8
Groceries	30.0	44.4	11.1
Restaurant	28.3	52.2	9.0
Bait and Tackle	27.4	41.0	10.2
Transportation	24.8	36.8	15.7
Laundry, laundromat	24.3	38.4	22.0
Mail Service	16.7	34.8	24.3
Sundries	10.7	41.2	23.2
Sleeping Accommodations	8.5	26.0	41.8
Package Goods	5.8	26.7	40.1
Swimming Pool	4.9	23.2	41.0
Lounge	4.6	33.0	32.5
Lockers	3.7	18.3	45.5
Bar	3.5	23.6	45.0
Dry Cleaning	2.3	17.2	46.7
Housekeeping Service	.9	7.7	50.1
Recreational Facilities	.9	22.6	44.0

Outboard Boating Club of America
Boating Facilities, Vol. #7, May 1, 1965

Landmark Research, Inc.

for boat owners with a map room or lounge and storage lockers. The second building of light industrial grade will house a basic groceries and tackle shop and minimum engine repair facilities. The balance of the items on the capital budget are self explanatory.

1975 MARINA CAPITAL EXPENDITURES

Slips on floating piers, 80 x 1200 =	\$96,000
Water and electricity to each slip	15,000
Ramp and related facilities	15,000
Ship sewage holding tank, pump and lines	15,000
Showers and locker room (3000' x \$20 per sq. ft.) =	60,000
Retail and repair building (5000' x \$10) =	50,000
Paved parking lot (125 stalls x 33 x .50) =	19,000
Landscaping	10,000
Contingencies and professional fees	30,000
Security fencing	15,000
Land	<u>100,000</u>

Total \$425,000

In 1977 and 1979 additional slips with utilities are added at additional cost of \$30,000 for each 20 unit expansion.

Of the \$400,000+ budget \$100,000 is represented by the land value allocated to the marina as a result of the allocated costs of providing the planned stone bulkhead, back-filling and sewer and water costs. For purposes of analysis it is assumed that the developer could finance the balance of site improvements for 8 1/2% interest 11% constant mortgage for an initial loan of \$325,000 and two supplemental loans equal to the slip expansion as scheduled or as demand requires.

In 1977 or 1979 expansion of 20 slips could be diverted to construction of a dry marina, i.e. a high clearance enclosed steel building in which boats under 22 feet in length can be stored on racks and accessed by a lift truck. This would depend primarily on nature of vacation season guests of resort inn and rate of increase in occupied second homes in Idlewild Complex.

A \$325,000 mortgage with 11% constant would require an annual debt service of \$35,750 initially and would amortize the loan in 17 years 6 months. Expansion of the number of slips in 1977 and 1979 would increase the debt service by an amount of \$3,300 for each expansion. A developer and lessor of the marina would hope to cover this fixed charge plus real estate taxes estimated to be \$8,400 in the first years from slip rentals plus maintain hardware in the face of hard pounding by boats and weather with a regular capital maintenance program as in Exhibit 11.

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To the degree that slip rentals would not be adequate to cover the capital charges, let alone provide a return on site value, the developer must either charge the net annual loss until 1980 to the cost of providing amenities which create value for his residential sites and resort or he should allocate some of the initial marina expense and land costs more heavily to the other land uses for which the marina contributes value and higher absorption rates. In short, there is a flexible line between that portion of the marina capital costs which are justified by the marina as an individual enterprise and that portion of capital costs which are part of the overall development strategy of creating high recreational location value for other parcels of the 650 acre Idlewild site.

C. Pricing Slip Rentals

A review of the competitive standard of services offered by the significant commercial marinas in Door County can be seen in Exhibit 9 and compared to the proposed marina at the Idlewild Inn. The proposed marina equals or exceeds the facilities at all other marinas with the exception of a full-line repair service which would be possible if demand warranted. Because of the adjacent resort facility with its swimming pool, golf course, restaurants, and rooms it is superior to all but the exceptional Bailey's Harbor Yacht Club which is much further north on the Lake Michigan side and represents a far heavier investment. As a result of the competitive superiority of location and amenities together with the nearby boatyard facilities at Sturgeon Bay, the proposed Idlewild seasonal rates are at the top of the market⁴ for Door County in Exhibit 10.

Based on this seasonal rate factor and a distribution of slip rentals by boat length indicated in the footnote of Exhibit 11, it was then possible to compute the gross and effective slip rentals for the summer season from April 1 to November 1. A heavy 20% vacancy was assumed in the first year of operation with a conservative 10% vacancy for the balance of the years. Revenue from transient slips assumed a 50% vacancy factor.

D. Rental Revenues From Slip Rentals

If the developer of the marina for the Idlewild project were to lease the proposed facility in return for slip rentals, Exhibit 11 suggests that the effective gross lease income would range from an order of

⁴At a similar resort inn marina at the Pioneer in Oshkosh it is flat leased to an operator at \$500 per large boat slip while at the Abbey on Lake Geneva there is a flat charge by resort management of \$650 for the summer season at a slip with water and electricity regardless of boat length, indicating charges by boat length may not be necessary where demand is strong. \$650 per boat compares with an average of \$350 per boat for Idlewild pricing which is conservative.

EXHIBIT 9

COMPARISON OF BASIC SERVICES OFFERED BY DOOR COUNTY COMMERCIAL MARINAS

<u>Marina</u>	<u>Elec.</u>	<u>Water</u>	<u>Sewage</u>	<u>Showers</u>	<u>Gas</u>	<u>Winter Storage</u>	<u>Repair</u>	<u>Bar</u>	<u>Rest- aurant</u>	<u>Groc- eries</u>	<u>Swim Pool</u>	<u>Motel Units</u>	<u>Golf</u>
Palmer-Johnson Sturgeon Bay	yes	yes	yes	yes	yes	yes	yes	nearby	nearby	nearby	no	nearby	no
Baudhuin's Sturgeon Bay	yes	yes	yes	yes	yes	yes	yes	yes	yes	nearby	no	no	no
Snug Harbor Sturgeon Bay	yes	yes	no	no	no	no	no	nearby	nearby	no	no	nearby	nearby
Fish Creek Mun. Fish Creek	yes	yes	yes	yes	yes	no	minor	nearby	nearby	nearby	no	nearby	no
Alibi Dock Fish Creek	yes	yes	yes	yes	yes	no	minor	nearby	nearby	nearby	no	nearby	no
Ephraim Yacht Har. Ephraim	yes	yes	yes	yes	yes	no no	no	nearby	nearby	nearby	no	nearby	no
Anderson's Dock Ephraim	yes	yes	no	no	no	no	no	nearby	nearby	nearby	no	nearby	no
Anchor Marine Sister Bay	yes	yes	yes	yes	yes	yes	yes	nearby	nearby	nearby	no	nearby	no
Bailey's Harbor Yacht Club Bailey's Harbor	yes	yes	yes	yes	yes	no	minor	yes	yes	no	no	yes	no
Proposed Idlewild Marina	yes	yes	yes	yes	yes	some	yes	yes (Inn)	yes (Inn)	yes	yes (Inn)	yes (Inn)	yes (Inn)

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magnitude of \$25,000 in 1975 to \$45,000 in 1980 prior to fixed charges. Without allowances for real estate taxes or the maintenance and replacement of capital improvements vulnerable to short useful lives, these revenues would be barely sufficient to cover debt service requirements after 1978. In this case the gross revenues might be added to the resort inn as a special department income and the resort inn would include real estate taxes and other fixed charges within its operating characteristics. However, since this marina is of value to the total development, it is more useful to carry through the financial analysis to measure the subsidy required of the marina which should be charged to other Idlewild project parcels.

E. Potential Revenues For a Marina-Operator Lessee

While the revenues for the capital provided for physical marina facilities may be marginal, there is still ample opportunity for the operator who provides services and retail services on the premises. For a full service marina, the income from slip rentals generally provides only 20% of the gross and slip rentals is not generally regarded by the industry as the significant profit center, an opinion shared by operators interviewed in Door County. The major profit centers are the sale of new and used boats and engines, boat repair services and parts, and retailing of various sundries from ship stores to basic camping groceries including ice and beverages. Equipment rentals, winter storage, and gas and oil each also represent five or ten percent of gross revenues. A limited service facility would have revenues at a 60-40 ratio with slip rentals at 40%. A full service facility with less than average boat sales and repairs might be at 25-75% with 25% representing slip rental. In that case the operator might gross \$75,000 and at a 33 1/3% margin would have \$25,000 for wages and other variables.

As budgeted the facility does not have large sheds or indoor repair of larger boats or indoor boat display. However, a marina operator such as Baudhuin in Sturgeon Bay might be very interested in providing the management for this marina as major repair work would be shifted to its main yards and the marina would generate contacts for its other services. The disadvantage of a local operator with a second base of operation would be that it would reduce the opportunities for capture of competitive business and in this case alienate those present boat owners dissatisfied with Baudhuin operation as indicated by the questionnaire. A number of marine gas wholesalers such as Texaco have been actively leasing marina outlets along the Wisconsin Lake Michigan shore and this base would be a logical extension of their operations. Another major operator of marinas in Wisconsin with outlets in La Crosse, Milwaukee, and Wausau is Skipper Bud's and Door County would be a natural extension of their growing chain which would be capital shy for the construction of a facility such as suggested here.

EXHIBIT 10

COMPARISON OF SEASONAL SLIP RATES
BY BOAT LENGTH FOR DOOR COUNTY COMMERCIAL MARINAS

<u>Marina</u>	18'-20	21-25	25-29	30-39	40-49	50-59	60-	Transient Rate per Ft
Palmer-Johnson Sturgeon Bay					\$300	\$400		20¢
Baudhuin's Sturgeon Bay	\$90	\$160	\$210	\$250	\$320	\$380		10¢
Snug Harbor Sturgeon Bay			\$100	\$140	\$180	\$220		
Fish Creek Mun. Fish Creek							\$288	\$4.00 a night
Alibi Dock Fish Creek	\$125	\$185	\$240	\$320	\$380	\$455		
Ephraim Yacht Har. Ephraim				\$488				20¢
Anderson's Dock Ephraim					\$300		\$500	
Anchor Marine Sister Bay	\$150	\$200	\$300	\$400				
Bailey's Harbor Yacht Club Bailey's Harbor								20¢
Proposed IDLEWILD Marina in 1975		\$200	\$250	\$400	\$500			25¢

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EXHIBIT 11

SUMMARY PRO FORMA OF MAJOR RECEIPTS & DISBURSEMENTS FOR PROPOSED IDLEWILD MARINA

	1975	1976	1977	1978	1979	1980	
Seasonal Slips ⁴ (large boats)	\$20,000	\$20,000	\$26,000	\$26,000	\$35,000	\$35,000	
Seasonal Slips ⁵ (small boats)	<u>+ 3,000</u>	<u>3,000</u>	<u>3,000</u>	<u>3,000</u>	<u>3,000</u>	<u>3,000</u>	
Total Seasonal Slips	23,000	23,000	29,000	29,000	38,000	38,000	
Vacancy Factor	<u>- 5,000</u> (20%)	<u>2,000</u> (10%)	<u>2,000</u> (10%)	<u>2,000</u> (10%)	<u>4,000</u> (10%)	<u>4,000</u> (10%)	
	18,000	21,000	27,000	27,000	34,000	34,000	
Transient Slips ⁶	<u>+ 7,000</u>	<u>7,000</u>	<u>7,000</u>	<u>10,000</u>	<u>10,000</u>	<u>10,000</u>	⁴ 20% x \$250, 60% x \$400, 20% x \$500
Total Slip Revenues	25,000	28,000	34,000	37,000	44,000	44,000	
Real Estate Taxes ⁷	- 8,400	8,400	9,000	9,000	9,000	10,000	⁵ 100% x \$200
Capital Depreciation Bldg. Maint. & Repair @ 3 1/3% per annum	- 3,600	3,600	3,600	3,600	3,600	3,600	⁶ 25¢ per ft per night x 30 ft. ave. x 140 day season x 50%
Slips & Supporting Marina, Capital Items @ 6% per Annum	- <u>10,000</u>	<u>10,000</u>	<u>11,800</u>	<u>11,800</u>	<u>13,600</u>	<u>13,600</u>	⁷ 400,000 assessed value x \$21 per \$1000
Income Available For Debt Service	3,000	6,000	9,600	12,600	17,800	16,800	
Estimated Debt Serv.	35,750	35,750	38,750	38,750	42,050	42,050	
Cash Flow Deficit	(32,750)	(29,750)	(29,150)	(26,150)	(24,250)	(25,250)	Total Deficit: (\$167,300)

SECTION IV

CONCLUSIONS AS TO MARINA FEASIBILITY

It can be shown that the marina as a single business entity is probably not initially feasible prior to 1980 unless the resort inn is extremely successful in establishing its identity among the high income sectors of eastern Wisconsin and northeastern Illinois in a very short period of time after its initial operation in 1975. On the other hand for the resort development and the recreational second home site values to fully exploit access to Sawyer Harbor and beyond, it is critical to provide a major marina facility and to shift development capital charges to these other development profit centers. Such an approach would increase the feasibility of the land development project and permit the marina operation to operate on capital structure at a feasible basis.

The gross revenues of about \$25,000 in 1975 to \$45,000 in 1980 must be adjusted for fixed charges as in Exhibit 11 to determine net revenues available for debt service. Fixed charges which would be the responsibility of the lessor would include real estate taxes and capital depreciation and replacement. Taxes were computed on 90% equalized value and a \$21 per 1,000 tax rate which is current in the township. Assuming all of the tax rateables are built in the Idlewild project, there should be no reason for the mill rate to rise. The capital maintenance and replacement program assumes a 3 1/3% charge per year for all marina buildings and 6% per annum on docks and some supporting marina capital items. With these assumptions the income available for debt service is negligible and leads to a deficit averaging \$28,000 a year. One must conclude that the marina itself cannot carry its full capital cost burden unless it could double its average slippage rental from \$350 in 1977 to \$700! \$700 might be feasible were Idlewild to have the market recognition which is now enjoyed by The Abbey of Lake Geneva, Wisconsin, where the present charge is \$650 per slip regardless of boat length. However, when analyzing a still-to-be built project, it is one thing to expect a competitive edge in amenities to provide an effective capture rate but it is quite another to assume the demand for a new facility so inelastic that one can charge twice the price of competitive facilities in the county. While some price increases might be feasible during the timeline of marina development prior to 1980, it is more instructive to look for ways in which to reduce the debt service to be carried from marina revenues.

An average loss of \$28,000 is the equivalent of debt service at 11% constant on \$250,000 of outstanding debt. Rather than finance this sum on the marina directly it would be preferable to absorb or to assign an additional \$250,000 in development costs to the other components of the development, particularly the condominium and resort inn parcels. In addition, it might be useful to consider allocating 10-15 acres of the marina site closest to the road for use by a maritime museum facility

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which was contemplated for another area somewhat removed from the marina. More of the fill and bulkheading costs of \$188,000 could be released against this other site use, reducing the equity investment represented by site value assigned to the marina. Once the nature of the Idlewild Complex and the marina revenue potentials were established by 1980 more favorable lease terms or favorable sale could be arranged.



HOW WISCONSIN'S FLEET COMPARES WITH OUR NEIGHBOR STATES

The following charts contain comparative information on boat registrations supplied by the U. S. Coast Guard. This source was the only data available that permitted direct comparisons, and was used despite the fact that the figures are based upon slightly different classifications than those shown in Table 1.

FIGURE 1

INBOARD BOATS COMPARED TO POPULATIONS

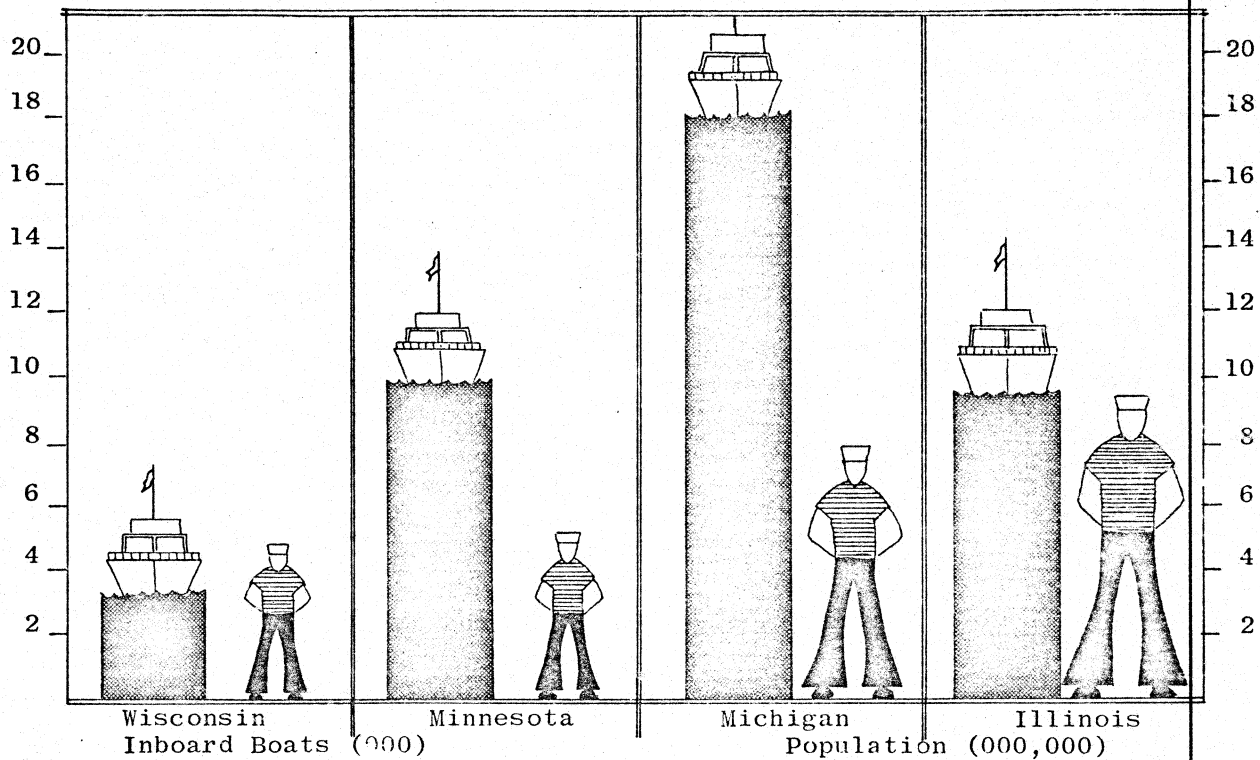
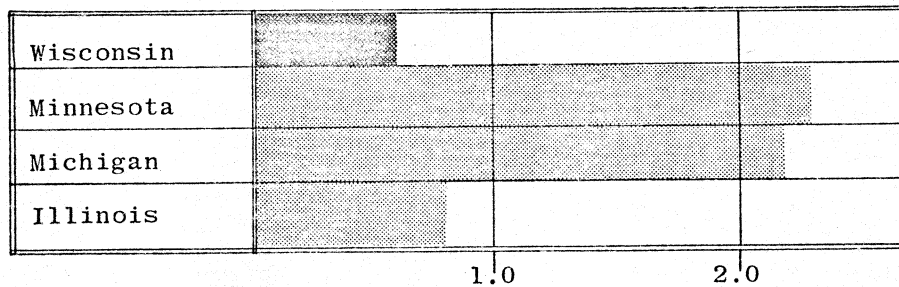


FIGURE 2

INBOARD BOATS PER THOUSAND POPULATION



III. GAPS - WISCONSIN'S INBOARD BOAT POTENTIAL - A SHORTAGE?

The comparisons shown in the preceding section are factual. The interpretation of the "why" of this involves more detailed analysis and is discussed in Sections IV to VIII.

This section simply compares the cold figures of "what Wisconsin would have in the way of larger pleasure craft" if she approached the national averages - or those of states around us.

- A. Compared to the National Averages
National averages brought up to the current 1968 year by interpolation would result in a total of 15,398 inboard craft registered in Wisconsin by residents.
- B. Compared to our Neighbor States
If we had the same per capita inboard ownership as our three neighbor states, Wisconsin would have a total of 7,980 inboard craft registered by residents.

But these states must still be lacking facilities because this total is also below the national norm by approximately 50 percent.

- C. Computed Estimates
Wisconsin data, fully considering family income and proximity to boating waters, shows that a total of 10,022 resident inboard craft would be registered here, and that a potential also exists for 9,827 non-resident craft. This totals up to 19,849 inboard pleasure craft.

TABLE 3 WISCONSIN'S POTENTIAL FOR INBOARD BOAT OWNERSHIP - 1968

<u>Basis of Comparison</u>	<u>Resident</u>	<u>Non-Res.</u>	<u>Total</u>
By Comparison with National Average	15,398	3,849 *	19,247
By Comparison (other states)	7,980	1,995 *	9,975
Best Estimate of Potential	10,022	9,827	19,849
Present Registered Craft	3,409	822	4,231
Best Estimate of Deficit	6,613	9,005	15,618

HOW ABOUT THE FUTURE!

The "potential" figures used here relied upon (1) the number of family units in each income class; (2) the rate of ownership in each class; (3) the proximity of these family units to usable water.

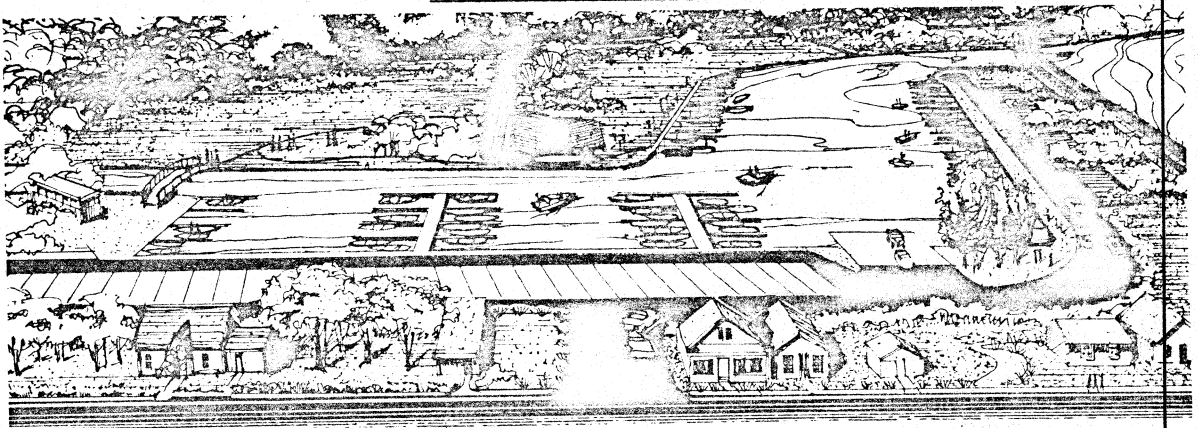
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Estimates of future "potential markets" have simply applied the best available estimates of future family unit numbers and incomes, assuming no increase in mobility. Results for 1980 show an increase of 50 percent.

TABLE 4 INBOARD BOAT POTENTIAL - WISCONSIN RESIDENTS

Income Class	Family Units	1980	
		Unrelated	Totals
0 - \$5,999	1,800	224	2,024
\$6,000 - \$9,999	4,452	571	5,023
\$10,000 +	7,575	933	8,508
Grand Total	13,827	1,728	15,555

IV. WHY DO PEOPLE BUY BIG BOATS?



Of all of the factors that have a bearing on the number of larger boats owned per capita around the country, these four lead:

- o Family Income
- o Proximity to boating waters
- o Accessibility of boating waters
- o Availability of facilities.

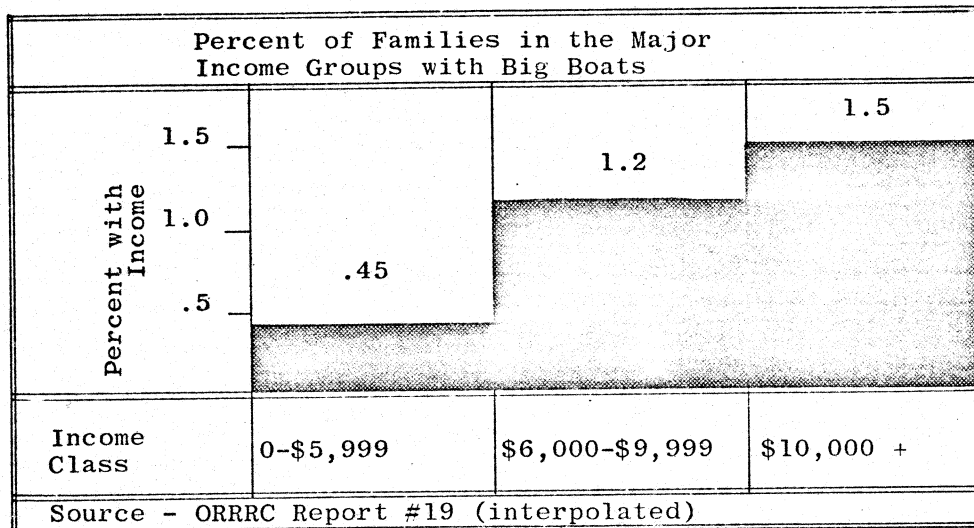
They form the soundest possible base for any market study of the potential of all or part of the field.

Where projections are made of potentials and future markets, it is necessary to procure detailed population and income estimates. In this report it has been necessary to utilize and interpolate applicable federal census and recreation data such as are combined in Figure 2.

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FIGURE 3

HOW INCOME EFFECTS BIG BOAT PURCHASES



V. WHAT IS HOLDING DOWN BIG-BOAT USE HERE?

Obviously, something is holding down this state's use of larger pleasure craft. To determine the probable cause, each of the major factors contributing was examined. These were:

Family Income
Proximity to Boating Waters
Accessibility of Boating Waters
Availability of Facilities.

A. Family Income

Wisconsin's average family incomes compared favorably with national averages, with more in the higher brackets and fewer in the lower income levels.

TABLE 5 WISCONSIN FAMILY UNIT INCOMES COMPARED WITH NATIONAL

Income Class	Wisconsin-1960 Census	National (1957) ORRRC #19
To \$6,000	44.9	58.4
\$6,000 to \$10,000	28.5	27.8
\$10,000 and over	26.7	13.8

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Income was ruled out as a factor of importance in Wisconsin's situation. On the basis of income, it would appear that Wisconsin should exceed rather than fall below the national inboard figures on ownership.

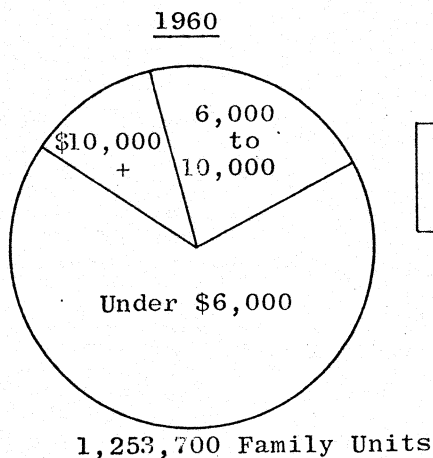
Average boat ownership per family was determined from U. S. Census data for major pleasure boat types for three main family income groups. This was compared against Wisconsin and the other Lake States figures. Projections of these figures were made to 1980.

Next, the family incomes of Wisconsin residents were examined and cataloged into the categories above. This result is shown in the two-pie charts that follow - one for 1960 and one for 1980. The 1980 chart shows not only population increases but significant shifts into higher income brackets.

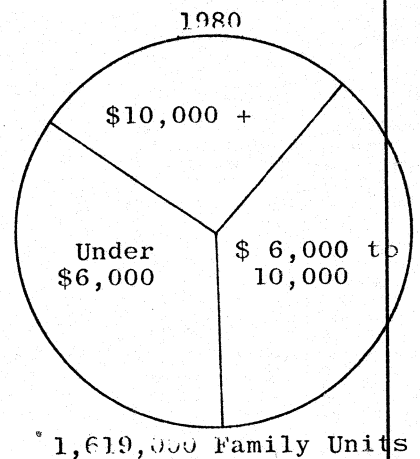
FIGURE 4.

FAMILY INCOMES - WISCONSIN - 1960 and PROJECTED 1980

By 1980, there will be more families to split a larger income. Average incomes will rise.



Families and
their
incomes
1960 and 1980



B. Proximity to Boating Waters

Both commercial and governmental agency data has consistently shown that the boating enthusiast in the inboard larger water craft class wants his water quite close - preferably within fifty miles. Beyond that distance, the ownership rate falls off.

This aspect was examined in some detail to determine the inland potential. These points appeared to be important:

1. Wisconsin has hundreds of miles of frontage on the Great Lakes, hundreds on the channeled Mississippi, and a significant amount on Lake Winnebago.
2. Wisconsin's populations are clustered close to these larger waters.
3. Inland areas some distance from large water probably limit the ownership potential severely. There is substitution of smaller craft - This is certain.

In view of the above, the lack of "proximity" to larger waters was listed as a severe handicap to inboard ownership in all areas over fifty miles away. In those areas, estimates were cut in half.

Yet, since the major populations were concentrated close to the big waters, "Proximity" could not be a major factor in the Wisconsin inboard deficit.

C. Accessibility of Boating Waters

Since the craft under discussion here are not carried around regularly, this does not appear to be a factor here.

D. Availability of Facilities

This left only the matter of facilities to be examined. Since none of the preceding three factors appeared to be responsible, this aspect was studied with some care.

The problem of facilities for the larger craft was complicated by their special needs. They are heavy and cumbersome - transport is laborious and dangerous (exposed propellor shafts). They are not readily trailerable - they need special facilities for:

Hauling
Launching
Docking
Fueling
Repairing
Storage
Refuge from storms

Apparently it is not enough to have the shining waters of Lake Michigan right at hand unless you have the facilities to take care of the boats.

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The water is there, but the boater needs help to utilize it. This is a problem roughly comparable to that of a jet passenger plane at an airport without paved runways or a loading ramp - sleek, powerful, fast and efficient, but absolutely useless without these facilities.

1. Facilities Surveyed

Does Wisconsin lack the facilities for large pleasure craft? There was no ready answer from any source.

To get the answer, an aerial survey of all harbor and dock space for pleasure craft was conducted in May, 1968. The survey covered Lake Michigan from Gary, Indiana to Escanaba, Michigan.

This air survey was reinforced by intensive questioning of public and private facility managers, harbor guide publishers, and all possible sources.

Figure 5

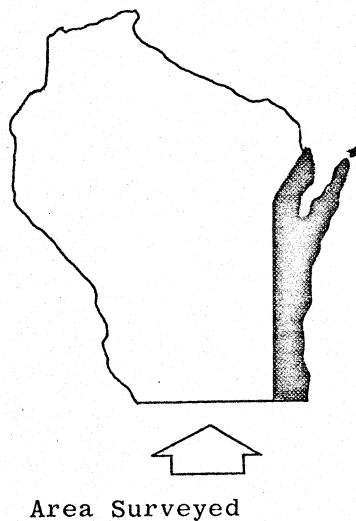
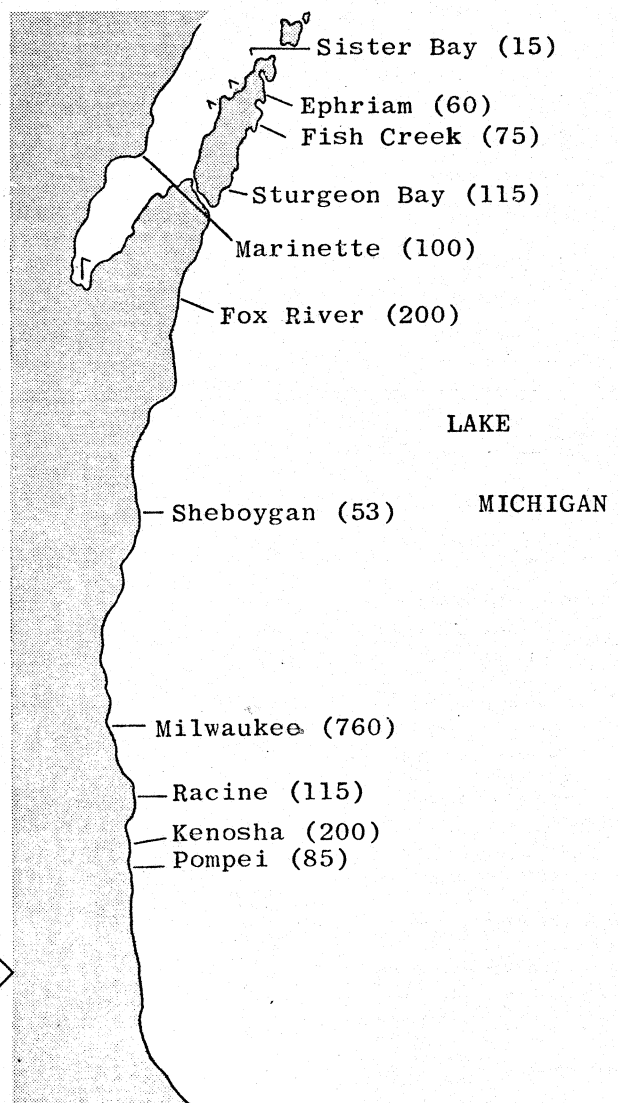
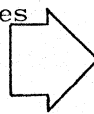


Figure 6

Existing Facilities
Charted



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Details of this survey are available in the Bureau office, but the overall result showed a dramatic shortage of facilities that could and possibly would severely hamstring the growth of the larger pleasure craft business.

These shortages are compared in the following chart which points out three things - Boats Now Registered in County, Potential Number (or what there should be) and thirdly, Existing Marina Space (Resident and Non-resident both):

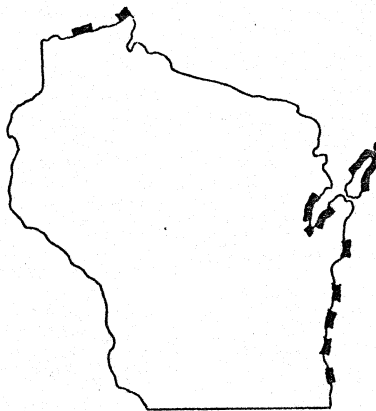
TABLE 6 LAKE MICHIGAN SHORE INBOARD BOAT FACILITIES

<u>County</u>	<u>Existing Space</u>	<u>Potential Boats</u>	<u>Actual Inboards (Registered)</u>	<u>Difference Gap (2) - (3)</u>
Marinette	60	202	21	181
Oconto	47	130	12	118
Brown	200	387	174	213
Door	265	401	88	313
Kewaunee	0	64	15	49
Manitowoc	0	245	42	203
Sheboygan	53	309	56	253
Ozaukee	?	187	55	132
Milwaukee	760	3002	576	2426
Racine	115	830	113	717
Kenosha	285	846	103	743
Totals	1,785	6,603	1,255	5,348

2. Harbors of Refuge

FIGURE 7

Great Lakes Areas Needing Harbors of Refuge



Adequate refuge from sudden storms and squalls is an essential "facility." This need has been thoroughly investigated by the Department of Resource Development (Don Wood). The following material covers his recommendations:

Landmark Research, Inc.

"Access to Great Lakes waters by owners of pleasure craft depends not only upon the availability of launching facilities, but upon the availability of harbors of refuge. Because of danger from storms, a boater should always be within ten miles of a harbor of refuge, and boaters with less than 15 hp motors should not use the Great Lakes unless they stay close to a place of refuge.

A standard of 15 to 20 miles between harbors of refuge on the Great Lakes is used by the Michigan Waterways Commission in its successful program of federal, state, and local financial cooperation in the building of small craft harbors on the Great Lakes. Wisconsin needs more harbors of refuge in order to reach a comparable standard.

Figure 7 shows areas with inadequate protection and areas where more small craft harbors of refuge would be needed to meet the minimum standard. About 12 or 14 are required, and at least one additional harbor is needed in the Apostle Islands.

Construction of Great Lakes harbors of refuge in other states has been a cooperative undertaking of federal, state, and local units. In Michigan, more than \$10 million has been spent on a small craft harbor program. The federal government contributed 60 percent, the state 23 percent, and local governments 17 percent. The state's share was financed from license fees on boats and motor fuel tax receipts. Wisconsin could not expect such a large share of federal contribution because most of the federal funds in Michigan helped pay for harbors of refuge on the south shore of Lake Superior, where safety needs were more acute than they are on Wisconsin's Great Lakes shores.

Although three of the areas shown on the map are authorized for study by the Corps of Engineers, no funds have yet been appropriated. The three are at Oconto, on the Door County peninsula, and on the northern shore of Douglas County. It is likely that federal funds could be used in those areas for part of the construction costs.

Harbors of refuge consist mainly of breakwaters at the mouth of a stream, which keeps water flowing through and prevents stagnation. Breakwaters and shoreside facilities such as launching ramps, parking areas, public toilets, and a dock for transient boaters should probably be provided with public funds. Private capital could be used to develop marinas within the breakwater and provide storage and service facilities for pleasure craft.

The proposed harbors should be built primarily as refuge for transient boaters and for launching, and not for mooring of local boats. Adjacent marinas probably should be constructed to provide for such storage.

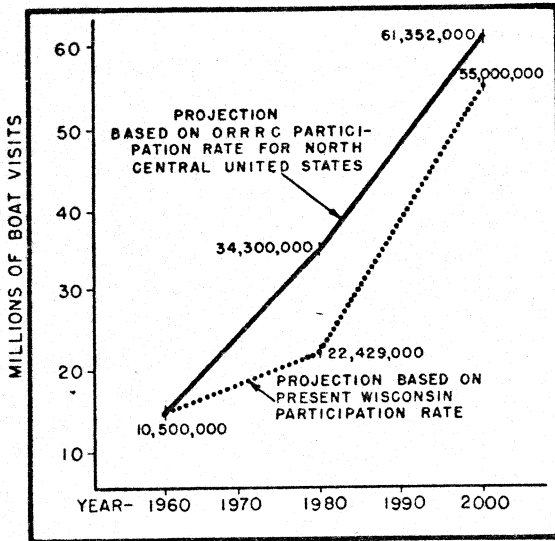
Any state program for harbors of refuge should also provide funds for public boating facilities at existing ports. These ports already have breakwaters for commercial shipping, but their public pleasure boating facilities inside these breakwaters are of varying quality and in generally short supply."

VI. CONCLUSIONS AND DISCUSSION

This comparison substantiated Wisconsin's fears regarding the health of our larger craft industry and the utilization of our larger waters. The magnitude of the difference is well illustrated

FIGURE 8

PRESENT AND PROJECTED BOATING VISITS
IN WISCONSIN



in Figure 1 which shows that the state lags behind all of the other three, even Illinois. This holds despite the fact that Wisconsin's average family income exceeds the national norm. Further, our population centers are close to big water - and this trend will continue. There is no reasonable explanation to this situation, other than a severe lack of facilities.

The conclusion seems plain - the state suffers acutely from a lack of facilities, both harbor and service - a lack that is being translated directly into overcrowding of inland lakes - and lost economic development and lost sport fishing for coho and trout!

We are not utilizing our bigger waters - yet this is the only significant outlet for the already excessive boating pressures on the inland lakes of our urbanizing southeast Wisconsin.

Wisconsin boaters must go to the boundary waters of Lake Michigan and the Mississippi River - but before they can, someone must provide substantial facilities for the launching, mooring, servicing and storage of the "bigger than trailer" size craft suitable for big waters. In rough terms, Wisconsin lacks millions of dollars worth of pleasure craft and all that this means in lost economic development. If we compare this with our Lake States neighbors, this deficit amounts to 6,749 inboard boats in 1967. But, considering our actual potential, the deficit is closer to 14,000 boats right now.

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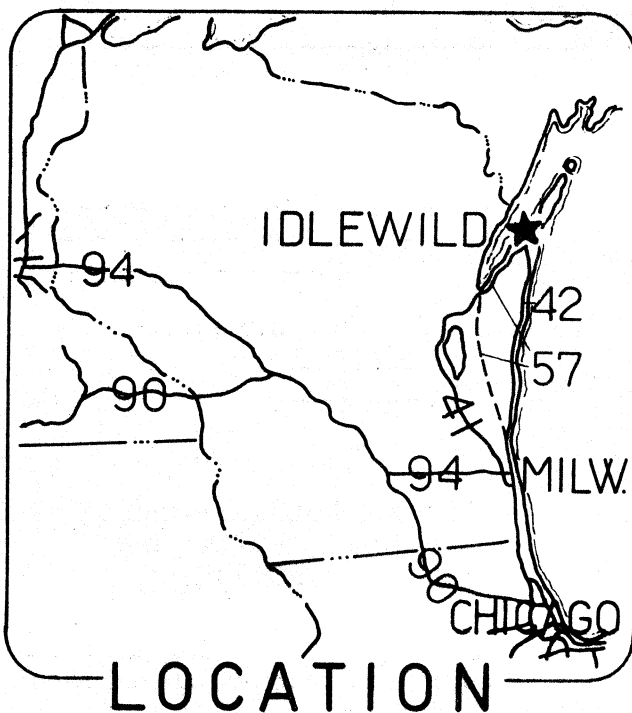
January 3, 1972

Dear Sir:

One of our clients is developing a high style recreational complex at Idlewild on Sawyer Harbor in Door County, Wisconsin. The 1000 acre complex has many resort facilities on a newly reconstructed Idlewild Harbor on the Green Bay side of the Sturgeon Bay Canal. His objective is to sell condominiums and detached homesites for both seasonal and year round use. An all-weather year round yacht marina will be featured in this complex. In addition there will be a golf course and country club with overnight accommodations available to both transient and permanent residents.

To help develop the type of marina that would best serve the Lake Michigan and Green Bay boatmen we need your response to the following questions.

There is no way to identify your response and be assured that this is not the beginning of a sales promotion. Please feel free to offer any comments you wish at any point in the questionnaire.



1. Do you ever vacation with your boat in Door County?

No _____. Please tell us why not and return the questionnaire. Thank You.

Yes _____. If yes how would you classify your boating holiday?

a. Cruiser: _____. That is, living aboard your boat and moving from one mooring to another very frequently to circulate around Door County and the Green Bay area.

b. House Boater: _____. You live aboard your boat at one or two Door County mooring sites.

c. Shore Boater: _____. You commute with your boat from your homeport to Door County and then avail yourself of on-shore accommodations and recreational facilities.

2. From what town and county do you commute from when your boat is at a Door County location? _____
3. Are you a resident of Door County who lives on his boat during the boating season? Yes _____ No _____.
4. As a cruiser would you be interested in:
- a. Gas & oil _____
 - b. Supplies, Marine or Food _____
 - c. Daily green fee for golf course _____
 - d. Meals ashore _____
 - e. An occasional overnite stay at your mooring site _____
5. What type of boat do you presently own? Power _____ Sail _____
6. Where do you moor your boat in the summer? Marina _____
Location _____
7. Where do you store your boat in the winter? Marina _____
Location _____
8. If you were managing these marinas what two features would you add.
Suggestions _____
- What two features do you dislike. _____
9. What features would you need for your boat when moored at our site?
Would you consider the following as necessary?
- | | |
|---------------------------|---------------------------|
| Golf course _____ | Indoor Swimming _____ |
| Fresh Water outlets _____ | 110 volt outlets _____ |
| Grocery Store _____ | Showers _____ |
| Tennis Court _____ | Handball Court _____ |
| Fuel & Supplies _____ | Exclusive resturant _____ |
10. During the boating season, how long do you use the marina facilities in Door County? Entire season _____ About 1 Month _____
About two weeks _____ A few days _____
11. What is your opinion of a marina situated within a total recreational complex complete with a hotel, exclusive restaurant, lounge and swimming pool, golf course, and other recreational facilities?
Great _____ Good idea but not for me _____ Poor idea _____
12. Would the Sturgeon Bay Airport be useful to you for a weekend of boating and fishing? Yes _____ No _____ Possibly _____

COMMENTS: _____

Thank You.

Messrs., Clettenberg & Roberto

