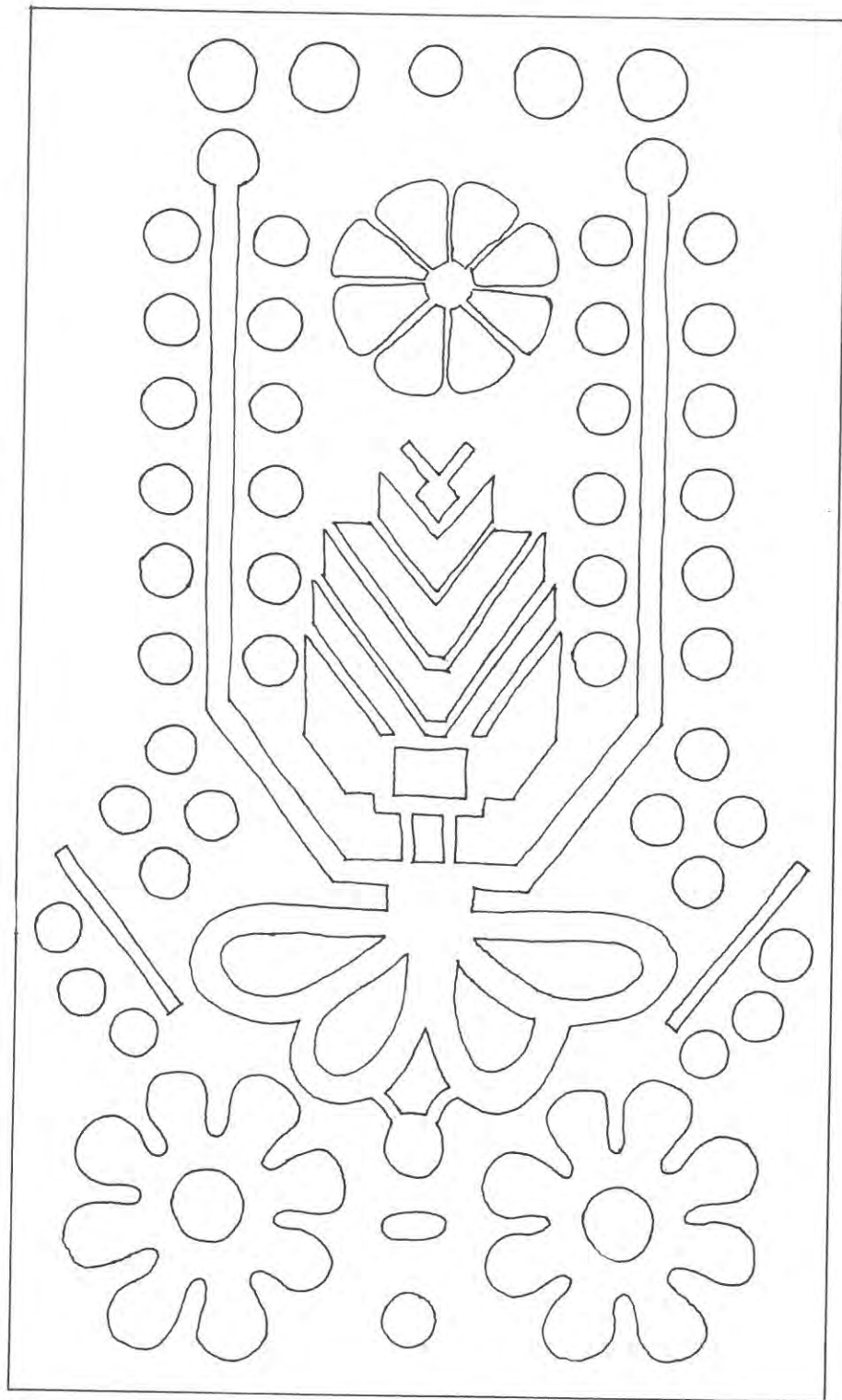


BAY MILLS INDIAN COMMUNITY  
COMPREHENSIVE PLAN



BAY MILLS INDIAN COMMUNITY



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**BAY MILLS INDIAN COMMUNITY**

RURAL ROUTE NO. 1  
BRIMLEY, MICHIGAN 49715

March 23, 1977

James Houck  
Department of Labor  
Bureau of Employment and Training  
State Secondary Complex  
7150 Harris Drive  
Lansing, Michigan 48926

Re: Comprehensive plan for Bay Mills Indian Community

Dear Mr. Houck:

The Executive Council of the Bay Mills Indian Community has authorized me to inform you that the Comprehensive Community Plan developed by your staff has been adopted by the Council as the official planning document for the Community.

The Council cannot say too much to express its appreciation and thanks to you and your staff for its dedication and work in preparing the comprehensive plan.

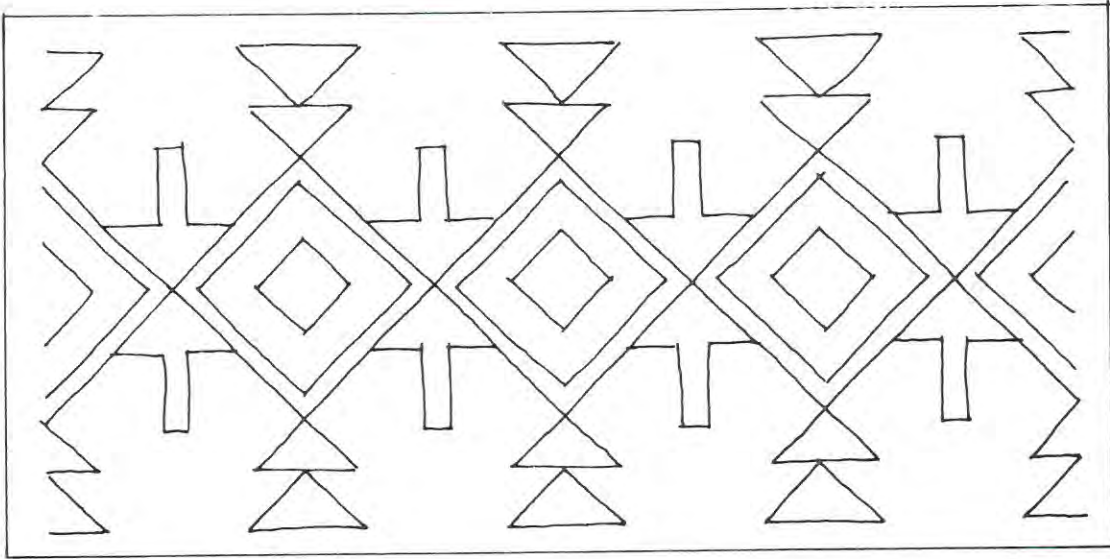
Sincerely yours,



Arthur L. LeBlanc  
Tribal Chairman

ALL/ap





## INTRODUCTION

The real heroes on this project were the people of the Bay Mills Community who patiently put up with our efforts, made us feel welcome, and guided the direction of this planning effort. All the long meetings, the surveys and interviews represent their substantial contribution that made this plan possible.

So many people helped in so many ways, one is hesitant to name names for fear of leaving someone out. The committees and staff at the Tribal Center are noted next, so we will take this opportunity to acknowledge the contribution of other community members, the fishermen, the carpenters, the mens' and womens' baseball teams, the bingo players, the cooks; all the folks who shared their time and their insights with us.

We of the planning team hope this plan is a fair and accurate presentation of Bay Mills, as it is and as you hope it will become. Where it is correct, it is due to the insight, guidance and information from the community. Where it is incorrect it is the failure of the planning team to accurately assess what lay before us.

While no document could ever capture the rich substance of the community, its interactions and its history, we hope this document will aid in the process of Bay Mills making its future.

**COMMITTEES & STAFF OF BAY MILLS TRIBAL GOVERNMENT**

**Executive Council**

Chairman-Art LeBlanc  
Vice-Chairman-Don Parish  
Secretary-Armella Parker  
Treasurer-Monica Karazon  
Councilman-Robert Bowen

**Staff**

Donelda Schofield  
Leila Parish  
Darla Schofield  
Elizabeth Parish

**Tribal Staff** - in support of administration

Office Manager-Geraldine Parish  
Attorney-Kathryn Tierney  
Legal Secretary-Armella Parker  
Administrative Aide-Clint Parish  
Resource Developer-Bill Thorne  
Accountant-Jean Parish

Wade Teeple-Police Official  
Walter LeBlanc-Police Official  
Levi Carrick-Police Official

Art LeBlance Jr. -- AA Counselor  
Barb Teeple-Senior Outreach worker

**Committees and Staff**

**Housing**

Don Parish-Chairman  
Robert Bowen  
Maurice LeBlanc  
Francis Parish  
Wade Teeple

**Education**

Johnson O'Malley

Armella Parker  
Geraldine Parish  
Dorothy Menominee  
Agnes Carrick

**Health**

Art LeBlanc  
Doris Rykers  
Agnes Carrick  
Elizabeth Parish  
Laurel Keenan

**Title IV**

Agnes Carrick  
Geraldine Parish  
Armella Parker  
Irma Parish  
Linda Carrick

**Staff**

Lorraine Bowen  
Laurel Keenan  
Yvonne Mc Ginnis

## **Participants in the Bay Mills Indian Community Development Plan**

The preparation of the Bay Mills Indian Community Development Plan was a major undertaking involving the cooperation of a number of people working with the Bay Mills Planning Staff. Primary input came from the Bay Mills Indian Community through the Executive Committee, which is the major policy making board at Bay Mills acting under the powers granted by the General Tribal Council. The Bay Mills Planning Staff has met frequently with the Executive Committee and representatives of other committees including: Housing, Health, Education and Law Enforcement in order to discuss planning issues, tribal goals and strategies and other issues of importance to the formation of the plan.

The Bay Mills Planning Staff was composed of members working in a training program under the direction of:

**James M. Houck** - Project Director who was administrative officer for the project and has an academic background in outdoor recreation planning. He has had extensive experience in community and recreation planning for the Thumb Area of Michigan.

**Richard Kibbey** - Project Instructor, has an academic background in Urban Planning and specializes in Housing and Community Development. He has had extensive experience as a planner for such diverse communities as Harlan, Kentucky and Lansing, Michigan.

### **The trainees were:**

**Ms. Laura Bartlett** has a background in resource development and contributed sections on Land Use, History and Education.

**Ms. Lorri Burt** a community member and resident provided major contributions to sections on Education, Health, and the Legal System.

**Ms. Sharon Teeple** a community member and resident provided major contributions to sections on Elderly and Youth.

**Ms. Judy Burton** a community member provided major assistance in preparation of Transportation and Housing section.

**Mr. Phil Kessler** has a background in civil engineering and provided contributions to sections of Sugar Island, transportation and cost benefit analysis for various engineering studies.

**Ms. Gail Jahnke** a community member provided assistance in the Recreation section.

**Ms. Sara Tadgerson** a community member provided input and assistance in the Economic Development section.

**Ms. Carla Waite** community resident provided assistance in sections of Youth and Recreation.

## ACKNOWLEDGMENT

The production of the Comprehensive Community Development Plan for the Bay Mills Indian Community was an immense undertaking which would have been impossible without the support and contributions of a great many agencies and individuals.

We are indebted to the following for their invaluable assistance in this study:

- The Director, Mr. John Campbell and staff of the Eastern Upper Peninsula Planning and Development District.
- The Director (Acting) Mr. Greg Mains and staff of the Central Upper Peninsula Planning and Development District.
- The Director, Mr. Michael Parish and staff of the Inter-Tribal Council of Michigan.
- The Director, Mr. James Hillman and staff of the Michigan Indian Commission.
- The Director, Mr. Donald Walsh and staff of the Eastern Upper Peninsula Employment and Training Consortium.
- The Director, Mr. Roger Fisher and staff of the Eastern Upper Peninsula Transportation Authority.
- Ms. Beth Shapiro, Urban Affairs Librarian, Michigan State University, East Lansing, Michigan.
- The Director, Mr. Pat Smith and Mr. Dean Coker and the staff of the Community Design Center, Lansing, Michigan.
- Mr. Gene Mill and Mr. Sid Hungerford, Soil Conservation Service, Sault Ste. Marie, Michigan.
- Mr. Del Meister and Mr. Loren Berndt, Soil Conservation Source District Office, Marquette, Michigan.
- Mr. Les Nichols, Recreational Service Division, Michigan Department of Natural Resources, Lansing, Michigan.
- Ms. Susan Drake, Bureau of Outdoor Recreation, U.S. Department of Interior, Ann Arbor, Michigan.
- Dr. Lewis Moncrief, Department of Park and Recreation Resources, Michigan State University, East Lansing, Michigan.
- Mr. James Hutchinson, Cooperative Extension Service, Sault Ste. Marie, Michigan.
- Mr. Jay Burroughs, Michigan State University Department of Landscape Architecture, East Lansing, Michigan
- Mr. John Mullin, Michigan State University Department of Urban Planning and Landscape Architecture, East Lansing, Michigan.
- Mr. Richard Baker, Urban Planner, Lansing, Michigan.
- Mr. Mark Cory, and Evaluation staff of the Lansing School District, Lansing, Michigan.
- Mr. Greg Griswald and Mr. Mike Randolph, Indian Public Health Service, Ashland, Wisconsin.
- Mr. Paul Lamb, Michigan Department of Mental Health, Lansing, Michigan.
- Ms. Sandy Firnhaber, Michigan Press Association, Lansing, Michigan.



## **PROJECT HISTORY**

In late 1974 a series of meetings and discussions ensued between Richard E. Donahue, Director, State of Michigan, Department of Labor, Bureau of Employment and Training and representatives of Inter-Tribal Council of Michigan and the Michigan Indian Commission. The purpose was to develop a program, utilizing the resources of the Bureau of Employment and Training, under its mandate of administration of the Comprehensive Employment and Training Act of 1973, which would benefit the Indian Reservations in the State of Michigan. It was determined that a major need of the reservation was comprehensive community planning.

In cooperation with Inter-Tribal Council of Michigan research efforts were undertaken in May, 1975 to establish design specifications for an experimental program which would give unemployed professional individuals a transitional skill into the field of community development planning. The Transitional Employment Program was subsequently established under Special Governor's Grant Funds, Title I, Section 103 (e), CETA.

Objectives of this Transitional Employment Program were to:

1. Identify the areas of community planning needed for each reservation.
2. Identify training program requirements.
3. Establish linkages between the various Federal, State, Local and Regional agencies involved with each reservation.
4. Develop administrative procedures.
5. Identify placement requirements in the field of community planning.
6. Hire the unemployed community development planner trainees.
7. Train the unemployed professional individuals in community planning.

A product of this training program would be a comprehensive community development plan which the reservation could use to chart its future course of development. Members of the reservation community would also receive training in comprehensive community development planning to provide implementation services following completion of the plan document.

In July, 1975 the Bay Mills Indian Reservation was chosen as the pilot training site for the Transitional Employment Program.

## **WHAT IS THE COMPREHENSIVE PLANNING PROGRAM**

The comprehensive planning program is the decisions made by Bay Mills regarding how it wants to develop as a community. That process was taking place before the planning team entered the scene and that process will go on after they have left.

This document, called a plan, is really many things. It is a record of what the situation is now, points out some strengths and weaknesses of what is now, and makes some recommendations as to how those strengths can be built on, and the weaknesses overcome.

Each subject area has, where appropriate, an inventory of existing conditions. That is followed by a statement of strengths and weaknesses. A series of goals states the perceived policy direction upon which recommendations are based. The recommendations and the text that goes with them, are specific statements as to actions that can be taken in pursuit of the stated goals.

The recommendations are specific suggestions relating to the direction the community indicated it would like to move. The important step was the decision by the community as to what it wanted. A fisherman can't tell you what size net to use until you know what kind of fish you want to catch. In the same way a planner can't make a recommendation as to how something can be done until the community decides what it wants accomplished. The long meetings, the heated discussions were all a part of the process where the community sets a direction. And just as that direction is constantly being adjusted, so is this plan constantly being adjusted.

The planning process keeps going on for as long as people are making decisions about Bay Mills. The advantage of having trained planners and a printed plan is that the planning process can take place in the presence of additional information. **Any decision is only as good as the information behind it.**

It is the hope of the planning team that the information set forth in this document will aid in decision making. In addition, it is hoped that planning staff has correctly understood the direction the community wants to move. If all that has been done correctly the planning team has done half its job.

The other half of the job is to be told over time. If the information is used, if the recommendations are followed up, if the planning document gets hauled out and consulted when decisions have to be made, then the planning team will have done a good job.

This doesn't mean there will be no more disagreement over community development. People can continue to disagree. But if they are arguing over facts instead of opinions, it will make for better decisions.

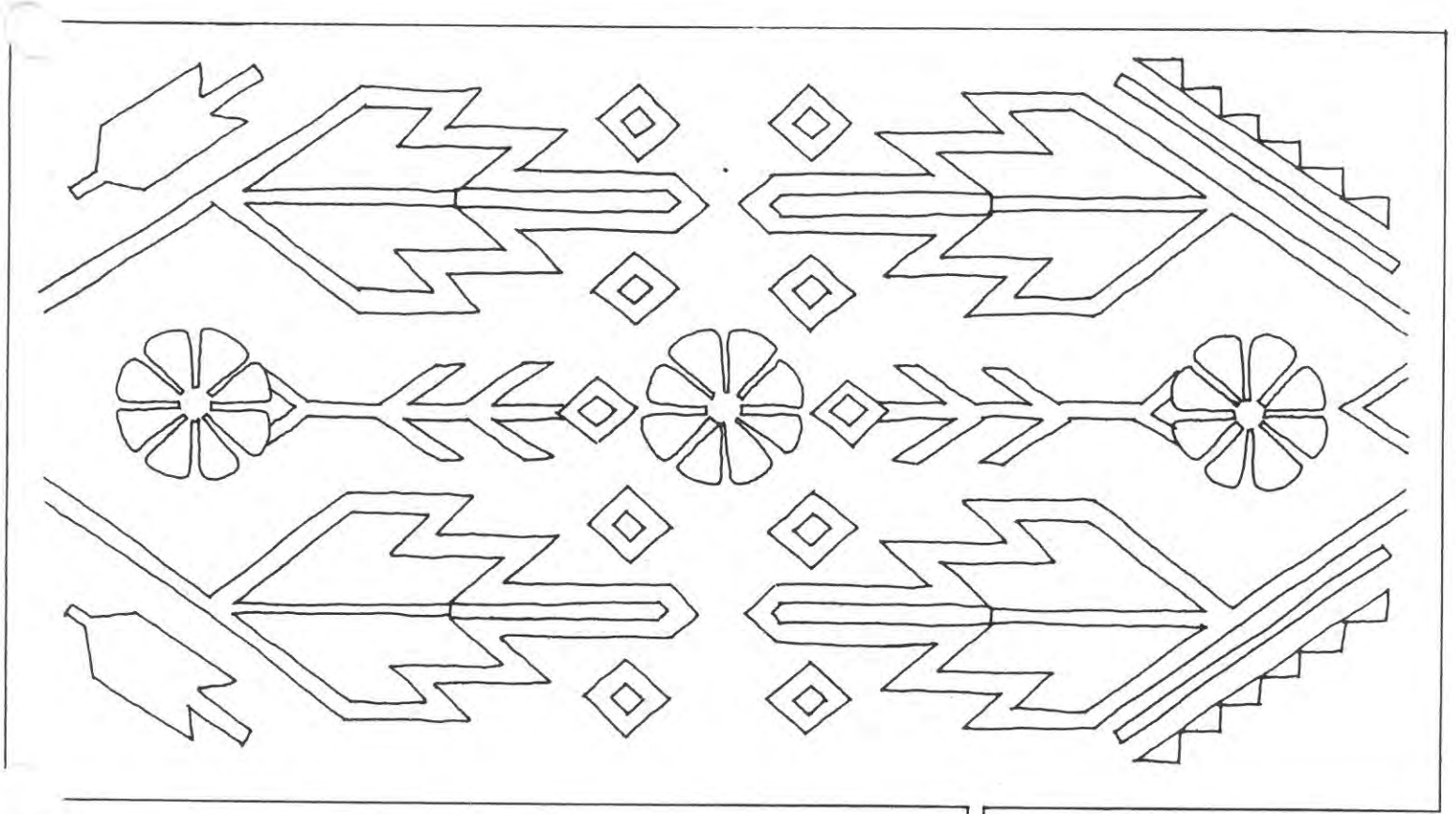
### HOW TO USE THIS PLAN

The purpose of this plan is to bring together information the Bay Mills Indian Community needs to make decisions about its future growth. It is the result of a one year training/planning program undertaken by the State of Michigan, Department of Labor, Bureau of Employment and Training in late 1975.

Information contained in this plan is provided on a range of subjects which describe the existing situation at Bay Mills. It is intended that this information be used by tribal government officials, committees and members of the tribe to clarify the process of making decisions about the communities future growth. The plan is also intended to serve as a factual resource to support

grants and proposals for future community projects and developments. It is important that the plan be used to encourage participation by community residents in the decision making process. It is hoped that this will not be a plan which is set aside to gather dust, but will be actively sought both as a reference and as a policy guide for future development options. It is also hoped that this plan marks the first step to establish an on going planning process as a recognized community function.

The plan is not a static document and as new opportunities, developments and viewpoints occur, it should be updated to reflect these changes. A loose-leaf form is provided to facilitate future adjustment in each section as required.



HISTORY



The members of the Bay Mills Indian Community are descendants of Chippewa or Ojibway bands who have been identified with the Upper Great Lakes Region for approximately 450 years. According to oral tradition the Chippewa, Ottawa and Potawatomi, all belong to the Algonquian linguistic stock, united in a slow migration from east of Montreal. These three tribes, "The Three Fires", later separated during this westward movement. The Ottawa and Potawatomi turned south, settling in areas of lower Michigan, while the Chippewa continued west into the northern woods along the shores of Lake Superior. A prime fishing and hunting location, the area around the St. Mary's Falls, presently Sault Ste. Marie, became one of the earliest permanent settlements of the Chippewa. From here, other Chippewa continued west and north settling along the shores of Lake Superior with major headquarters around Chequamegon Bay or "La Pointe".

Attracted to the woods and waters which provided the basic essentials of living, a group of Chippewa achieved geographical stability in the Sault area. For at least three generations, before the arrival of European explorers in the early 1600's, they remained relatively free from outside interference with the exception of occasional battles with nearby tribes. In this time the Chippewa were able to develop a well established and largely self reliant society.

Occupying the "Soo" region, a rough and cold country little suited for farming, the Chippewa depended primarily upon fishing and hunting for survival. Supplemental agricultural products were obtained from southern Michigan Indians who gathered here in the spring and fall and traded their products for the Chippewa's fish, furs and other products. Thus, a trading center was established here long before the arrival of whites.

Indian life in this area was largely nomadic centering around an annual cycle of activities determined by the seasons and food supplies. During the spring and summer the Chippewa gathered in large villages where abundant fish populations could support a large number of people. In addition to fishing, other spring and summer activities included gathering and drying berries, producing maple sugar, planting potatoes and corn and constructing birch bark canoes. With the arrival of winter, there came a limited fish supply and an ice cover which generally stopped lake travel from October to March. At this time the large villages dispersed with extended family units traveling to inland areas forming small winter hunting camps where moose, bear and other game were sought. In spring, with the retreat of ice from the lakes, these families journeyed back to the shores to fish and reunite with family and relatives.

Religion was a very important part of Chippewa life, in which man was viewed as a part of the great natural cycle. Through their religion the Chippewa sought to ward off evil spirits and come in contact with spirits which would guide and protect them. Sharing the earth with all other creatures, every object of the universe, animate or inanimate has a soul and is greatly respected. Religion was also largely an individual matter. At puberty, each child journeyed to an isolated sacred place where a vision was sought through a period of fasting. At this time a spirit appeared and remained a life long guardian to the individual.

In accordance with their religious views, the Indians had no conception of land ownership. The land and waters were not to be owned nor exploited but were used by all alike for survival needs. On the move, dependent upon food supplies, tribes became identified by their geographical locale. They had undefined areas as hunting grounds but there was no conception of sovereignty

over all the people of an area. The lands and waters were not considered as merchandise or personal property which made the white man's continual pressure to buy Indian land mysterious and confusing.

When French explorers led by Etienne Brule arrived in the region of the St. Mary's Falls and Whitefish Bay in 1622, the Chippewa society had been established. The Chippewa proved to be of crucial value to the survival and well being of explorers who ventured to this area by supplying fish and furs, guiding them through the woods and lakes and teaching the white man to hunt, fish and gather food from the land.

The French maintained peaceful relations with the Chippewa since obtaining furs from them was of prime importance to the French trade economy. The British, also competing for furs from Indians helped instigate rivalry among Iroquois and Chippewa competing for hunting territory. 1649 marked the beginning of a ten year period during which the Chippewa were driven west while at war with Iroquois tribes. However, in 1660, the Chippewa returned and overcame the Iroquois at Iroquois Point, located approximately five miles from the present Bay Mills Indian Community and have occupied the Sault region since that time.

The British, who gained control of the Upper Great Lakes Region after capturing French military posts in New France in the late 1700's, took a much more condescending attitude towards the Indians. Revolting against this treatment, the Chippewa united in an attempt to restore French control by joining in Pontiac's rebellion against the British in 1763 in which every British post west of Niagara, except Detroit, was over-run. The British, soon realizing the importance of the Indian fur supply, sought in the Proclamation of 1763, to protect Indian hunting territory by restricting infringement of colonial farmers in this area.

By the 1760's white contact had already taken its toll on the Indian culture. At this time, Indians were congregated in trading centers such as Sault Ste. Marie and Michilimackinac and largely dependent on trade with the invading explorers. During this period of intense trade, continual contact with whites resulted in a cultural breakdown for the Indians. Indians materially began living more like whites, were affected by numerous religious missions and became dependent upon trade items introduced and supplied to them by whites.

Following French and British dominance, the American pioneer proved to be a much greater threat to the Indian's territory and culture. The Chippewa joined with other tribes of the northeast in all the wars against American frontier settlements to the end of the War of 1812. With the decline of fur trading and increasing importance of agriculture, Indian lands in Michigan steadily diminished as the American pioneers forced their way into Indian territory. The impact of American settlers was delayed in the Lake Superior region due to the remote and harsh nature of the area which made it little suited for extensive farming. However, with the discovery of forest and mineral resources in the Upper Peninsula, there was little hesitation for pioneers to exploit these resources with no respect for Indian territories.

By the use of force, by promising annual payments of goods and by distributing liquor freely, the Americans induced Indian tribes to sign a series of treaties by which they surrendered to the United States their lands. Reservations, remnants of sovereign Indian lands, were originally founded as those lands the Indians needed to survive by following their traditional life style.

Beginning in 1795, with a treaty ceding to the Americans two thirds of Ohio with the assurance that the balance of the Northwest Territory would remain in Indian hands, Indian lands in Michigan were gradually diminished, resulting in today's reservations. Following this, three major treaties in 1820, 1836 and 1855 directed the areas where Michigan reservations are presently located.

Chippewas were settled all along the shores of Lake Superior and particularly at the St. Mary's River and Falls in 1820 when the governor of Michigan, Lewis Cass, led an expedition into these Indian settlements to secure land for a military post. In the resulting Treaty of St. Mary's on June 16, 1820, the Indians ceded 16 square miles adjacent to the St. Mary's River to the United States, but reserved their traditional fishing and camping site at the head of the rapids in addition to their right to camp and fish in the area.

In 1836 the bands from the Sault area joined with other Chippewa and Ottawa bands signing a treaty that ceded all of Northwestern Michigan above the Grand River and the majority of the Upper Peninsula to the United States. The fishing and camping area reserved in the 1820 Treaty was reaffirmed and an additional nine acres, including Sugar Island and 250,000 acres at the base of Whitefish Bay were set aside for the Chippewa bands of the Upper Peninsula. The present Bay Mills Community was included within these reserved acres.

By 1855 the main district occupied by Indians in the Sault area extended from Sugar Island to Whitefish Bay. A treaty was signed in 1855 to settle financial accounts from the 1836 Treaty and to establish permanent homes in Michigan for the Ottawa and Chippewa bands.

In this treaty four areas were reserved in 32 sections for Indian land assignments to be made in 80 and 40 acre selections by eligible Indians. These were located in four places: Salt Point, Point Iroquois, East side of Sugar Island and Hay Lake and southern St. Mary's River channel. Actual distribution of the land patents did not take place until 1873. Indians received no help from the government in obtaining and protecting their land holdings and became victims of unscrupulous whites. The long delay of land patent distribution put the Indians in a position of unequal competition with aggressive homesteaders and investors. The construction of the St. Mary's ship canal between 1853 and 1855 also interfered with Indian land holdings. Not only were their prime fishing locations, ancestral burial grounds and homes taken and destroyed during the construction, but the St. Mary's Canal Company also had priority in selecting 750,000 acres in this area as payment for their work.

By 1880, the Indian settlements at the Sault were gone with many moving to the region of the present Bay Mills Community, Iroquois Point and Sugar Island. In accordance with the 1855 treaty and the Indian Appropriation Act of 1860, the United States purchased 794.75 acres of land for use by the Bay Mills Indians from the Methodist Mission Society who originally purchased this land for an Indian mission. With exception of 527.85 acres held in trust for the Bay Mills Indians, these lands were allotted and fee patented in 1873 to individual Indians. The lands that were fee patented passed into non-Indian ownership and are now in the hands of the U.S. Forest Service and others. The checkerboard pattern of the present Bay Mills Community and surrounding land holdings, in addition to the predominately marginal land, are characteristic of land left after being picked over by whites.



Through legal and illegal means, by 1933, two thirds of Indian lands in the United States had passed into non-Indian hands. This led to passage in 1934 of the Indian Reorganization Act (IRA) which ended allotments and further sales of Indian's land. Michigan's four Indian reservations were established through this act as an effort to help Indians regain sufficient land holdings for a "self sustaining economy and a self satisfying social organization." Provisions were made to buy back Indian land and establish means for tribes to develop constitutions. In 1937, land was purchased for Bay Mills and the Bay Mills Indian Community was organized with the adoption of their Constitution and Charter (November 27, 1937) in accordance with the Indian Reorganization Act. Along with the original mission area, these lands comprise the 2,189 acres of the present Bay Mills Community. The resulting tribal land status is:

Original Mission Area	527.85 acres
IRA Lands (1937 purchase)	1053.91 acres
Sugar Island (1937 purchase)	607.75 acres
-----	
<b>TOTAL BAY MILLS ACREAGE</b>	<b>2189.51 acres</b>

Although not federally recognized as an Indian reservation until 1937, occupation by Chippewa in Bay Mills has been continuous since at least 1848. Since this time, the inhabitants of Bay Mills have seen many changes in life styles and populations.

The opening of a lumber mill on Bay Mills Point in 1875 greatly affected the previously small, isolated Indian community. Within 20 years the area had expanded into a well developed town with a predominately white population of 1,900. In addition to the original lumber mill, 2 sawmills, a sash and blind factory, pulp and paper mill, post office, railroad, and 2 churches developed here. During the life of this town, many houses were constructed within the Indian community. In addition, employment was available, outside of fishing and hunting. A fire in 1904 destroyed this town at Bay Mills, and decreased the population to about 75. At this time, the Bay Mills Indian community returned to a more traditional life style of predominately fishing and hunting and remained quite isolated and primitive until fairly recently. The community's size has been largely dependent on food and employment availability. Many left Bay Mills in the 1920's for work in Raco and later to Sault Ste. Marie where more work became available.

Rustic and isolated living conditions for those remaining at Bay Mills continued for a long time. Similar to their ancestor's movements in response to seasons and food supplies, many Bay Mills residents migrated from summer homes along the shores to more substantial log dwellings inland a mile or so during harsh winter months. With a school located within the community until 1938 and no road until this time, the Bay Mills community became totally isolated in the winter. Food had to be brought in before the winter set in and stored in the ground to be used throughout the winter with occasional groceries brought in by sled.

Factors which aided in ending the isolated nature of Bay Mills began in the late 30's with the construction of the main road as far as the lighthouse. This road remained gravel until the 1950's. Cars started turning up at Bay Mills during the rum-running days and electricity was extended to the community in 1948.



With the closing of the Bay Mills school in 1938, students attended the public school at Brimley. Those attending the Brimley school had to walk to the dump road on the south end of the reservation to wait for the bus, many walking from as far away as the lighthouse. Community life has always been an important aspect of the Bay Mills community with many activities provided through the school and church including 4th of July festivals and Saturday night square dances with Gros Cap.

Bay Mills people previously were employed at a lumber mill, leather tannery and dredging firms mostly located Sault Ste. Marie. Also in 1937, an Indian Camp modeled after the Civilian Conservation Corps started at Bay Mills paying \$1.00 per day plus room and board. Those working here were involved in work such as planting trees, cutting wood and constructing roads and irrigation ditches on the reservation.

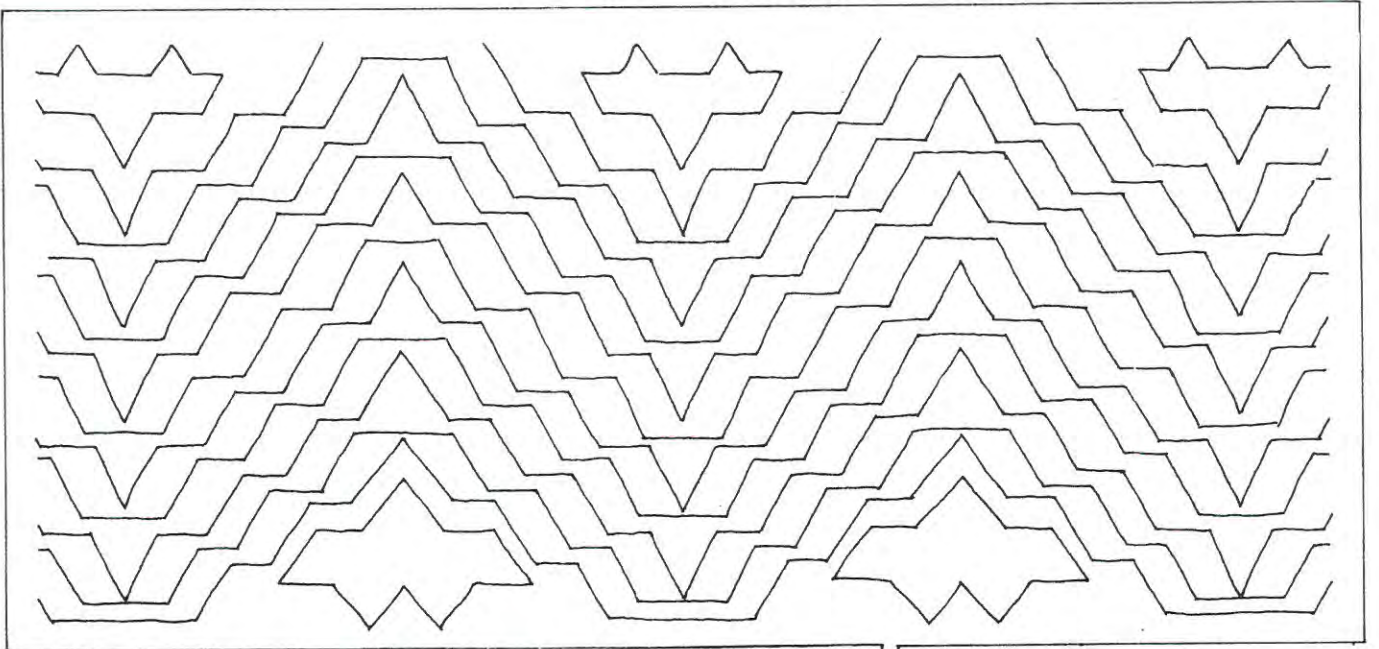
Fishing too, has always been a major part of life at Bay Mills. Fish prices were 1½ to 3 cents per pound for herring in the 1930's at which time fish had to be dressed, boxed, iced and taken to Brimley to be shipped by train. During the early 1900's many Bay Mills fishermen became employed by white commercial fishing firms which had developed in the area. Employment with white commercial firms continued through the 1960's, since Bay Mills people could not afford to buy state commercial fishing licenses and other equipment needed to set up individual operations. Gradually, Bay Mills fishermen who could afford state licenses, began commercial fishing operations.

Dramatic changes have occurred at Bay Mills since the period of minority awareness in the late 60's and early 70's. At that time government funding and services were extended to Michigan Indian reservations. These changes were most evident in the higher involvement of the community in tribal government, increased employment opportunities, upgraded housing quality and availability and an overall relatively high standard of living.

Over the past 20 years it is believed that the Bay Mills population has doubled with additional members desiring to move here. The sense of place and community prevails here. No matter where a person goes, the reservation is home. The past history of Bay Mills reflects white America's neglect of the native population. Current activities and the future of Bay Mills will be the result of Bay Mills efforts to shape it's own destiny.

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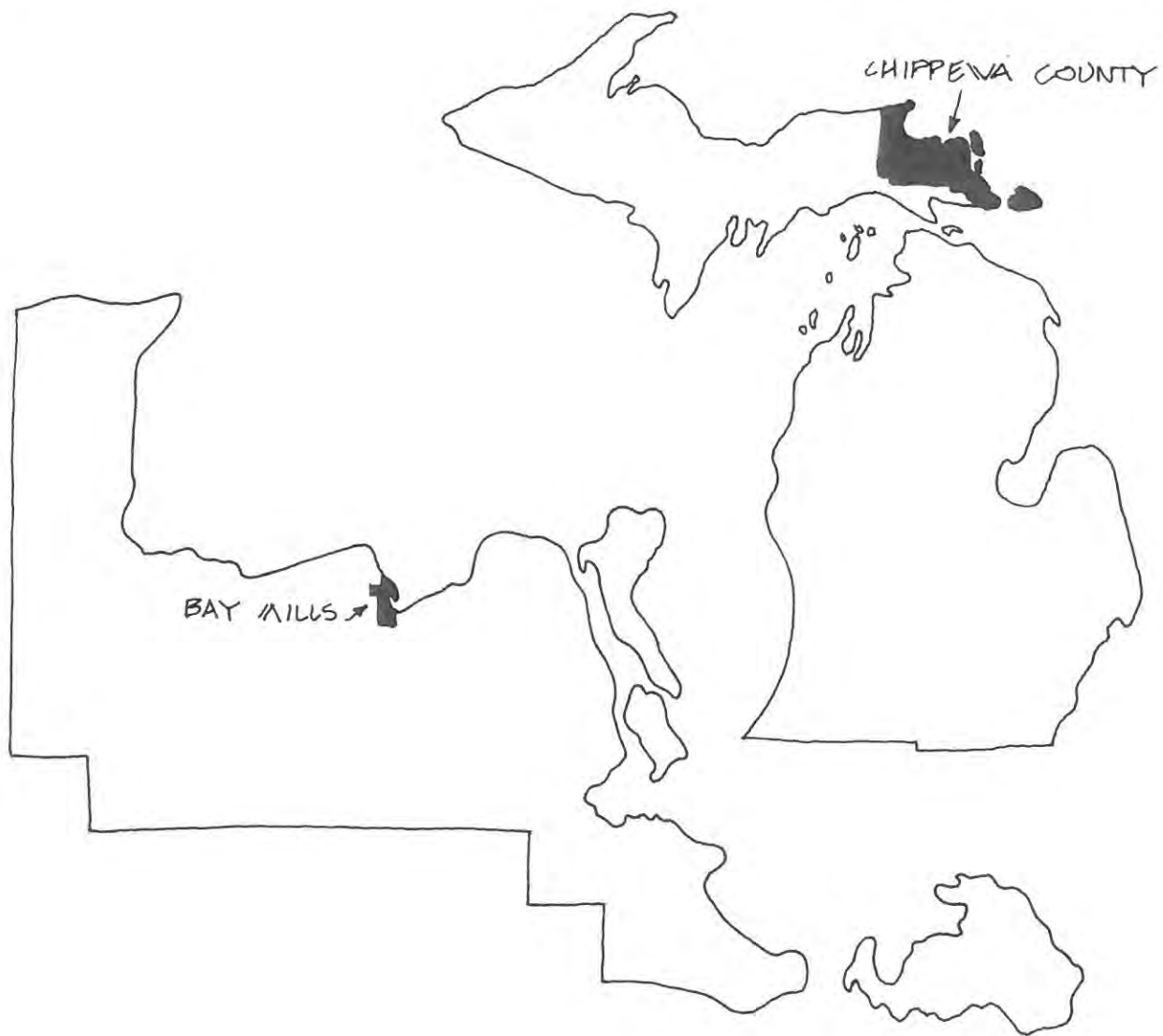


REGIONAL CONSIDERATIONS

## Introduction

The purpose of this section on regional considerations is to place the situation of Bay Mills into the context of activities in the Eastern Upper Peninsula. Clearly the activities, resources and services available within the region place the conditions of Bay Mills into perspective, as Bay Mills will share many of the limitations and opportunities available regionally.

For that purpose, there is discussion of regional demographics, economic activity, environment, the regional transportation net, higher education and housing. In addition, the political and social situation, as a context for Bay Mills, is briefly covered. All these areas are covered as an outline for proceeding with the more specific activities at Bay Mills. Throughout the plan, additional specific comparisons between Bay Mills and the region will be made, to highlight by comparison.



Bay Mills is located in the Eastern Upper Peninsula, an area long marked by limited job opportunities and sparse and declining population. The area does not contain a Standard Metropolitan Statistical Area (SMSA) and is more than 200 miles away from any large urban center. It contains three communities of notable size: Sault Ste. Marie (25 miles from Bay Mills, population about 15,130) Newberry (50 miles from Bay Mills, population about 2,500) and St. Ignace (60 miles from Bay Mills, population about 3,000). Kincheloe Air Force Base (KAFB) with a population of 8,000 is the second largest population center in the area. This base has tentatively been ordered closed by the Department of Defense, which would result in substantial loss of income to the area and loss of some jobs to Bay Mills.

Over 41 % of the 13,000 jobs in the region are government, though the possible closing of KAFB would cause a decline in this sector. Less than 5% of the region's jobs are in manufacturing and approximately 20% in wholesale or retail sales. Remaining jobs are in farming, construction, communications, transportation, finance and mining. Unemployment in the area is usually two to three times the state average.

The Soo Locks are a major economic feature, both for its employment opportunities and the tourists it attracts. Other major tourist development in the area includes state parks and national forests. Bay Mills is located immediately adjacent to Hiawatha National Forest and close (5 miles) to Brimley State Park. Park season is realistically, however, only about four months of the year, between Memorial Day and Labor Day.

Remote location, harsh climate, lack of resources and development facilities all serve to hinder development in the region. Though major thoroughfares are in good condition, supplemental roads are not as well maintained and the bridges in the area are in very bad shape, through a bond for extensive bridge repairs was recently passed.

Sault Ste. Marie is the northern terminus of Interstate Highway 75, a four lane divided highway and the major north-south access to the Mackinac Bridge, a toll bridge, which is the only link to the lower part of the state. This road passes 15 miles from the reservation. Other major highways in the area are M-28 running east-west and passing 6 miles south of the reservation, M-123 running north-south to Paradise passing 25 miles west of the reservation and Lake Shore Drive which follows the south shore of Whitefish Bay and passes thru the reservation.

Lake Superior State College (LSSC) is a new and growing institution in the region and has had a strong positive impact on the expectations of educational attainment levels. Educational attainment within the region is low, with median years of school completed at 11.7, below the state median of 12.1.

Health care in the area is inadequate, with people frequently traveling to Canada or downstate for serious illness.

Housing in the area is in high demand and in short supply and thus, very expensive. This is believed to be because of the demand from KAFB, LSSC and tourism. The proposed closing of KAFB is expected to decrease the demand for housing.



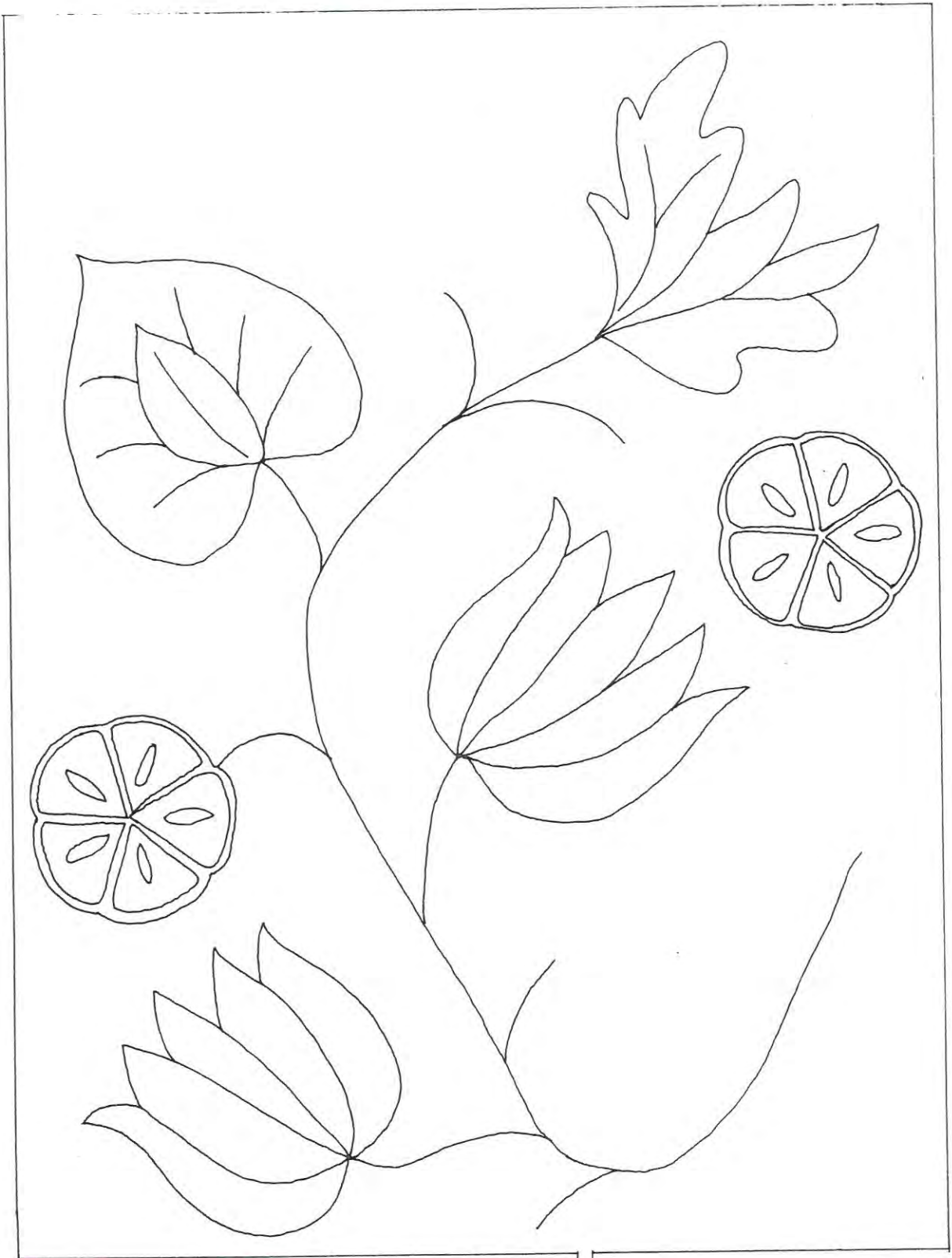
Plans for the region are developed by the Eastern Upper Peninsula Planning and Development District (EUPPAD). The region is part of the Upper Great Lakes Regional Commission. Township development plans are being developed by EUPPAD, working with local committees. EUPPAD has taken a progressive position regarding efforts at Bay Mills but is responsible for a considerable amount of other work.

Federal and State Legislative Representatives from the area are spread thin, with general concern for the larger region rather than the Indian population exclusively. Relations between the Bay Mills Community and local elected officials seem mixed, depending upon the personalities involved. Relations with other government agencies seem cordial, especially with the U.S. Forest Service, an adjacent neighbor and the Federal Fish Hatchery, a very important segment of the fishing community.

Relations with local law enforcement agencies are mixed. The State Police and Chippewa County Sheriff's Department get high marks. There have been serious problems with the behavior of some members of the Soo Police Department that have led to several civil rights suits regarding physical abuse of Indian youths. There have been repeated clashes with the State Department of Natural Resources over fishing and hunting questions, though these clashes are not as heated as they have become elsewhere in the Eastern Upper Peninsula. Despite policy level differences, progress towards accommodations has been made and local DNR staff is cooperative.

Relations with local non-Indian neighbors have been generally improving though there are some prejudiced individuals. In other areas of the Eastern U.P. and northern lower peninsula, discrimination and hostility occurs much more frequently, usually triggered by inflammatory interpretations of Indian fishing rights.

Though struggling to overcome the cumulative effects of past neglect and discrimination, and located in an area suffering declining fortune, Bay Mills is assuming a more prominent position as a community in the Eastern Upper Peninsula.



LAND USE



## Introduction

Land is an irreplaceable resource which has both potential and limitations in meeting the needs of the Bay Mills Community. Development is inevitable but with proper planning it can occur in such a way that the type community desired by Bay Mills can be realized. Since the land base and its capacity for supporting development is limited, planning for the use of Bay Mills land is especially important to insure protection of a quality community, environment and avoidance of conflicting uses. The limited availability of suitable land within the existing land base of Bay Mills makes acquisition of additional land a top priority in meeting future land use needs of the community.

To effectively plan the use of land within the existing land base or any additional land acquired, many factors must be taken into consideration. The present and future land use section of the Bay Mills Comprehensive Community Development Plan combines the community's land use needs with the environmental capacities of the land. Beginning with an environmental inventory of the land of Bay Mills, the capabilities and considerations of this physical environment is integrated with the community's land use needs into a future land use plan.

The inventory includes geology, topography, soils, hydrology, vegetation, wildlife, climate as well as existing land use for residential, recreational, community use, historical and cultural, agricultural, commercial and transportation. Future land use projections are made for the areas mentioned. Suitability by natural factors are delineated, expansion recommendations made, and finally general location recommendations are made, including administrative guidelines.

Also included is a brief presentation on Whitefish Bay. Although it is the major natural resource of the Bay Mills Community, community information is sketchy and anecdotal. It is hoped this section will encourage the pursuit and accumulation of the specific data necessary for the best management of this substantial resource.

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## LAND USE ENVIRONMENTAL INVENTORY AND LAND USE CONSIDERATIONS

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### Inventory

The natural environment of the Bay Mills Community, in particular the soils, topography and water systems, is a result of various geological processes which gradually shaped this area. Cambrian red sandstone<sup>1</sup> and Upper Cambrian and Lower Ordovician sandstone and sandy dolomite<sup>2</sup> constitute the igneous and metamorphic bedrock underlying Bay Mills. Deposits overlying the bedrock here as well as in all of Chippewa County consist of several sedimentary rock units formed 230,000,000 to 620,000,000 years ago when all of Michigan was invaded by a succession of warm shallow seas. Following this marine period, four major glaciers altered and formed the main physiographic features of the Bay Mills Reservation. Lake Algonquin, covering this area during the last glacial stage, deposited a heterogeneous mixture of rock debris or glacial drift on the surface, extending to a depth of 50 feet or more.

The surface deposits of Bay Mills are of two types; lake plains and till plains. The majority of the reservation, the lake plain areas, consist of layers of clay, silt and fine sand of low permeability which contain layers of sand and gravel with relatively high permeability. The till plain areas, located in a small portion of the reservation's southwest end consist of areas with little surface

relief underlain by thin unstratified glacial drift consisting of clay, sand, gravel and boulders intermingled.

(Map references: Bedrock Geology, Surface Deposits).

### **Environmental Considerations**

The geological characteristics of the area are considered in determining future land uses primarily because bedrock may pose limitations for development when too close (less than 10 feet) to the surface.

No restrictions arise on the Bay Mills Community due to bedrock since it lies 50 to 200 feet below the surface. However, the geological processes which occurred here are important since they have determined today's soils, drainage patterns, topography and general physiographic characteristics. The environmental capabilities and limitations of these resulting features are discussed in following sections of the land use report.

## **TOPOGRAPHY**

### **Inventory**

Directly related to the glacial deposits is the surface configuration of the Bay Mills Community. The elevation of the reservation varies from 600 to 700 feet above mean sea level, consisting of generally very level terrain with a slope of 10% or less meaning that the land rises in elevation 10 feet or less for every 100 feet change in horizontal distance. However, extending north and south along the western boundary of the reservation is Mission Ridge which enters the southwest corner and a small segment of the northwest corner south of Spectacle Lake. Another small ridge in the northeast corner near Gumshoe Lake and a dune area north of south pond are included in the reservation. These three areas, with slopes of 20% to 60% add variety to the basically level terrain found on the reservation. (Map Reference: Slope)

### **Environmental Considerations**

Topographic characteristics of an area indicate how gradually or steeply the land rises or falls and in extremely flat areas, where there is likely to be excessive water. Additional expense and other limitations arise in areas of slopes greater than 12% which on the Bay Mills Reservation occurs only in the three small areas mentioned above. Areas of relatively no slope are of greater concern in relation to Bay Mills since there is a greater susceptibility to poor water drainage. This concern is considered in greater detail in the hydrology section.

(Map Reference: Slope/Suitability)


# BAY MILLS INDIAN COMMUNITY


BRIMLEY, MICHIGAN

SCALE 1" = 1500'

NORTH

## BEDROCK GEOLOGY

 CAMBRIAN RED SANDSTONE

 LOWER CAMBRIAN AND LOWER ORDOVICIAN SANDSTONE AND DOLOMITE

DEPTH OF BEDROCK ABOVE SEA LEVEL 500 FT

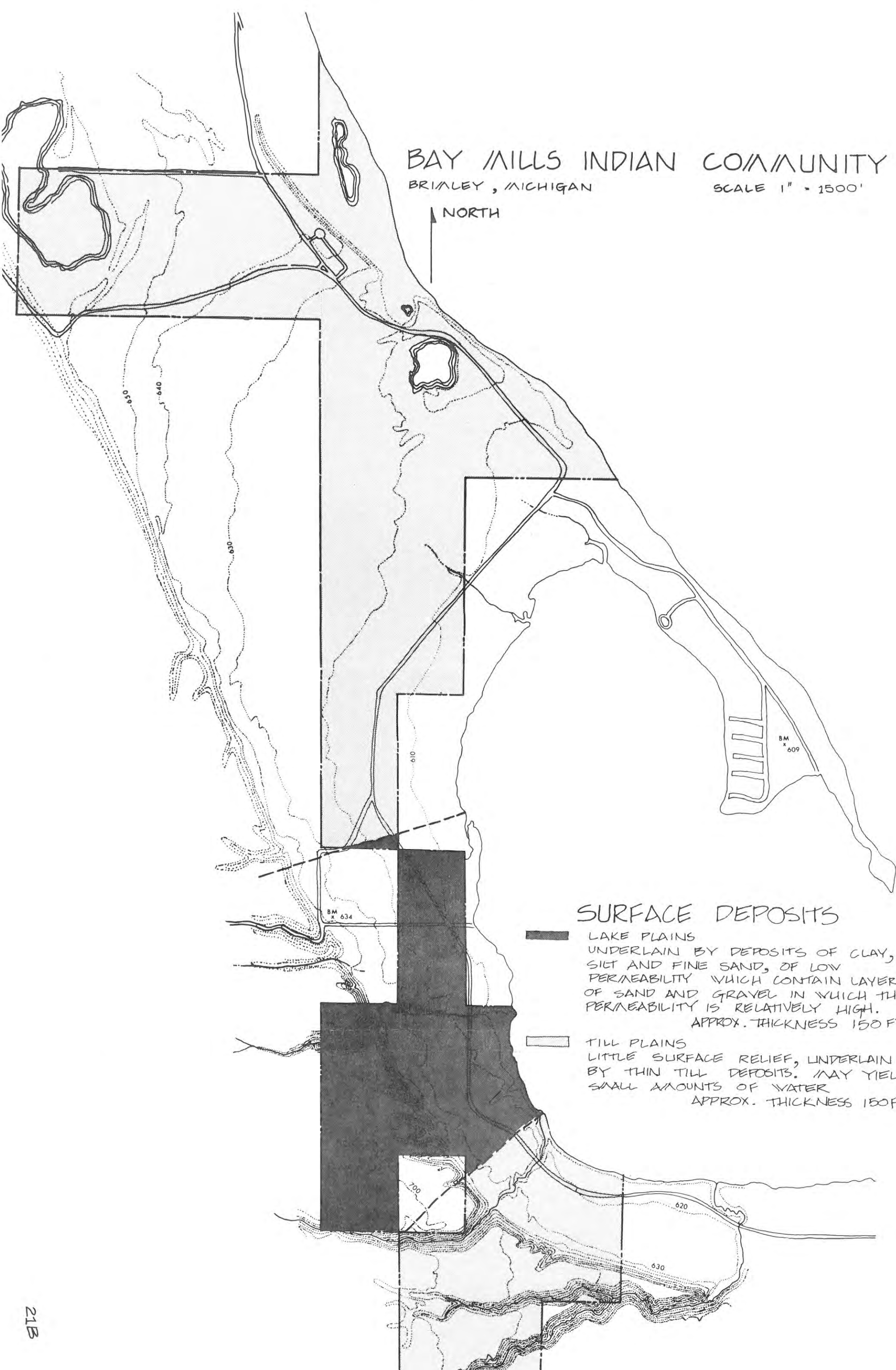


# BAY MILLS INDIAN COMMUNITY



BIRLEY, MICHIGAN

SCALE 1" = 1500'

NORTH



## SURFACE DEPOSITS

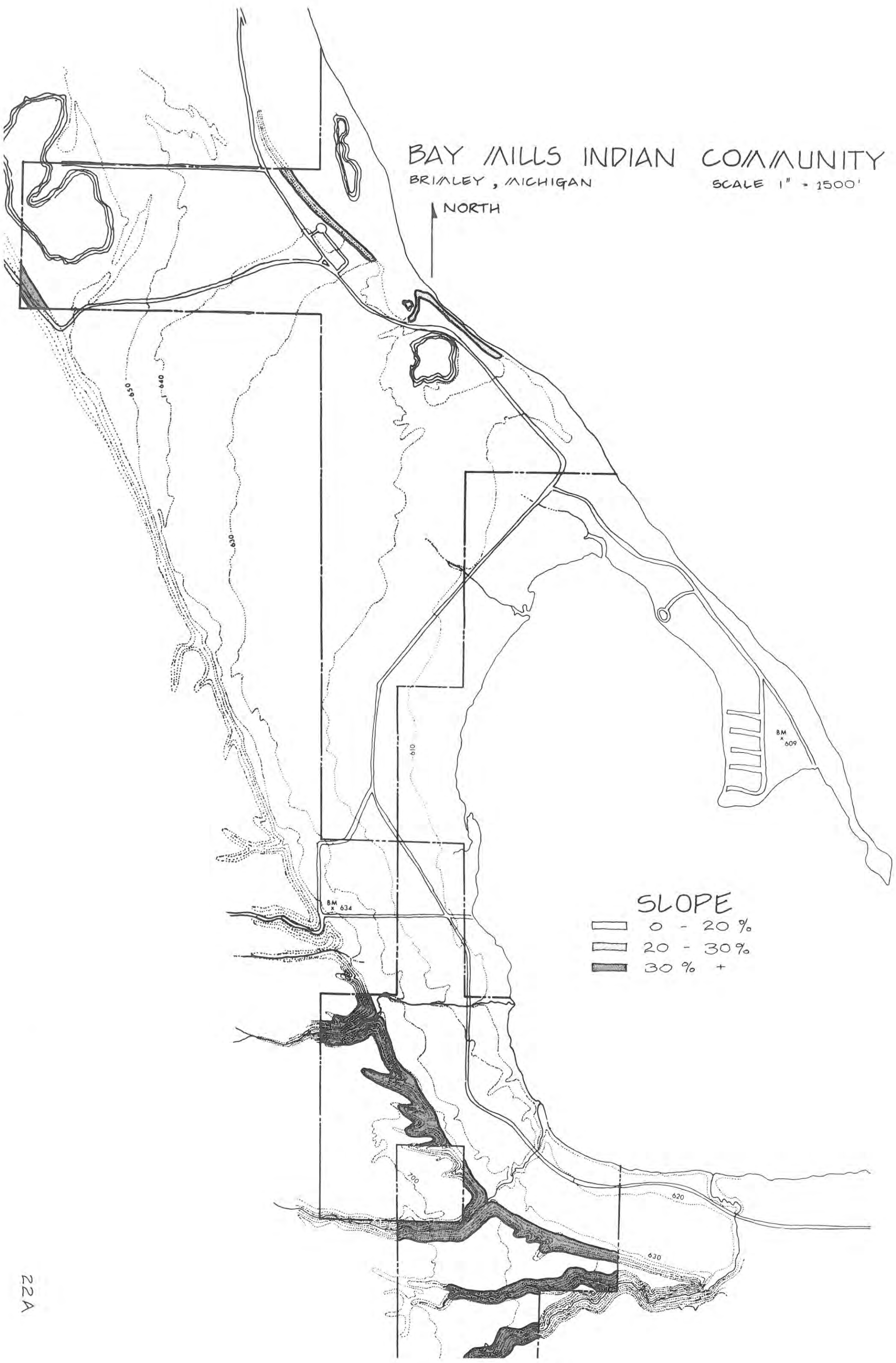
-  LAKE PLAINS  
UNDERLAIN BY DEPOSITS OF CLAY, SILT AND FINE SAND, OF LOW PERMEABILITY WHICH CONTAIN LAYERS OF SAND AND GRAVEL IN WHICH THE PERMEABILITY IS RELATIVELY HIGH.  
APPROX. THICKNESS 150 FT.
-  TILL PLAINS  
LITTLE SURFACE RELIEF, UNDERLAIN BY THIN TILL DEPOSITS. MAY YIELD SMALL AMOUNTS OF WATER  
APPROX. THICKNESS 150 FT.

# BAY MILLS INDIAN COMMUNITY

BRIMLEY, MICHIGAN

SCALE 1" = 1500'

NORTH



## SLOPE

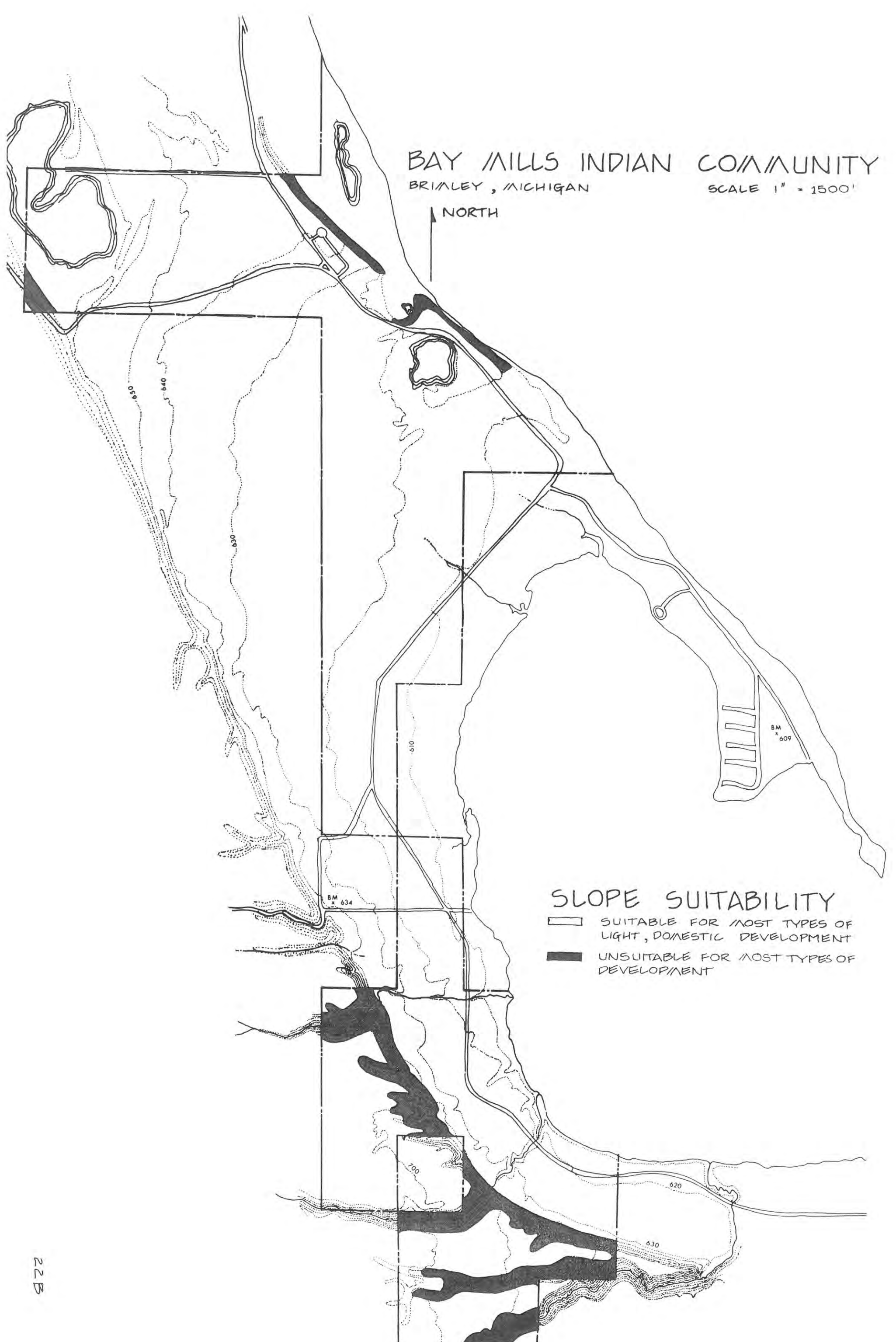
- 0 - 20 %
- 20 - 30 %
- 30 % +

# BAY MILLS INDIAN COMMUNITY



BRIMLEY, MICHIGAN

SCALE 1" = 1500'

NORTH



## SLOPE SUITABILITY

-  SUITABLE FOR MOST TYPES OF LIGHT, DOMESTIC DEVELOPMENT
-  UNSUITABLE FOR MOST TYPES OF DEVELOPMENT



## SOILS

### Inventory

Also resulting from the geological processes of this area are the soils of the Bay Mills Community. These soils, like most soils of the Upper Peninsula, were weathered and broken down from glacial drift and glacial lake sediments forming today's soil types. Chippewa County's soils range from clayey and loamy soils to sandy, wet sandy and organic soils. On the Bay Mills Reservation the setting is much the same with soils ranging from sands to mucks and well drained to very poorly drained soils. Generally drier sandy soils are found in the northern end of the reservation with poorly drained mucks and impermeable clays more frequent in the southern end.

(Map Reference: Soils)

A 1975 U.S. Soil Conservation Service survey provided soil data for the northern end of the reservation known as the Bay Mills Mission area, comprising 527.85 acres in sections 18, 19 and 24, T. 47N, R. 2 & 3 W. South of this area soil data was available only through a 1927 Department of Agriculture soil survey of Chippewa County. Being a reconnaissance of such a large area, an updated soil survey of the south end is necessary for detailed site analysis of this area. The vegetative cover, vegetative requirements and hydrological data have been examined in conjunction with the 1927 soil data to provide generalized conditions, suitability and recommendations of the south end. However, updated soil tests are needed in making individual site decisions for this area. Until an updated soil survey is completed in the south end, individual soil analysis must be performed by site to confirm the capability of the soil.

### Environmental Considerations

The soils of the Bay Mills Community are the most decisive of the environmental features in determining harmonious land uses. The importance of evaluating soils is primarily related to the capacity to drain water and capability to support buildings. With the exception of soil types: Seney, Rubicon and Rousseau, (all located in the northern end of the reservation), there are several limitations for development, particularly for septic tanks, dwellings and commercial buildings. These limitations, based on the natural condition of the soils, stem from their wetness and high flooding potentials. Wetland areas have a low percolation rate in which the density of the soil particles slows the ability of water to seep through it. Soils which are extremely wet or have a high potential to flood will not absorb and filter sewage effluent properly, causing these wastes to remain at the surface and/or contaminate the ground water. Soils which are too sandy also cause limitations for septic systems in that the wastes will percolate too rapidly to be purified, polluting the ground water and wells. Soils with severe ratings as related to sewage absorption may possibly be modified in site or system design but this may be too difficult or expensive, therefore impractical.

Due to the adverse environmental and health effects of development in areas which are not capable of supporting such development, future development in these areas is strongly discouraged. On the reservation, future development (primarily residential and commercial) is recommended in areas with soil types Seney, Rubicon and Rousseau, which have few limitations regarding septic tank absorption fields and dwellings. These soil types are found in the northern

f the reservation. Some of this area is presently developed. The undeveloped areas are located in the pine plantation and southeast of the pine plantation. If, after sufficient soil tests and analysis, individual sites are found to be suitable for development in the south end, these sites could be developed.

In localities where the community's health and environment would be threatened by development on unsuitable soils, other land uses must be utilized. Remaining undeveloped, these areas will maintain and enhance the rural nature of the community as well as providing areas for hunting, snowmobiling and passive recreational uses.

Indirectly, these undeveloped areas will also be beneficial to the community by maintaining ground water supplies and providing wildlife habitat.

Map References: Soils for dwellings  
Soils for Septic Uses  
Soils for Roads  
Flooding Frequency

## HYDROLOGY

### Inventory — Ground Water

The ground water resources of the Bay Mills Community are directly related to the topography, soils and rock substratum. Since much of the community land is in low wet areas and/or characterized by a high water table it is conducive to high water retention. These wet regions are excellent areas for supplying ground water reservoirs providing a sustained flow of ground water to wells throughout the year.

The initial source of all ground water in the aquifers of Chippewa County is precipitation. With an average annual precipitation exceeding 30 inches, supply would more than satisfy foreseeable water needs if this rainfall entered into uniformly distributed permeable aquifers. However, most of this water does not enter the ground water reservoirs, but is lost through evaporation, transpiration and surface runoff to the Great Lakes drainage system.

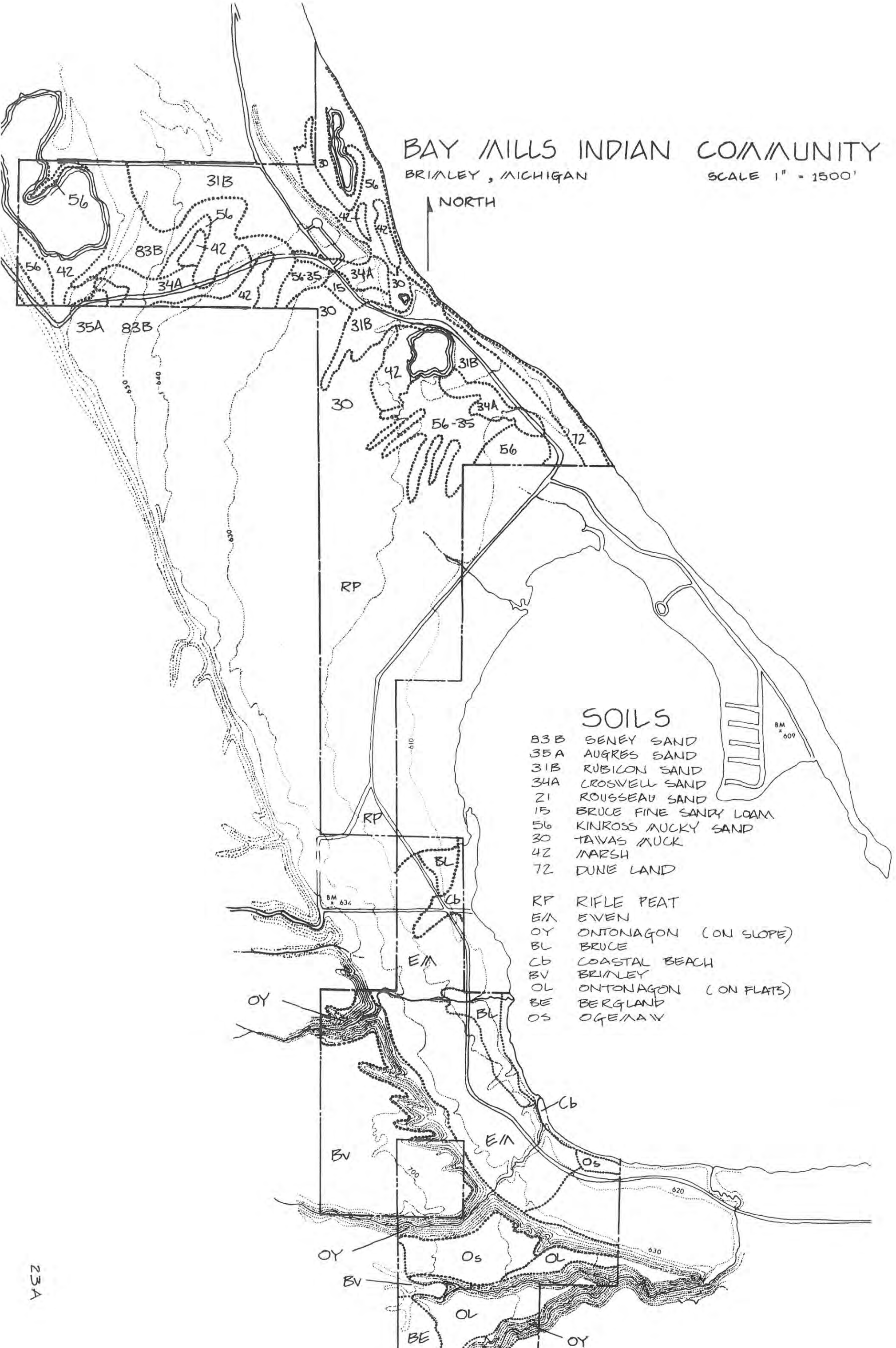
Ground water levels in Bay Mills as well as all of Chippewa County fluctuate with seasonal changes in the rate of recharge and discharge from the ground water reservoirs. During the spring thaw, water levels normally rise in response to the infiltration of rain and melting snow. Summer temperatures cause an increase in evapotranspiration and a reduction in the opportunity for recharge resulting in declines of water levels. In the fall, evapotranspiration losses are reduced and precipitation, after restoring depleted soil moisture, may cause rises in water levels. The summer decline stage may continue if precipitation is deficient or if an early general freeze impedes normal infiltration.

# BAY MILLS INDIAN COMMUNITY

BRIMLEY, MICHIGAN

SCALE 1" = 1500'

NORTH



## SOILS

- 83B SENEY SAND
- 35A AUGRES SAND
- 31B RUBICON SAND
- 34A CROSVELL SAND
- 21 ROUSSEAU SAND
- 15 BRUCE FINE SANDY LOAM
- 56 KINROSS MUCKY SAND
- 30 TAVAS MUCK
- 42 MARSH
- 72 DUNE LAND
  
- RP RIFLE PEAT
- E/M EVEN
- OY ONTONAGON (ON SLOPE)
- BL BRUCE
- CB COASTAL BEACH
- BV BRIMLEY
- OL ONTONAGON (ON FLATS)
- BE BERGLAND
- OS OGE/MAW

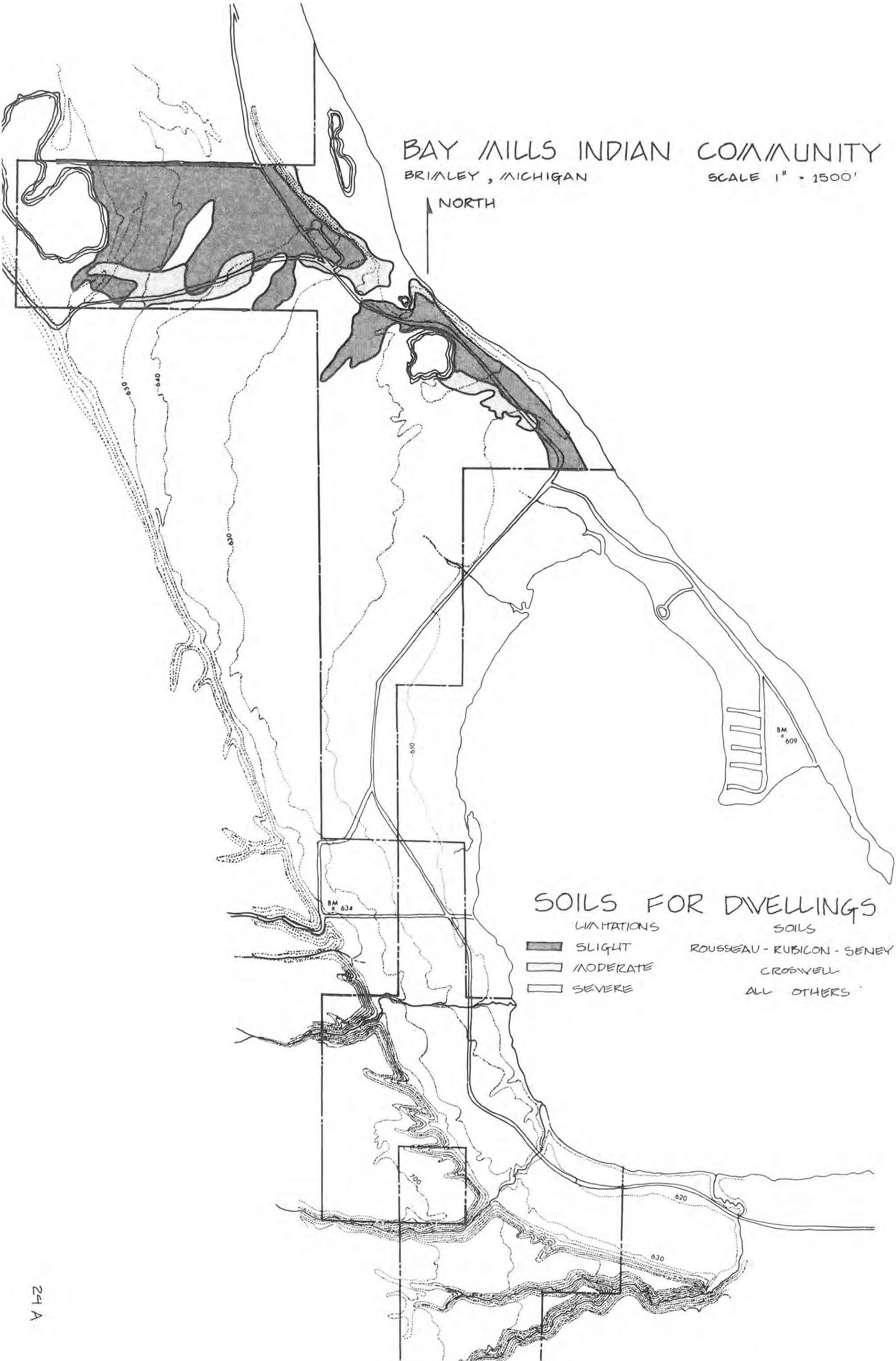


# BAY MILLS INDIAN COMMUNITY

BRIMLEY, MICHIGAN

SCALE 1" = 1500'




NORTH



## SOILS FOR DWELLINGS

LIMITATIONS

SOILS

-  SLIGHT
-  MODERATE
-  SEVERE

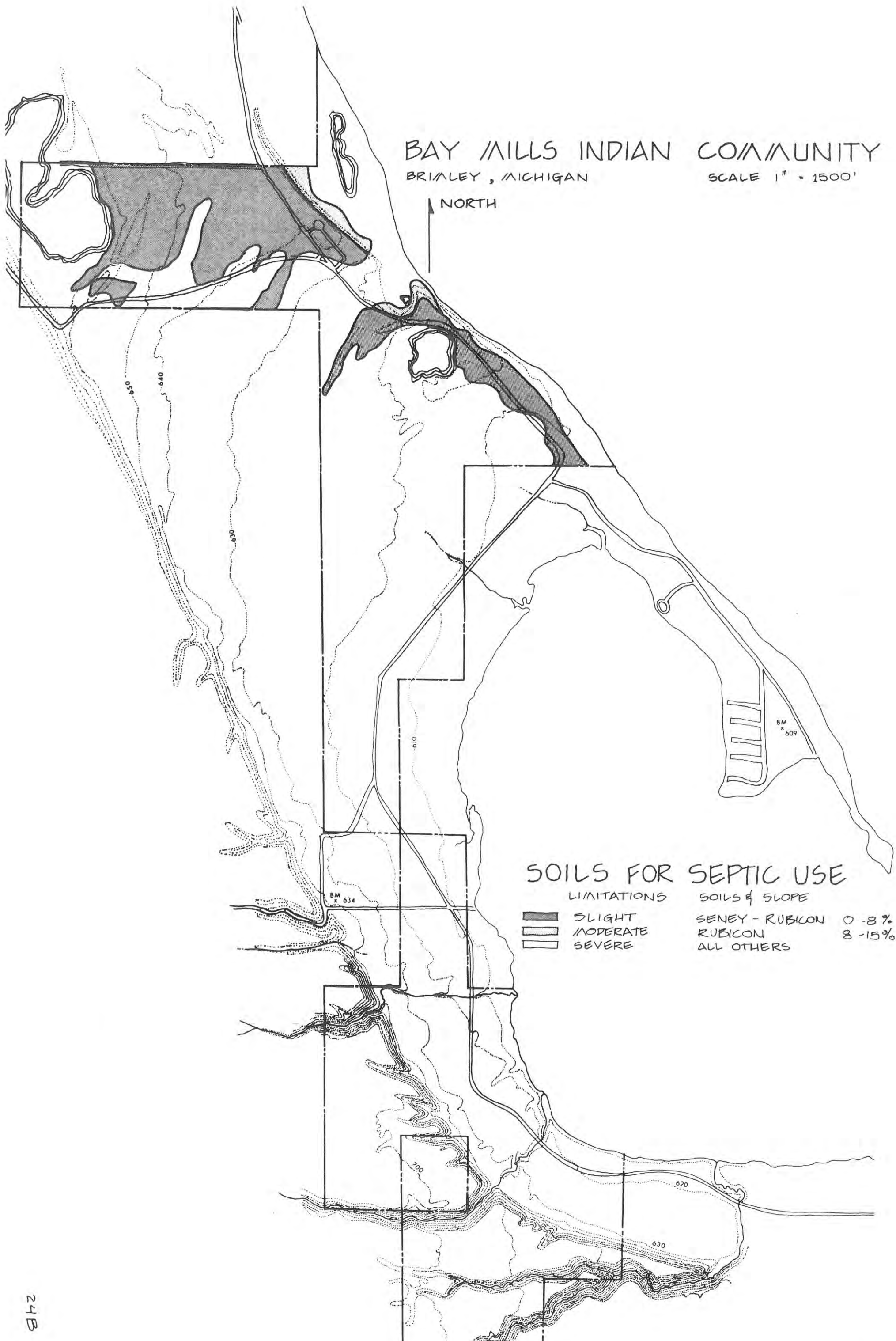
- ROUSSEAU - RUBICON - SENEY
- CROSSWELL
- ALL OTHERS

# BAY MILLS INDIAN COMMUNITY




BRIMLEY, MICHIGAN

SCALE 1" = 1500'

NORTH



## SOILS FOR SEPTIC USE

LIMITATIONS		SOILS & SLOPE	
	SLIGHT	SENEY - RUBICON	0 - 8%
	MODERATE	RUBICON	8 - 15%
	SEVERE	ALL OTHERS	



# BAY MILLS INDIAN COMMUNITY

BRIMLEY, MICHIGAN

SCALE 1" = 1500'

NORTH

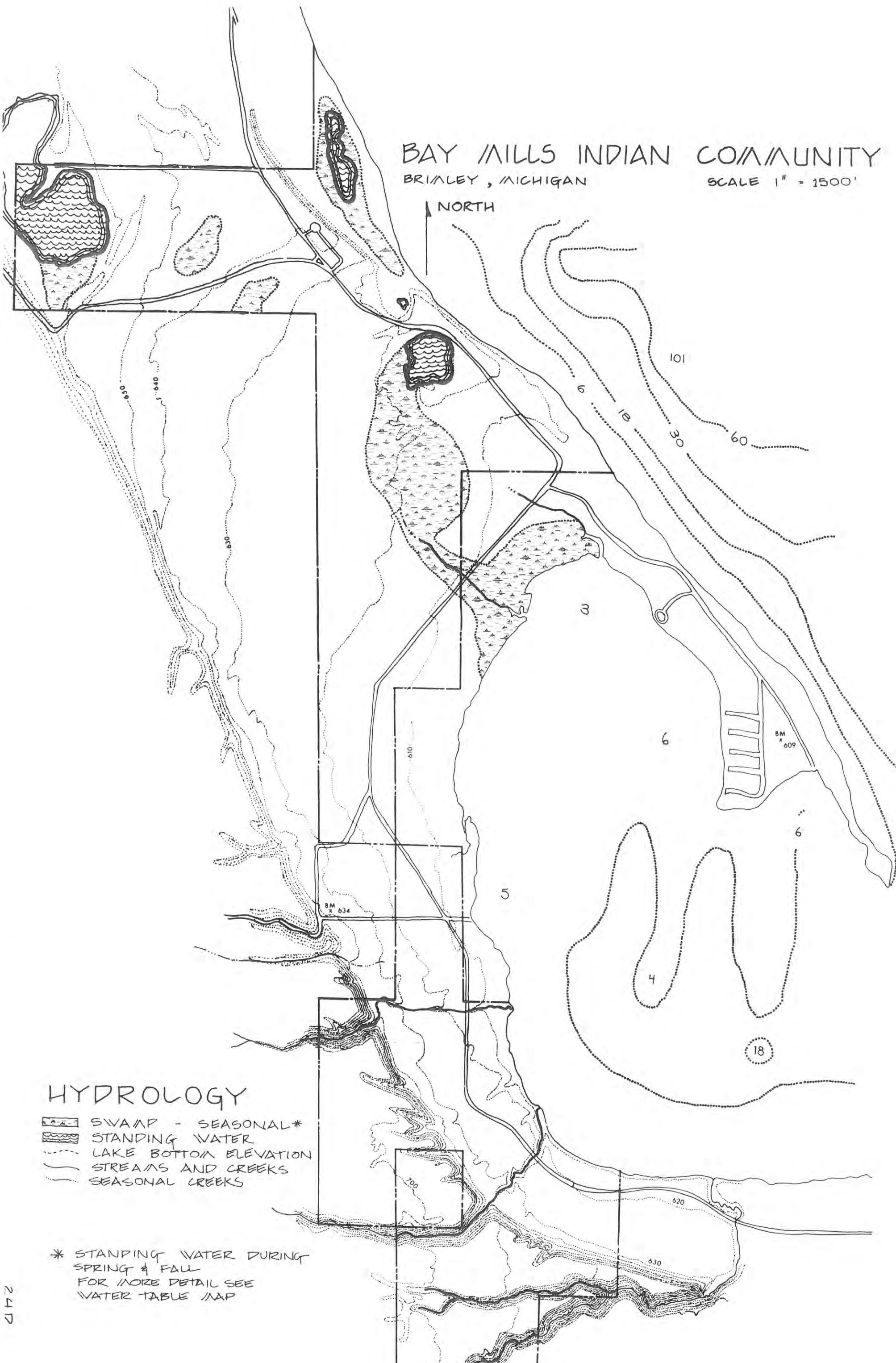


# BAY MILLS INDIAN COMMUNITY






BRIALEY, MICHIGAN

SCALE 1" = 1500'

NORTH



## HYDROLOGY

-  SWAMP - SEASONAL\*
-  STANDING WATER
-  LAKE BOTTOM ELEVATION
-  STREAMS AND CREEKS
-  SEASONAL CREEKS

\* STANDING WATER DURING  
SPRING & FALL  
FOR MORE DETAIL SEE  
WATER TABLE MAP

## VEGETATION

### Inventory

Forest cover of the Bay Mills Community consists of:

COVER TYPE	ESTIMATED ACREAGE	PERCENT OF COVER
Spruce Fir	221 Acres	18%
Swamp Hardwood	212 Acres	18%
Lowland Brush	202 Acres	17%
Swamp Hardwood/Aspen	100 Acres	8%
Aspen/Birch	100 Acres	8%
Spruce Fir/Lowland Brush	100 Acres	8%
Norway Pine	91 Acres	8%
Aspen	74 Acres	6%
Grass	63 Acres	5%
Aspen/Spruce Fir	26 Acres	2%
Spruce Fir/Swamp Hardwood	11 Acres	1%
Other	15 Acres	1%

During the 1920's this area was heavily cut over resulting in today's stands of aspen and hardwood populating the highlands and swamp conifers found in the lowlands. The red pine plantation located in the north western segment of the reservation, east of Spectacle Lake was planted in 1935 by the Civilian Conservation Corps.

(Map Reference: Vegetation).

### Environmental Considerations

Completely clearing the vegetation from a development site may result in detrimental effects to the site and to the activity on the site. Removal of all vegetation will destroy the natural character of the community as well as the benefits of the vegetative cover such as preserving site privacy, individuality and protection from noise, winds and snow. The visual appearance of the community and individual sites may be preserved by careful consideration of vegetative removal with removal only where necessary.

Harvesting timber of the Bay Mills Community for commercial purposes must follow a market analysis of such activity. A forest operating plan, including timber cutting recommendations has been provided to Bay Mills by the Bureau of Indian Affairs and is included in the appendix for reference. Potential woodland productivity based upon the soil capabilities is also included in the appendix.

(Map Reference: Woodlot suitability)



Recharge to the ground water is negligible in the winter because precipitation is predominately in the form of snow.

Wells and streams of the Bay Mills Community receive water of good quality in terms of temperature and freedom from mineralization and pollution. All well water on the reservation meets U.S. Public Health Service requirements for drinkable water.

**Surface Waters**

In addition to Whitefish Bay (refer to section on Whitefish Bay) surface water resources of the Bay Mills Community include three lakes, all found in the north end and various streams primarily located in the south end.

	AREA	DEPTH	BOTTOM TYPE	FISH SPECIES	EUTROPHIC STAGE
Spectacle Lake *(3)	88 Acres	Avg. 5'	1-3' Muck	Small Perch Northern Pike	Moderate
Gumshoe Lake	20 Acres	5' or less	Muck	Small Panfish Pike	Advanced
South Pond	10 Acres	5'- 10'	Muck		Advanced

All waters of this area travel towards and eventually drain into Whitefish and Waiska Bay. The numerous small streams and swamp areas indicate that the drainage system here is in an early stage of development.

(Map Reference: Hydrology).

**Environmental Considerations**

In many areas of the reservation, particularly in the south end, the ground water surfaces during various times of the year or is continuously at the surface such as in swamp and marsh areas. A main concern with surfacing or high ground water is contamination of ground water resources resulting from septic drainage fields which causes serious health threats to the community. Other problems arise when development occurs in wet areas such as flooding of dwellings and damage to structures. When considering development of a site, sufficient analysis must be performed to determine the likelihood of surfacing ground water. Development, without sufficient site modification is strongly discouraged in areas where this is an occurrence.

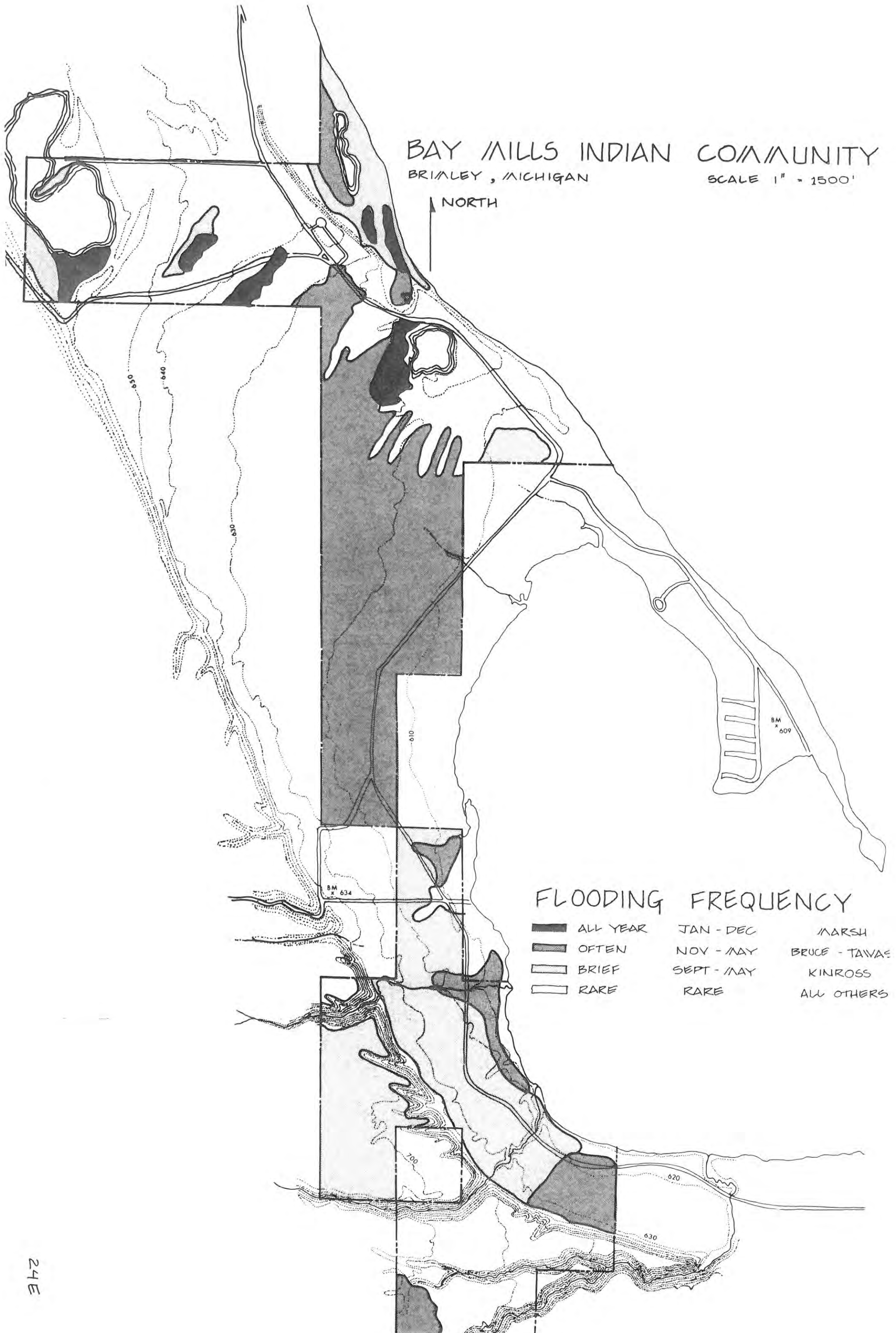
(Map Reference): Water Table  
Flooding Frequency

# BAY MILLS INDIAN COMMUNITY

BRIALEY, MICHIGAN

SCALE 1" = 1500'

NORTH



## FLOODING FREQUENCY

ALL YEAR	JAN - DEC	MARSH
OFTEN	NOV - MAY	BRUCE - TAVAE
BRIEF	SEPT - MAY	KINROSS
RARE	RARE	ALL OTHERS

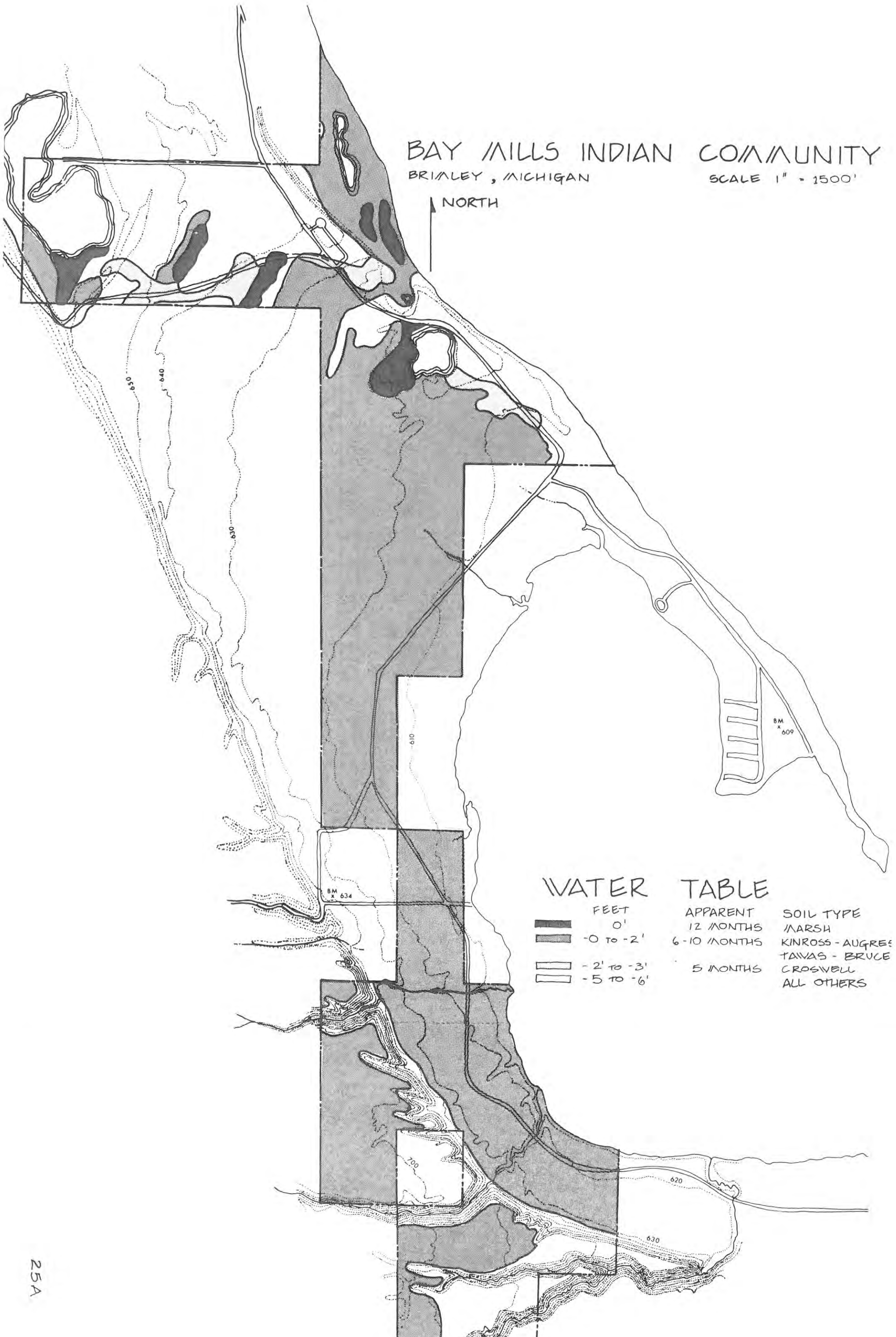


# BAY MILLS INDIAN COMMUNITY

BRIMLEY, MICHIGAN

SCALE 1" = 1500'

NORTH



## WATER TABLE

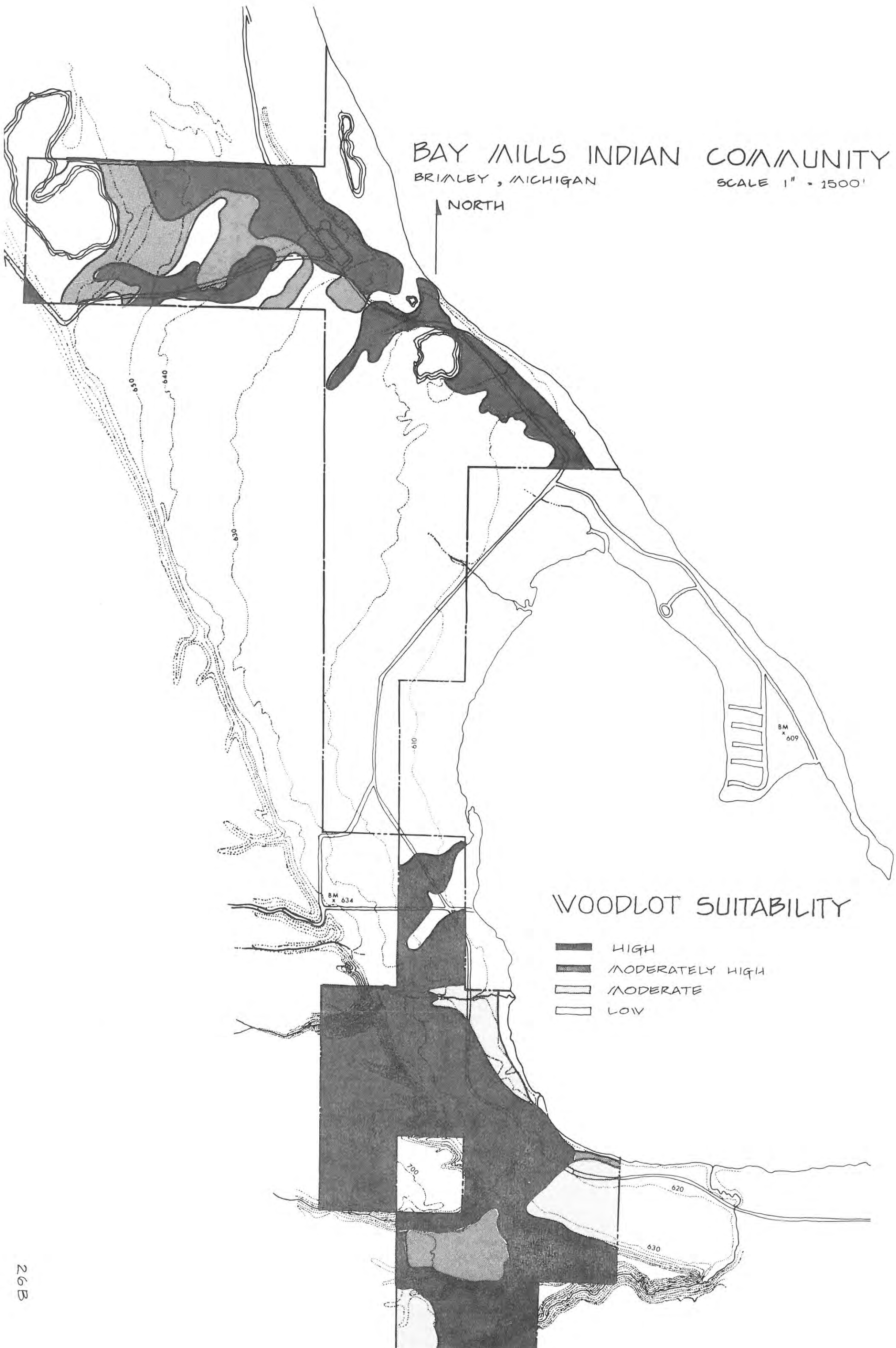
FEET	APPARENT	SOIL TYPE
0'	12 MONTHS	MARSH
-0 to -2'	6-10 MONTHS	KINROSS - AUGREE
-2' to -3'	5 MONTHS	TAWAS - BRUCE
-5 to -6'		CROSWELL
		ALL OTHERS

# BAY MILLS INDIAN COMMUNITY





BRIALEY, MICHIGAN

SCALE 1" = 1500'

NORTH



## WOODLOT SUITABILITY

-  HIGH
-  MODERATELY HIGH
-  MODERATE
-  LOW

## **WILDLIFE**

### **Inventory**

The availability of food, cover, water and living space will largely determine the kind and abundance of wildlife that populate an area. The Bay Mills Community provides these habitat requirements for both woodland and wetland wildlife species. In addition, the rural and largely undeveloped nature of the reservation and surrounding area increase the attractiveness of this area for wildlife.

Wildlife which have been observed at Bay Mills include: deer, bear, porcupine, beaver, sandhill crane, loon, racoon, snowshoe hare, fox, possum, muskrat, grouse, moose, wolf, mink, otter and a variety of bird species.

### **Environmental Considerations**

Various elements determine the abundance of wildlife in an area, some of which man has a great deal of control. Among these, over hunting may greatly diminish a species. Removal of vegetation (especially low brush young grown) and further development of an area will diminish habitat availability for wildlife.

Many localities which are unsuitable for development are ideal for maintaining wildlife habitat. In addition, in areas of development, preservation of present wildlife habitats as much as possible will help preserve the variety of wildlife found here. Conservation codes controlling the catch of wildlife will aid in a continuing supply of those species such as deer and snowshoe hare, which are utilized for food supply.

(Map References: Wetland Wildlife Support — Woodland Wildlife Support)

## **CLIMATE**

### **Inventory**

The climatological data included here was taken from the Sault Ste. Marie weather station's annual summary and comparative data. It must be kept in mind that since Bay Mills is located 20 miles west of Sault Ste. Marie and directly on the shore of Whitefish Bay, the weather is generally more extreme here. For example, winter temperatures tend to average 10° colder at Bay Mills, there is generally more snow accumulation here and wind speeds are more extreme. However, since the Sault Ste. Marie weather station is the nearest station with climatological records it is used here to describe the general climate of Bay Mills.

Bay Mill's climate is influenced by it's proximity to the Great Lakes, particularly Lake Superior. Temperatures are moderated to an extent in the winter and summer due to the surrounding lakes although the winters here are comparatively cold and summers are quite cool. The freezing of Whitefish Bay and subsequent loss of its moderating qualities by mid December until around April, causes the already harsh winter winds and temperatures to be much more severe. Annual temperatures average around 40° F. 16.5° F. is an average winter temperature, although temperatures below 0° are common. A record low temperature of -37° F. was recorded in February of 1934. Summer temperatures average around 62 F. with a record high of 98° in August of 1947. (Reference Temperature Chart)



Weather changes are frequent in this area due to the many pressure systems passing through this section of the United State and Canada. Southeast surface winds usually carry summer rains while winter snows most often accompany northwest winds. The mean wind speed in the area is 9.6 MPH with a prevailing west, northwest direction.

Unpredictable and often dangerous storms are frequent here in the spring and fall causing hazardous lake conditions. On November 11, 1975, a storm with winds recorded as high as 90 MPH resulted in lake conditions severe enough to sink the 600 foot ore freighter "Edmund Fitzgerald" in addition to several fishing boats. The lives of many Bay Mills fishermen were nearly lost when caught by this same storm.

(Reference Chart: Wind Speed and Direction)

The nearness to the Great Lakes increases the amount of cloudiness and precipitation in this area. Precipitation here ranges from 24" to 34" annually and is well distributed throughout the year. Much of this precipitation is returned to the atmosphere by evaporation which is controlled by temperature, humidity, solar radiation and wind velocity.

(Reference: Precipitation Chart)

Sunshine values average low, especially in the winter months. Daylight during most of June and July will last almost 16 hours but will shrink to less than 9 hours in late December. The average frost free growing season is 112 to 148 days from the middle of May to the first of October. May 10 to May 20 is the average date of the last 32° F. or lower temperature, with late November being the average time for appearance of a snow cover that will last throughout the winter to finally disappear around April 9th. Snowfall will average between 60" and 120" providing a fairly heavy but generally manageable snow cover.

(Reference: Snowfall Chart)

### **Environmental Considerations**

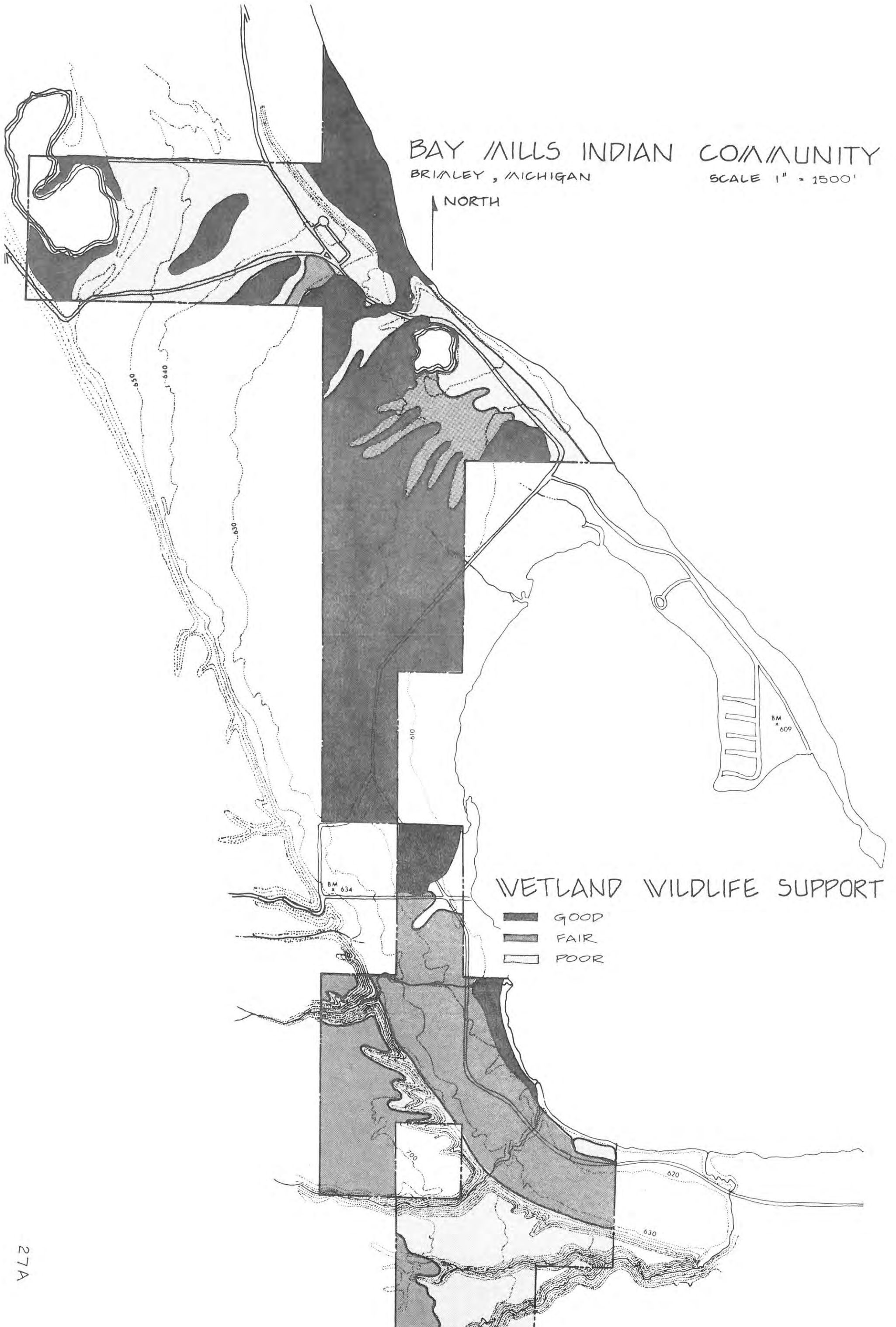
The weather of Bay Mills, particularly winds, temperature and snowfall, is important to consider in determining site location, site planning and materials to be used in construction. Sites utilized for dwellings, buildings, recreation and other uses must be examined individually since each site interacts with climatic elements in a unique way. Orientation and design of structures within a particular site may be planned in relation to such elements as wind speed and direction, temperature, sun paths, snowfall and rain to provide maximum protection from and advantage of these characteristics.



BAY MILLS INDIAN COMMUNITY  
BRIMLEY, MICHIGAN

SCALE 1" = 1500'

NORTH



WETLAND WILDLIFE SUPPORT

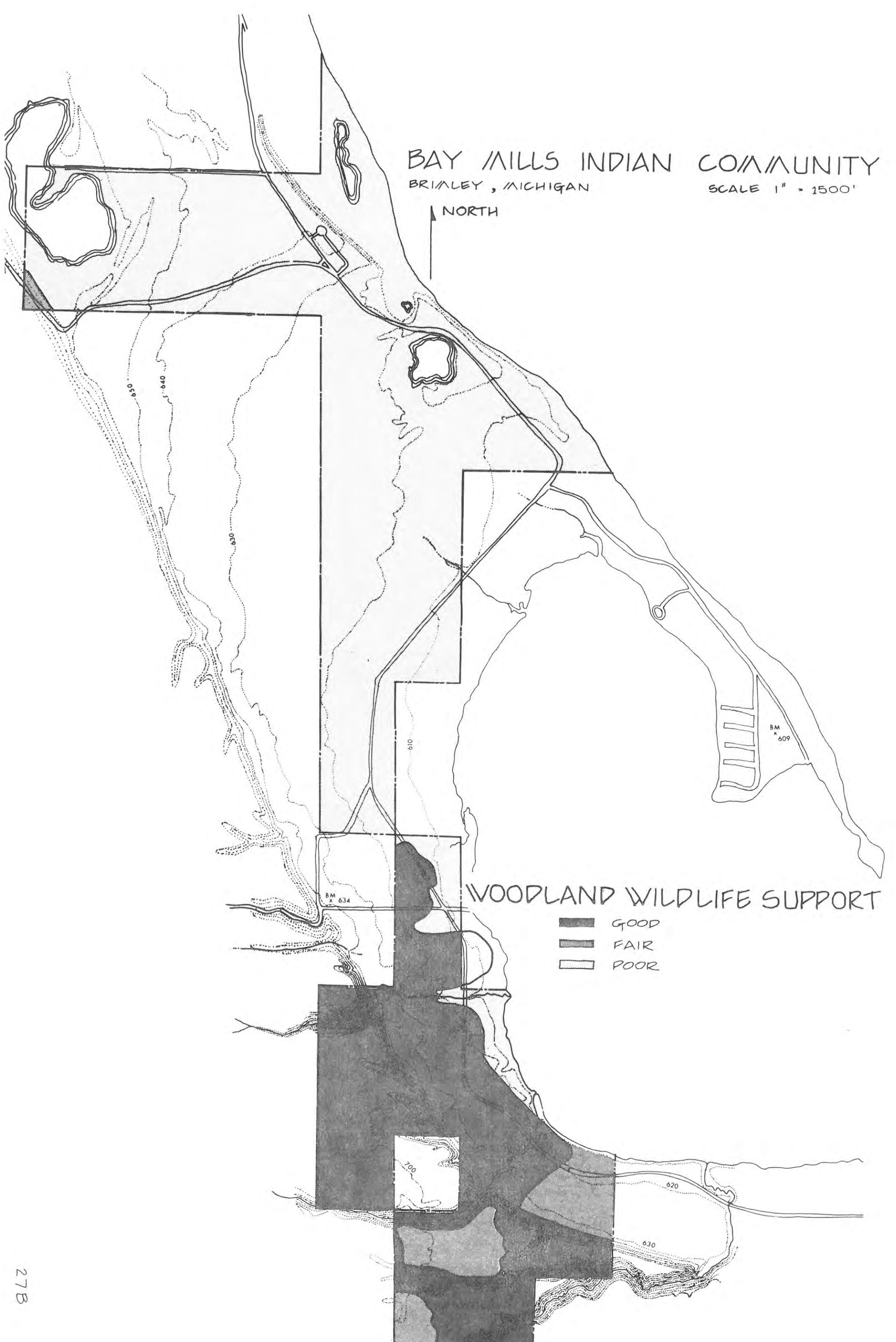
- GOOD
- FAIR
- POOR

# BAY MILLS INDIAN COMMUNITY

BRIMLEY, MICHIGAN

SCALE 1" = 1500'

NORTH

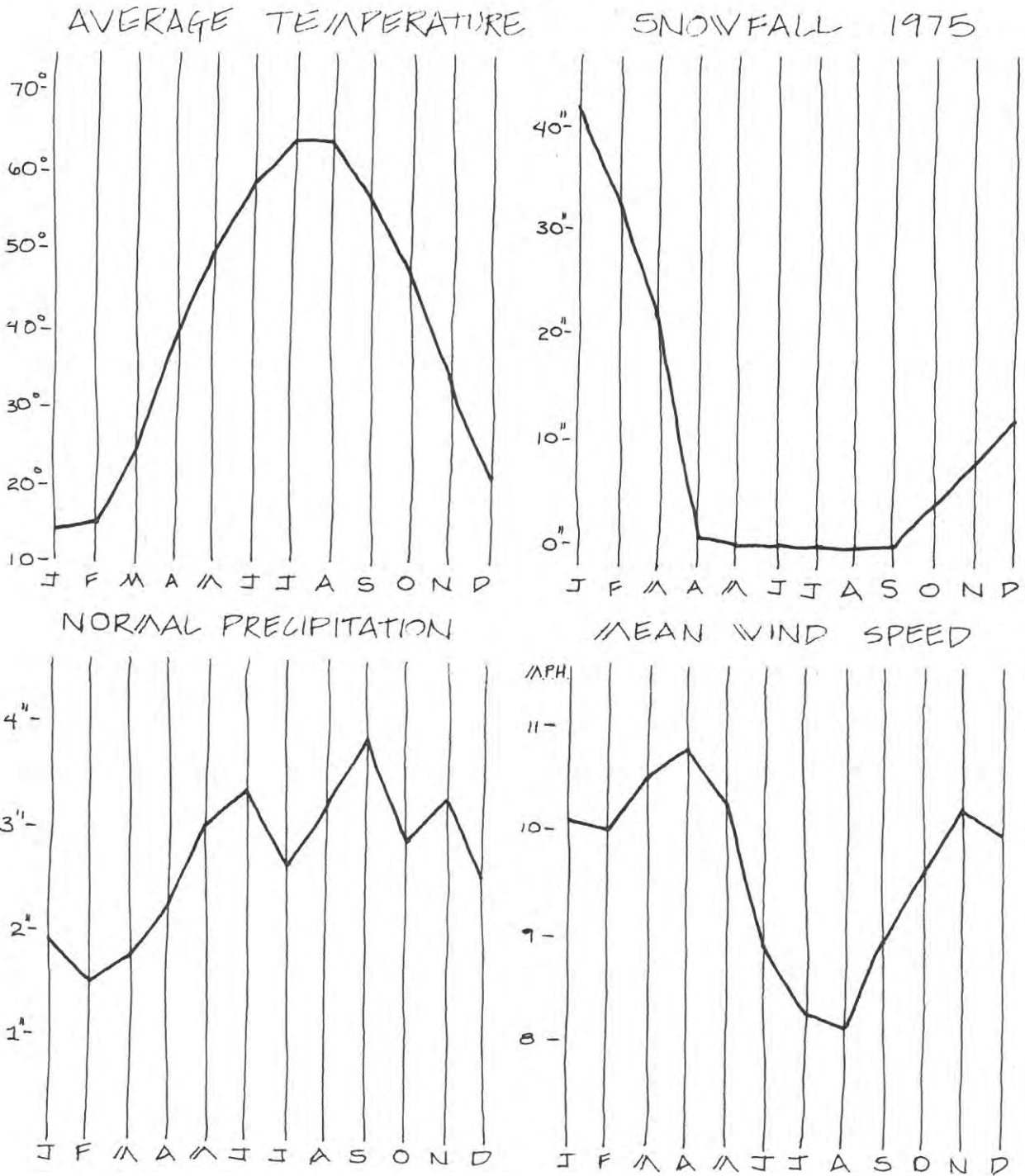


## WOODLAND WILDLIFE SUPPORT

-  GOOD
-  FAIR
-  POOR

The challenging nature of the weather at Bay Mills makes individual site planning with consideration for these features crucial. Among the benefits to the community for this planning are increased dwelling comfort, increased longevity of structures and decreased expense for heating and maintaining structures.

(Refer to housing section for more detailed site considerations)



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## EXISTING LAND USE

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The natural features of Bay Mills, the woods, dunes, Mission Ridge, lakes, streams and open spaces all located along the shores of Whitefish and Waiska Bay combine with the intimate community atmosphere to make this a very appealing rural residential community. Approximately 33% of the community land has been developed, primarily for residential, community and recreational uses. A brief description of these land uses follows to accompany the existing land use map.

### RESIDENTIAL

Of the developed areas on the reservation, the largest land use is residential. A total of 78 residential units are located on the reservation, 26 of which are mobile home units and 52 houses (including 10 HUD housing units). Residential units are distributed along Lakeshore Drive in the north and south ends of the community. 50 units are located in the northern 1.5 miles of the community with 28 units in the southern 1.3 miles.

(Refer to housing section)

### RECREATIONAL

Designated recreational use areas are located primarily in the north end of the reservation, although various localities are utilized for recreation in all areas of the community.

### RECREATIONAL USE AREAS

FACILITY	USE / DESCRIPTION
1. Baseball field	Baseball
2. Dune area north of cemetery	Parties and gatherings
3. Abe's Bingo Field	Drive-In Bingo
4. Basement of Church	Bingo, social events
5. Road in front of HUD housing	Play area
6. Basketball hoops	Basketball
7. Spectacle Lake Park	Parties, gatherings, trails, campsites
8. Area surrounding Spectacle Lake	Cranberry & mushroom picking
9. Playground adjacent to headstart building	Children's play area
10. Private play equipment	Play areas
11. South Pond	Ice skating, boating



- |  |   |
|--|---|
| 12. HUD housing unit playground                            | Fenced asphalt court                    |
| 13. Basement of Head Start Building                        | Temporary game area, pool, ping pong    |
| 14. Beaches  | Swimming, boating, hiking, snowmobiling |
| 15. Pine plantation & other undeveloped areas of community | Passive recreational use                |

### COMMUNITY AND INSTITUTIONAL

Existing community and institutional facilities include:

FACILITY	USE
1. Bay Mills Tribal Center	Tribal offices, police station, food storage, tribal council meetings.
2. New Community Center	Head Start School, offices
3. Former Head Start Building	Recreational center, carpenters workshop, utility building.
4. St. Catherine's Church	Church activities, recreation
5. Public Housing Office	Community Library
6. Pump House	Utility facility

These community facilities are all located in the northern 1.5 miles of the community.

### HISTORICAL

A small cemetery is located on the dunes west of South Pond overlooking Whitefish Bay. Referred to as the "Old Indian Burial Ground" this cemetery dates back to 1841. Other burial sites are on the reservation but unmarked, to avoid disturbance. Other sites, of early camps or other historical sites, are known but not marked for the same reason.

### AGRICULTURAL

Located in the southwest end of the community is a cattle farm which has been maintained by the community. The General Tribal Council in June of 1976 mandated that the cattle farm be discontinued, and the cattle be sold due to the unsuccessful commercial nature of the operation. Formerly crop producing farms occupied this site but with the exception of a few household garden plots, farming has disappeared on the reservation as well as declining in the region.

## COMMERCIAL

One private commercial operation presently exists on the reservation. This operation, a basic fish processing plant, provides facilities for net and boat storage and repair, fish gutting and cleaning, fish storage and transportation of fish to markets. In addition many community homes are used for net and boat storage and repair, and fish cleaning.

## TRANSPORTATION

Lakeshore Drive, a paved county road extends five miles north and south through the Bay Mills Community. In addition, the dump road, Mission Ridge Road, Spectacle Lake Road, all dirt roads, are found on the reservation. Unimproved dirt roads and two tracks, some of which are remnants of a road that followed the lakeshore, are located in the pine plantation, around Spectacle Lake, and to numerous points along Whitefish and Waiska Bay. (Refer to transportation map in transportation section).

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## FUTURE LAND USE NEEDS

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Inter-related factors (population, economic opportunity, housing, availability etc.) determine the present and future land use needs of the Bay Mills Community. Based on studies in the particular use areas, (detailed in other sections of the plan), the following are proposed and projected land use needs of the Bay Mills Indian Community.

LAND USE	FUTURE NEED
Residential	20 HUD housing units (2 years) 70 HUD housing units (5 years) Mobile home park, on expansion land
Commercial	Fish processing plant (1 year)
Recreational	Expansion of ball field to recreational area Renovation of former Head Start Building for youth center Development of Spectacle Lake Park Playground in new housing and trailer park Sports field in south end
Special Environments	Preservation and protection of fragile and special environments including: cemetery dunes and shoreline wetland and marsh areas Gumshoe area - North Pond

Agricultural	A market analysis is necessary before undertaking this type development
Forestry	A market analysis is necessary before undertaking this type development
Transportation	Improvement & construction of roads to new housing developments and Trailer park  Bus shelter by new housing Improvement of Lakeshore Drive
Utilities	Extension of electricity and water lines to new housing developments Construction of septic tank facilities Well drilling in areas not served by public water
Other	Waste disposal, septic & solid

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### LAND USE PLANNING

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Uncontrolled growth of Bay Mills will result in a certain fragmentation of its intrinsic natural beauty and intimate community atmosphere. With the present size of the community's land base and the limited suitable areas for development, planning the future land use of the community is needed to protect against unnecessary detrimental effects that will occur with uncontrolled expansion. Both the community's needs and goals and the environmental capabilities must be integrated to make these land use decisions.

Health, structural and visual aspects of the community are among those which are protected and enhanced by planning community land uses with respect to the capabilities of the environment. For example; septic tank absorption fields placed in areas of high ground water, where soils are improperly drained, or in areas of potential flooding, may result in surfacing of septic effluent. This is both unpleasant to see and smell and more important, may invade ground water resources resulting in extremely unhealthy and unsanitary conditions.

Additional problems arise when residential units are placed in wet and improperly drained soils. Flooding of the structure is both unpleasant and damaging. Settling of soils is not uncommon in wet areas resulting again in structural damage. Furthermore, cracking may occur with structures located in wet areas, particularly where, for a large portion of the year, the ground is frozen.

Not only must the community be planned to consider environmentally suitable areas, but individual site planning, taking into consideration effects of winds, cold temperatures and snow will provide dwellings much more comfortable and less expensive to maintain.

In addition to reserving areas for development, it is also important to protect and preserve some areas in their natural state. Special and fragile environments such as the cemetery, sand dunes,

swamps and shorelines may be damaged with development or certain uses. Therefore, the type and intensity of activity in these areas must be controlled. Undeveloped areas are also desirable to retain the rural beauty of the community. Once again, this is applied to individual site planning where for example retaining as much of the vegetation as possible will allow privacy and individuality of each dwelling.

Location of the various land uses (residential, commercial, recreational and community) in respect to each other is important to provide an orderly community which is both safe and convenient to its residents. Community and recreational facilities are desirable in central localities where they are convenient to all community members. In contrast, residential and recreational areas are not desirable in combination with some commercial developments where for example the safety and privacy of residents may be threatened.

Delivery of services such as electricity, water, garbage pickup and transportation need not be duplicated. For example, a residential development located near the present HUD housing project would involve less expense to the community since an extension of some existing utilities is possible.

These social and environmental factors are combined and evaluated to determine the future land uses of Bay Mills. Through consideration of these factors the community may plan for present and future growth and develop in a manner desired by the community. This process of planning for uses of the community's land, present and future, is not a one time affair but must be a continuous process. As Bay Mills expands and develops, new needs and goals arise and continually updated and revised land use decisions are very important. Continual monitoring and evaluation is needed to insure that Bay Mills continues to move towards their desired community.

### **Land Suitability**

In planning the direction of community expansion, the preceding social and environmental factors must be considered. To insure the health of the community and protection of the environment, the capacity of the land to support various uses provides one basis for land use decisions. Following is a list of areas, identified by soil types, which are environmentally suitable for the land use needs of Bay Mills. The primary factors taken into consideration to determine these suitabilities are: soil characteristics, slope, depth to ground water and flooding potential. Since these suitabilities apply to areas defined by soil types, individual site analysis remains necessary.

1. Residential Suitability — Factors which are considered in determining residential areas are suitability for septic tank absorption fields, dwellings with basements and dwellings without basements. Soils capable of supporting residential development are:

- Seney
- Rubicon
- Rousseau
- Croswell

(Reference Maps: Soils for Dwellings and Soils for Septic Use).



The remaining areas of the reservation have severe limitations for residential development primarily due to soil wetness, high water table and susceptibility to flooding posing potential difficulty in drainage.

II. Commercial Suitability — The following areas are capable of supporting foundation loads of structures no more than three stories high:

- Seney
- Rousseau
- Rubicon
- Croswell

The remaining reservation land poses severe limitations due to the soil wetness, high water table, flooding potential, frost action and excess humus.

(Reference Map: Soils for Dwellings)

III. Recreational Suitabilities — Areas suitable for camping and picnic areas (considering restrictive features such as flooding, wetness, slope and surface texture):

- Seney
- Croswell
- Rubicon
- Brimley
- Rousseau

Areas suitable for paths and trails:

- Croswell
- Colonville
- Brimley

Restrictions arise in other areas of the reservation for recreational use due to both excess soil moisture and excessively sandy soils causing soil blowing.

IV. Local Roads and Streets — Areas capable of supporting an all weather surface that can carry light to medium traffic all year:

- Seney
- Rubicon
- Rousseau
- Croswell
- Augres

Severe limitations arise in other areas of the reservation due to poor soil strength, excessive soil moisture, frost action and flooding susceptibility.

(Reference Map: Soils for Roads)

- V. Woodland Suitability — Areas which have a high potential productivity for tree crops are:
- Augres
  - Rousseau
  - Croswell
  - Rubicon
  - Colonville
  - Brimley
  - Ontonagon

Areas with moderately high potential productivity: Seney  
 Areas with moderate productivity potential — Bruce

(Reference Map: Woodlot Suitability)

Excessive water in or on the soil limits other areas on the reservation for woodlot suitability. Areas mentioned above also have limitations due to the sandy texture and in some cases excessive water. There are many factors to be considered in woodlot management which must be evaluated site by site to determine suitability for productive woodlots in a particular area.

(Refer to appendix for possible management problems and for tree species which are potentially productive in these areas).

- VI. Agricultural Suitability — Areas which are generally suitable for field crops are:  
 Bruce — Some limitations limit plant choice and moderate conservation practices.

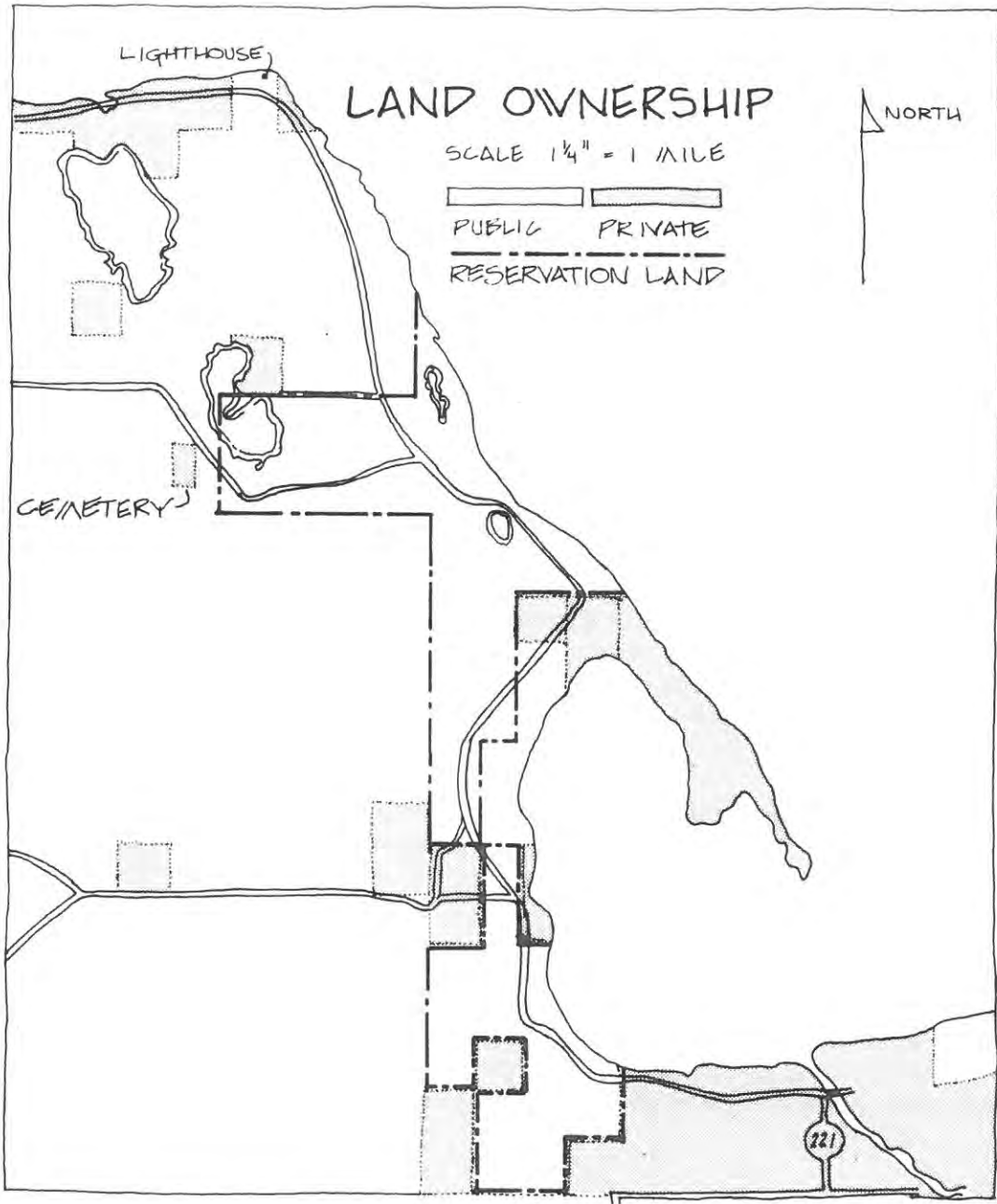
Rousseau  
 Bergland Severe limitations within these soil types reduce plant choice or require  
 Ontonagan special conservation practices or both.  
 Brimley

These ratings do not include climatic restrictions which are a major consideration for the Bay Mills Community due to the short length of the growing season. Refer to appendix for average per acre yield under high level management. Again site by site examination and economic analysis must be performed for particular crop suitability.

- VII. Wildlife Suitability — Areas on the reservation which are capable of providing wetland wildlife habitat are:

Rifle peat		Colonville	
Bruce		Brimely	Fair
Tawas Muck	Good	Bergland	
Marsh		Ogemaw	
Kinross			

(Reference Map: Woodland Wildlife Support)



### **Land Expansion**

In addition to planning for use of the present land base of Bay Mills, more land is necessary to meet the needs of the community. Existing land suitable for development is very limited and not sufficient to meet the future needs of Bay Mills. Without expansion of Bay Mills land base future development may eventually be forced into unsuitable areas causing health and environmental threats as well as more cost to the community.

Examination of the land north of the present community's land base is recommended as one possibility for future expansion. Careful site and location planning is necessary in any additional areas acquired by Bay Mills.

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## **LAND USE PLAN**

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Based upon Bay Mills' future land use needs and integration of social and environmental considerations of the community, the following land use plan is recommended. Recommended land uses are located in general areas based upon community orientation and environmental suitability for that use. Individual site testing and analysis remains necessary to establish suitability for the designated use. To finalize and implement the land use plan, it is recommended that the entire community be platted and reserved for the determined appropriate land uses approved by the General Tribal Council. Of top priority for Bay Mills is acquisition of more land to provide sufficient suitable sites for their land use needs.

### **GENERAL LOCATION RECOMMENDATIONS FOR LAND USE OF THE BAY MILLS COMMUNITY TO ACCOMPANY FUTURE LAND USE MAP**

#### **Residential**

Immediate residential needs of 20 units and additional proposed need of 70 units must be located in areas with proper soil drainage, no surfacing of ground water and limited flooding. Areas most capable of meeting these demands are of soil types Seney, Rubicon and Rousseau. Therefore it is recommended that the pine plantation be reserved for this residential development need. The area just north of the present housing development has been designated for five elderly residential units.

#### **Commercial**

The site north of the cemetery, selected for location of the fish processing plant, must be designed to insure protection of the site, especially the dunes adjacent to the site. A small sector of land immediately north of the present housing development is recommended to be reserved for future commercial needs of the community (such as food co-op, laundromat etc.).

#### **Recreational**

To meet recreational needs more convenient to residents of the south end, the former area of the farms may be tested and analyzed to determine suitability for recreational development.

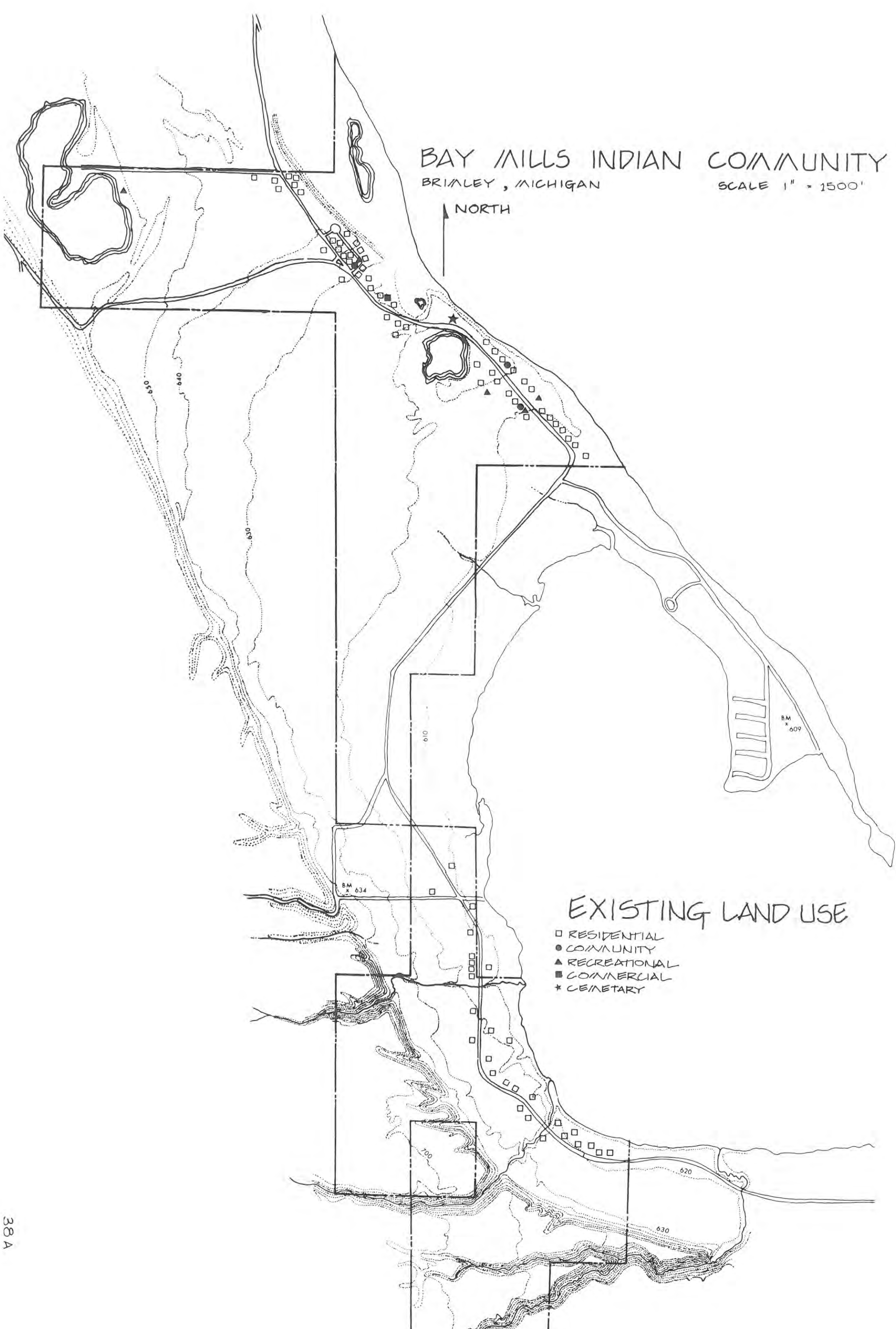


# BAY MILLS INDIAN COMMUNITY

BRIMLEY, MICHIGAN

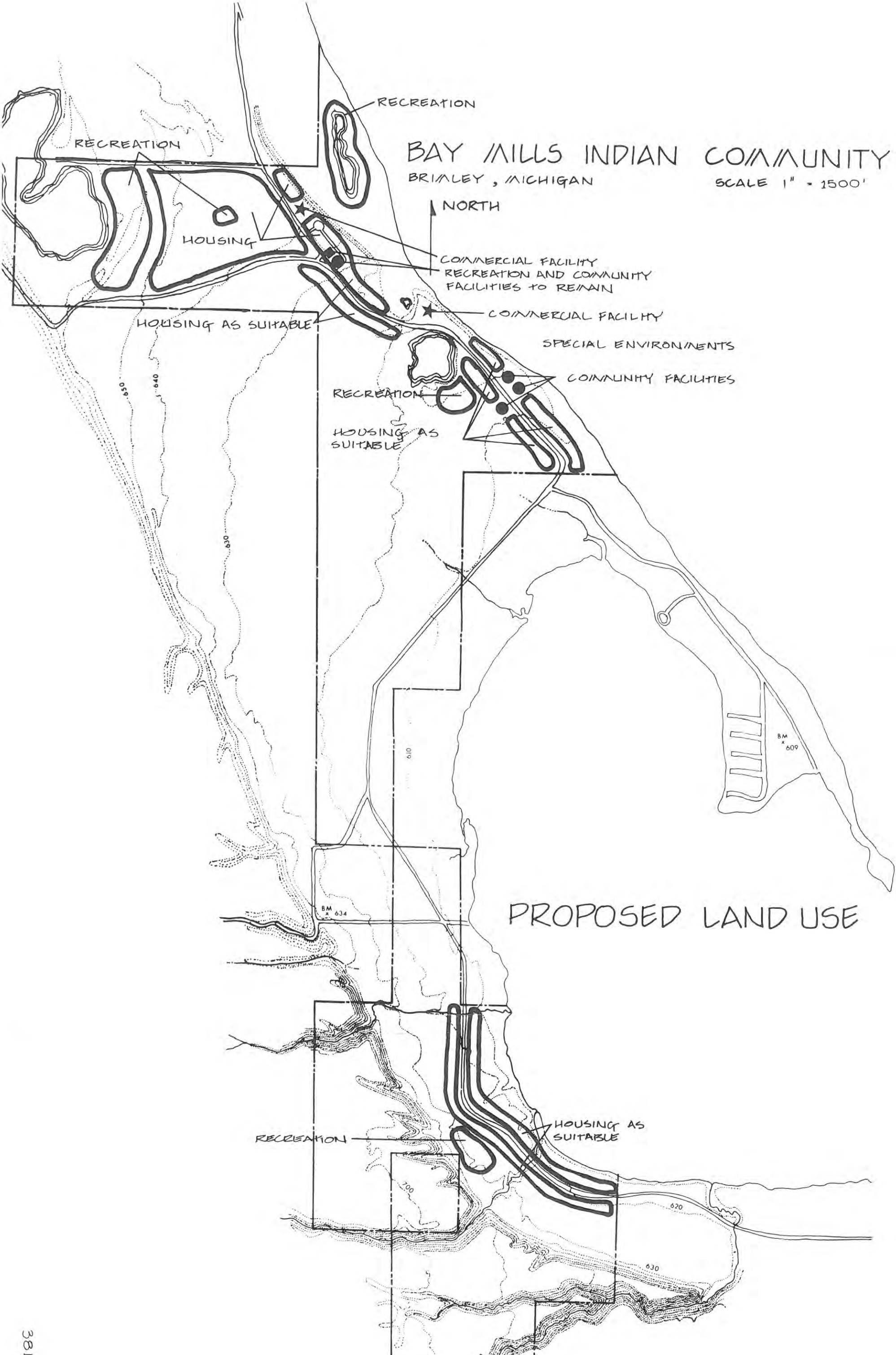
SCALE 1" = 1500'

NORTH



## EXISTING LAND USE

- RESIDENTIAL
- COMMUNITY
- ▲ RECREATIONAL
- COMMERCIAL
- \* CEMETARY



# BAY MILLS INDIAN COMMUNITY

BRIMLEY, MICHIGAN

SCALE 1" = 1500'

NORTH

It is recommended that a small site be reserved within future residential development areas to meet recreational needs of the children. The area around Spectacle Lake provides an ideal outdoor recreation location for future residential development in the pine plantation. Present recreational areas of the community may further be developed or improved as needed.

### **Community**

Consideration to the former Head Start Building or area immediately north of the present housing development or in the Pine Plantation is recommended for location of a recreational center or a community utility building to be used for a mechanical and automotive workshop and carpenter's workshop. The site adjacent to the former Head Start Building can support only very light new construction. It is recommended any substantial new recreation or community building be done in conjunction with the new housing in the Pine Plantation.

### **Special Environments**

Restrict and control type and intensity of development and/or use on and around designated special and fragile environments of Bay Mills. To protect these areas the following actions are recommended: Restrict all activity in the cemetery, provide dune erosion control near the cemetery, control the use by hikers, snowmobilers and cars in the dune areas, restrict all development in cemetery, dunes and wetlands.

### **Agriculture and Forestry**

It is recommended that as much of the forest cover of Bay Mills be preserved as possible with only selective thinning as determined through consultation with the forestry service to improve these stands. Timber cutting plans are not feasible until sufficient markets are available for these products.

Due to the short growing season and harsh climate, success of agricultural development is questionable at Bay Mills. Developing areas for agricultural purposes also requires specific site and market analysis.

### **Land Expansion**

Acquiring additional suitable land is a primary need of Bay Mills in meeting their future needs. The areas north of the reservation to Iroquois Point and west on Mission Ridge are recommended as areas to examine for expansion.

## **GOALS**

- Expand Bay Mills land base to meet community land use needs.
- Insure that the use of land and resources of the Bay Mills Community is compatible with the natural environment.
- Insure compatability of adjacent land use areas.

## OBJECTIVES

- **Obtain data on the soils, vegetation and other natural features of land north and west of Bay Mills.**

This data will enable Bay Mills to determine the capabilities and limitations of the land in meeting the developmental needs of the community.

- **Apply for land acquisition for Bay Mills in areas which will be suitable for the needs of the community.**

An expanded land base will allow Bay Mills to develop in environmentally suitable areas as well as meeting the growing needs of the community.

- **Conduct ongoing study, testing and analysis of Bay Mills land.**

Study and analysis of the natural environment at Bay Mills will enable the community to identify suitable developmental areas and make well based decisions on the best use of the land.

- **Plat Bay Mills land in accordance with community needs and land capabilities reserving suitable areas for residential, recreational, commercial, community, transportation and other land use needs of the community.**

This would involve designation of areas within the community for particular uses (residential, recreational, commercial, transportation, etc.). Reserving areas for specific uses will allow control over the manner in which the community develops and aid in insuring protection of the community's health, safety and environment.

- **Adopt an overall land use plan including land use regulations and enforcement measures.**

A land use plan will enable Bay Mills to develop in accordance with the overall needs and goals of the community in addition to directing development to areas of the reservation to which the land is suitable. Regulations and enforcement procedures will insure compliance to this land use plan.

- **Determine the land uses of Bay Mills with consideration of the following:**

Provide sufficient distance between incompatible land uses.

Restrict development in areas not capable of supporting such development.

Reserve adequate areas of the Bay Mills Community to accommodate future residential development needs with insurance of protection of the community's health, safety and environment in such development.



Reserve environmentally capable areas to meet commercial land use needs with insurance of protection of the community's environment in the case of such development.

Insure compatibility of land use developments with the social and natural environment of Bay Mills.

Insure preservation and protection of special, unique and fragile environments of Bay Mills.

Reserve areas for development and expansion of transportation facilities as needed by Bay Mills.

Provide for expansion of needed utilities and services as needed by the community.

Provide localities for waste disposal (septic and solid) needs of Bay Mills.

Reserve appropriate areas of Bay Mills to remain undeveloped.

Improve and expand existing recreational facilities of Bay Mills in addition to reserving additional localities to meet further recreational needs.

Reserve areas for development of agricultural and forestry activities where economically and environmentally feasible.

- **Conduct an annual evaluation of Bay Mills land use plan with revisions made as needed.**

As Bay Mills develops, new needs may arise. Updating the land use plan will help insure that these land use provisions continually meet the community's overall needs and goals.

- **Control activity and development within special, unique and fragile environments of Bay Mills.**

Excluding or limiting use in areas such as the cemetery, dunes and marshes will help insure preservation and protection of these areas.

- **Establish site standards for residential, commercial, recreational and other uses of the Bay Mills Community.**

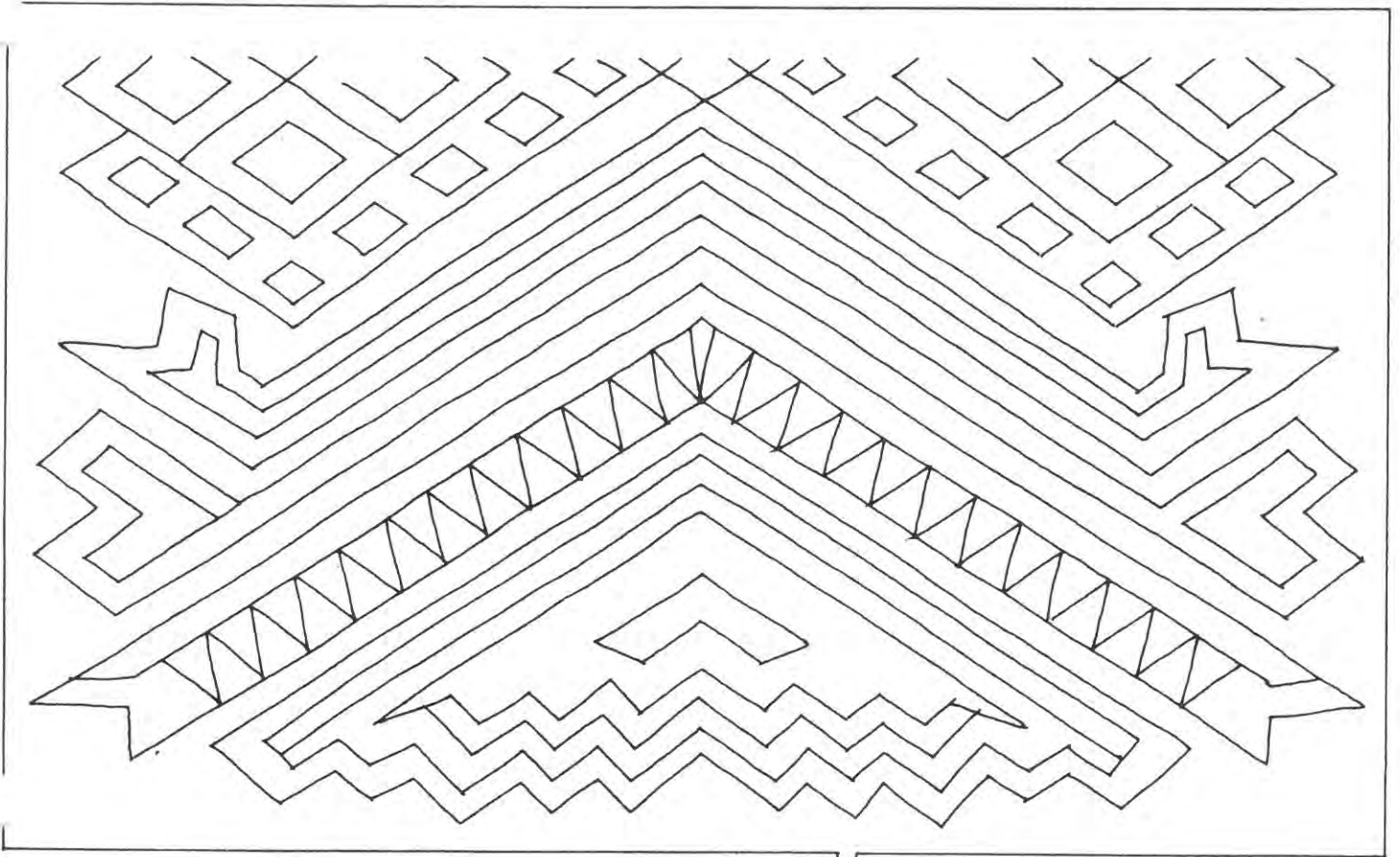
These site standards will provide a basis for maintaining the type community desired by Bay Mills.

## FOOTNOTES: LAND USE

- 1) **Red Sandstone of Cambrian Age:** A red, pink and white arkosie sandstone which includes some layers of red, brown and grey shale and is of non-marine origin. This sandstone which underlies all of Chippewa County is generally very hard and resistant to drilling, although locally it may be soft and contain many shale layers. The red sandstone is an important source of water in the Sault Ste. Marie, Sugar Island area.
- 2) **Sandstone and Sandy Dolomite of Later Cambrian and Early Ordovician Age:**  
These sandstone beds are permeable and constitute one of the principal aquifers of the Northern Penninsula. Properly constructed wells tapping the sandstones may be expected to yield moderate to large amounts of water.
- 3) Approximately 2/3 of Spectacle Lake lies within the north west corner of the reservation.

## LAND USE SECTION - DATA SOURCES

- 1) **Geological — History and Date**  
“Reconnaissance of the Ground Water Resources of Chippewa County; Michigan” by K.E. Vanlier and Morris Deutsch. State of Michigan, Department of Conservation, Geological Survey Division. Progress report #17, 19B (Prepare cooperatively by the U.S. Dept. of the Interior-Geological Survey)
- 2) **Topography — U.S.G.S. Map**
- 3) **Soils:**  
1975 Soil Conservation Survey  
1927 Soil Survey of Chippewa County  
Soil interpretation sheets on individual soil types supplied by U.S. Dept. of Agriculture-S.C.S.
- 4) **Hydrology — Source #1**  
U.S.G.S. Map  
Soil Interps
- 5) **Climate:** 1975 Annual Summary of Local Climatological Data, U.S. Dept. of Commerce, NOAA  
Sault Ste. Marie Weather Station



DEMOGRAPHICS

### **Importance of Demographics**

This demographic section will present an overview of the Bay Mills Community by drawing together figures reflecting the relative conditions of life at Bay Mills. These figures will be examined in two ways. First we will look at the figures and see what sort of trends can be perceived. We then want to look behind the figures to determine the processes at work. First "what" is going on and then "why". The "what" tells us about the situation now and in the past. By looking at the "why" we can make some projections as to what is likely to happen in the future.

Areas to be examined in this section will include age and sex distribution, household characteristics, economic and employment figures, with health statistics and levels of educational attainment. Also to be examined are the key variables which determine population trends on the reservation.

It is sometimes difficult to question statistics or tribal programs without seeming to single out some individual. Though in a community of this size, it is often easy to pick a family or an individual out of statistics, the intent in this section, and throughout the plan is not to single out any individual or group of people, it is simply an attempt to look objectively at the situation. The better our information is, the better our decisions can be.

### **Population Characteristics**

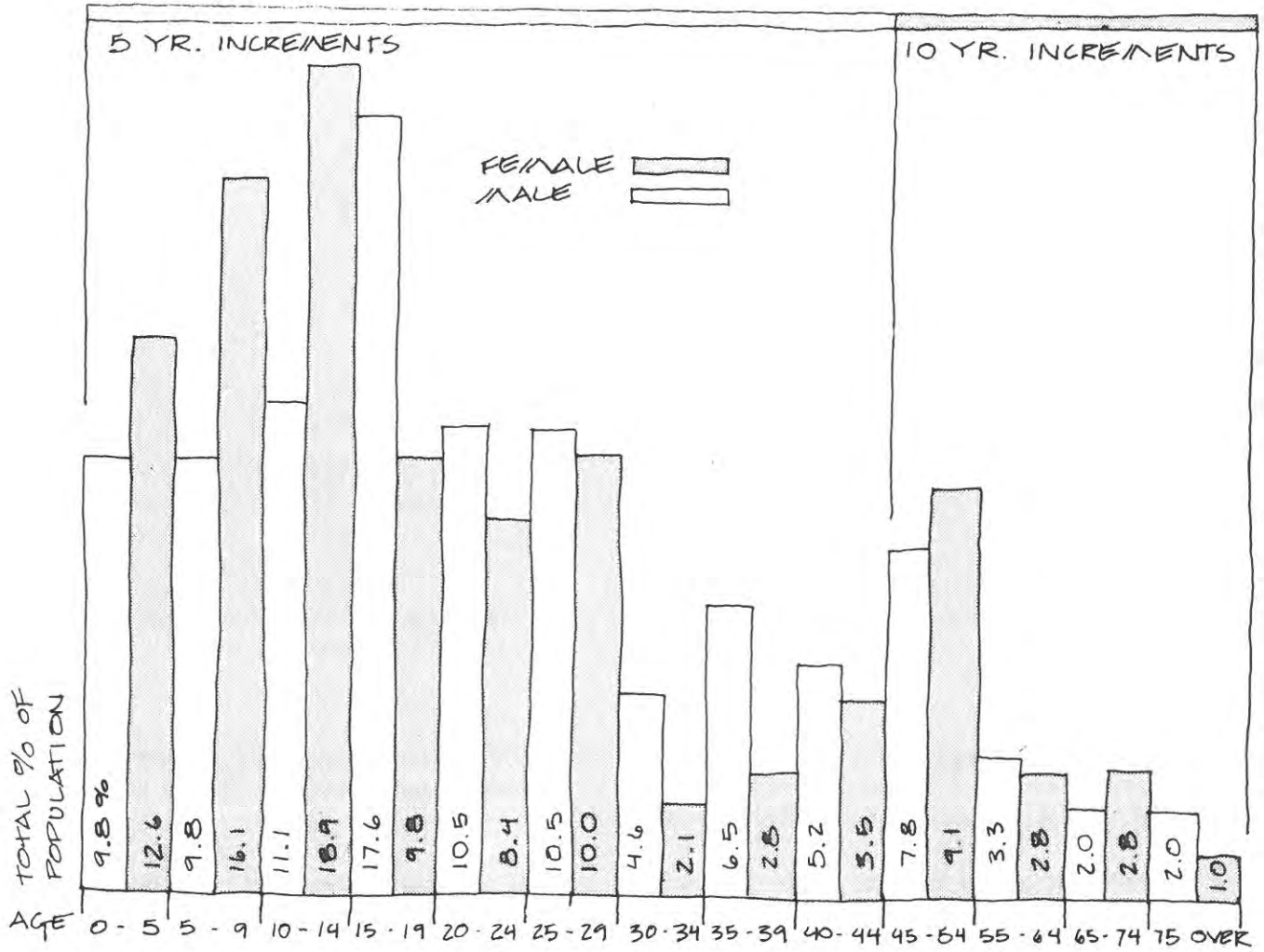
The major social and cultural feature of Bay Mills is the community's strong and pervasive family ties. It is both the biggest strength and most outstanding weakness of the community. Family ties provide a strong sense of belonging. People, tied together by the bond of blood, care for one another. Young children are not neglected, old people aren't abandoned. The nuclear family is supplemented by a loosely defined extended family. A recurring theme throughout this plan is the strong family ties which often impose limitations on the effective operation of tribal programs, especially evaluation and enforcement. Nepotism is practically impossible to avoid because of the small population size. The issue of favoritism or family loyalty sometimes overrides concern for wider tribal priorities. Consequently, the tribe as a whole suffers as it is unwilling or unable to raise the sticky issue in a constructive manner.

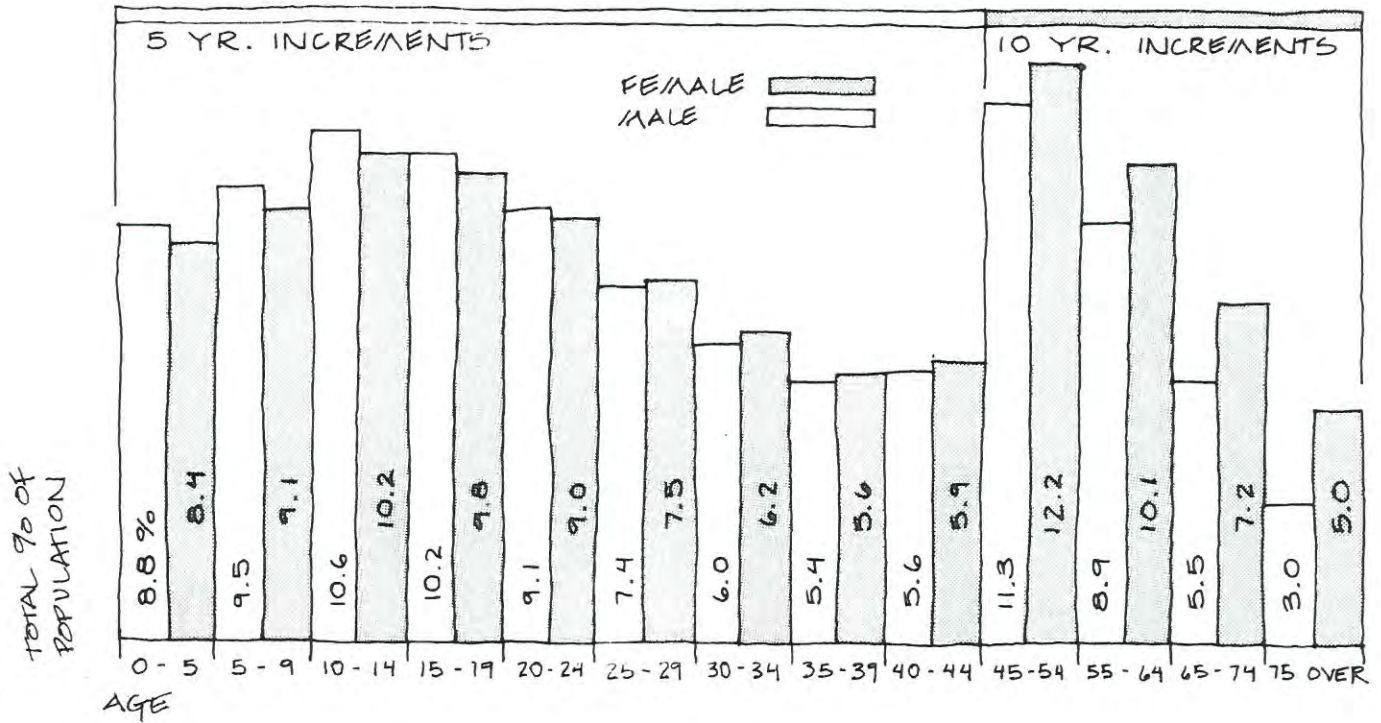
The current population distribution at Bay Mills differs significantly from the national profile. The full time resident population, as of January, 1976, is 297. Permanent seasonal population is 21. Over 60% of the population is under 25 years of age. Two-thirds of that 60% are between 5 and 14, a figure having strong ramifications in terms of Bay Mills school population.

While nationally, almost one half (44%) of the population is between 25-64, at Bay Mills it is closer to one third (35%). This has particular significance as regards to the work force of a community. This is also the age sector from which a community usually draws its leadership. Efforts at stabilizing and strengthening the community must bolster the percentage of the population this sector represents. Bay Mills has few older residents, the percentage of elderly at Bay Mills being only one half the national average. While nationally, the over 65 represent 10% of the population, at Bay Mills they represent less than 5%.



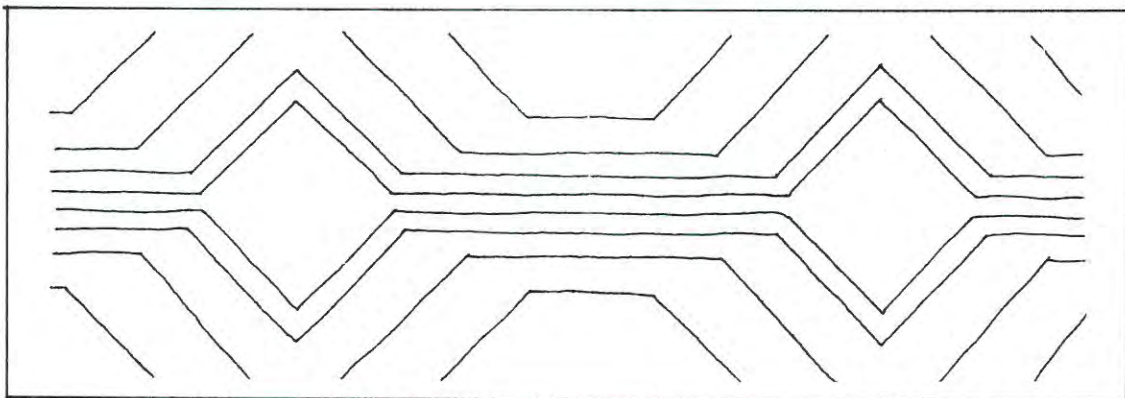
FE/MALE / MALE BAY MILLS AGE STATISTICS 1976 CENSUS DATA





At Bay Mills, median age for men is 20.5 years, for women 16.25 years. Nationally, comparable figures are 26.8 years for males, 29.3 for females. Of special interest in these figures is the dramatic contrast regarding the median age of women.

An examination of the ratio of male to female at Bay Mills sheds some light. The female population drops 50% between 14 and 25, while the male population increases by 30%. That ratio of male to female then holds through age 45 before evening out. The primary causes of this drop seem to be Bay Mills women marrying off the reservation, and the limited job opportunities for single women.

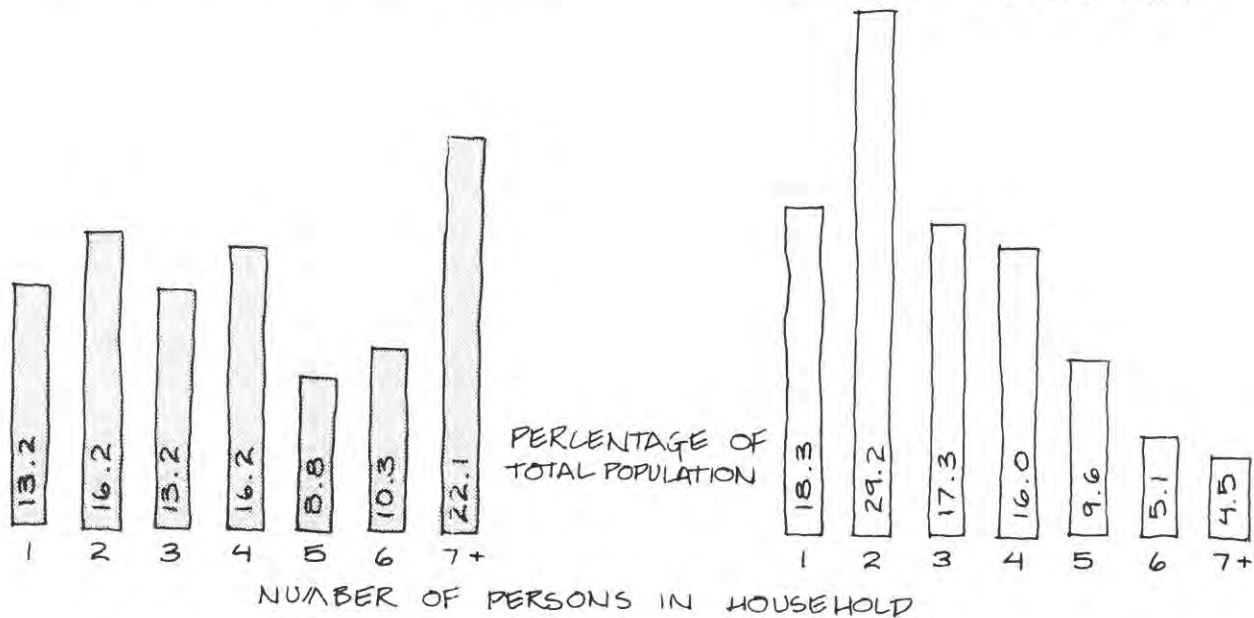


### Household Characteristics

Characteristics of the households are revealing in terms of family composition, and size. Average size of a Bay Mills household is 4.8 persons as compared to 3.06 persons nationally. Bay Mills shows a far smaller percentage of small families and a larger percentage of large families than the national average. This seems to be changing somewhat, with younger families tending to be smaller, as people marry later and have fewer children.

BAY MILLS INDIAN COMMUNITY

NATIONAL CENSUS DATA



Household configurations reflect the unique situations of Bay Mills. In many instances a household includes an older child, parent or relative. 24 young single men between 18 and 35 are living with their parents, primarily because of the lack of any other housing. A desire to move out is often indicated. Many single parents (overwhelmingly they are young women) with children live with their parents. Over 20% of households are headed by a female, which approximates the national average (22%).

### Employment and Income

Employment patterns at Bay Mills are shaped by the conditions in the Eastern Upper Peninsula as a whole and by its special situation as an Indian Community. The government, in one form or another, employs approximately 60% of the community's work force, compared to 41% of the county work force. However, these are not secure or well paying government jobs such as exist in the region. Less than 20% of these positions can be considered permanent or secure as are civil service positions. Most jobs are funded by one year grants, low paying and lacking in major fringe benefits or advancement opportunities. The major categories of government jobs are: tribal government, Inter-tribal Council of Michigan, Inc., Kincheloe Air Force Base, job training programs and community service programs (such as Head Start and Johnson O'Malley).

Of those jobs in non-governmental areas, over 80% are seasonal (the lake, the woods, dredging or construction). Of those people who have previous work experience, over 25% are currently unemployed. These figures do not include these young people or women who would work if work were available nor do they include individuals who are underemployed. Even more outrageous than the existing unemployment rate is that, by comparison, it is low for Bay Mills. The reservation is experiencing a surge in employment, with the Indian Action Team, new fishing, nearly a million dollars worth of construction this year and expansive funding for many tribal government programs. These are good times, When funding for Indian Action Team, construction and Tribal government funs out, the unemployment rate will skyrocket. Only some of this will be taken up by fishing.

Current income levels among the reservation population show that almost 45% of households have incomes below \$5,000 even when 20% of the households have at least two people working.

There are correlations in the income data that run counter to standard assumptions. While nationally, large families tend to have lower incomes, at Bay Mills, the reverse is true. The fact that so many of the families with income above \$7,500 are large and work for tribal government is a reflection of policy decisions by the community to award tribal jobs to those with larger families. That jobs are not awarded by educational levels is demonstrated by the correlation that almost half those with education beyond high school have incomes less than \$7,500.

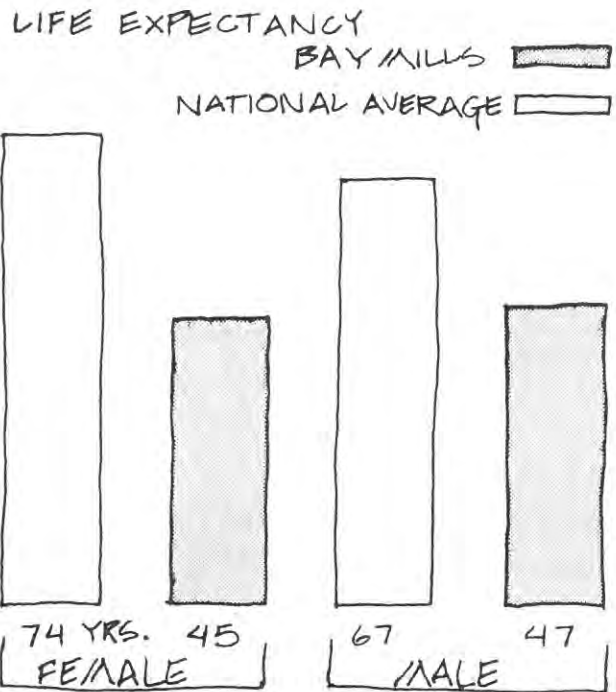
Twenty percent (20%) of all households are headed by a female and over one half of the households headed by females have an income of less than \$3,000. Over 40% of the households have women as either the primary wage earner or a significant contributor to the family's income. This is comparable to national figures. Still, there are severely limited job opportunities. Jobs on the reservation are still understood by most decision makers as being either men's or women's work.

Women's job opportunities continue to center around areas traditionally consigned to women: Child care, health care and secretarial work. Even within these areas the higher paying positions tend to be held by men. The community has in the past been slow to take advantage of the skills of many of the younger women on the reservation who are both qualified and eager to work at more skilled and higher paying jobs. Consequently, many of the women must either look off the reservation for suitable employment or pursue the traditional expectations. Though the community has recently taken strong, positive steps to correct this situation, the women on the reservation are still well below capabilities regarding expectation and utilization of their talents.

### **Health**

Perhaps most alarming, over the long term, of all the conditions at Bay Mills is health. Though dismal facts are clearly correlated to income levels, the issue of life style and expectations must cross the mind of anyone encountering such a set of figures. In seeking an explanation for why so few elderly at Bay Mills, one needs go no further than life expectancy. Average age at death for Bay Mills males is 47 years, for women 45 years. This is 20 years below the national average for men and almost 30 years below for women. Over 35% of all deaths over the last 10 years have been from causes other than diseases.





The contributing factor, to these accidental deaths, and other, degenerative diseases, most frequently cited is alcohol. Due to the moralistic aura surrounding alcohol abuse and lack of adequate medical reporting procedures, no statistical evidence is available for Bay Mills, but alcohol and drug abuse are most frequently mentioned as the number one problem on the reservation by over 50% of those households surveyed. Of all other areas perceived as problems, over 70% were health concerns, including dental problems, diabetes and lack of access to doctors. Less than 25% have private or group health insurance. 70% have diabetes in their genetic background, yet 76% of the children have never had a diabetic urinalysis. 53% of households have had occasion to use emergency room services in the last year. 22% of households have experienced accidents or broken bones this year. 42% of households have had teeth extracted in the last year. Almost 30% of the homes have someone with high blood pressure. 49% of the homes have someone with an overweight problem. Many of these problems are related to one another, a complex of concerns affecting the health of the community.

**Education**

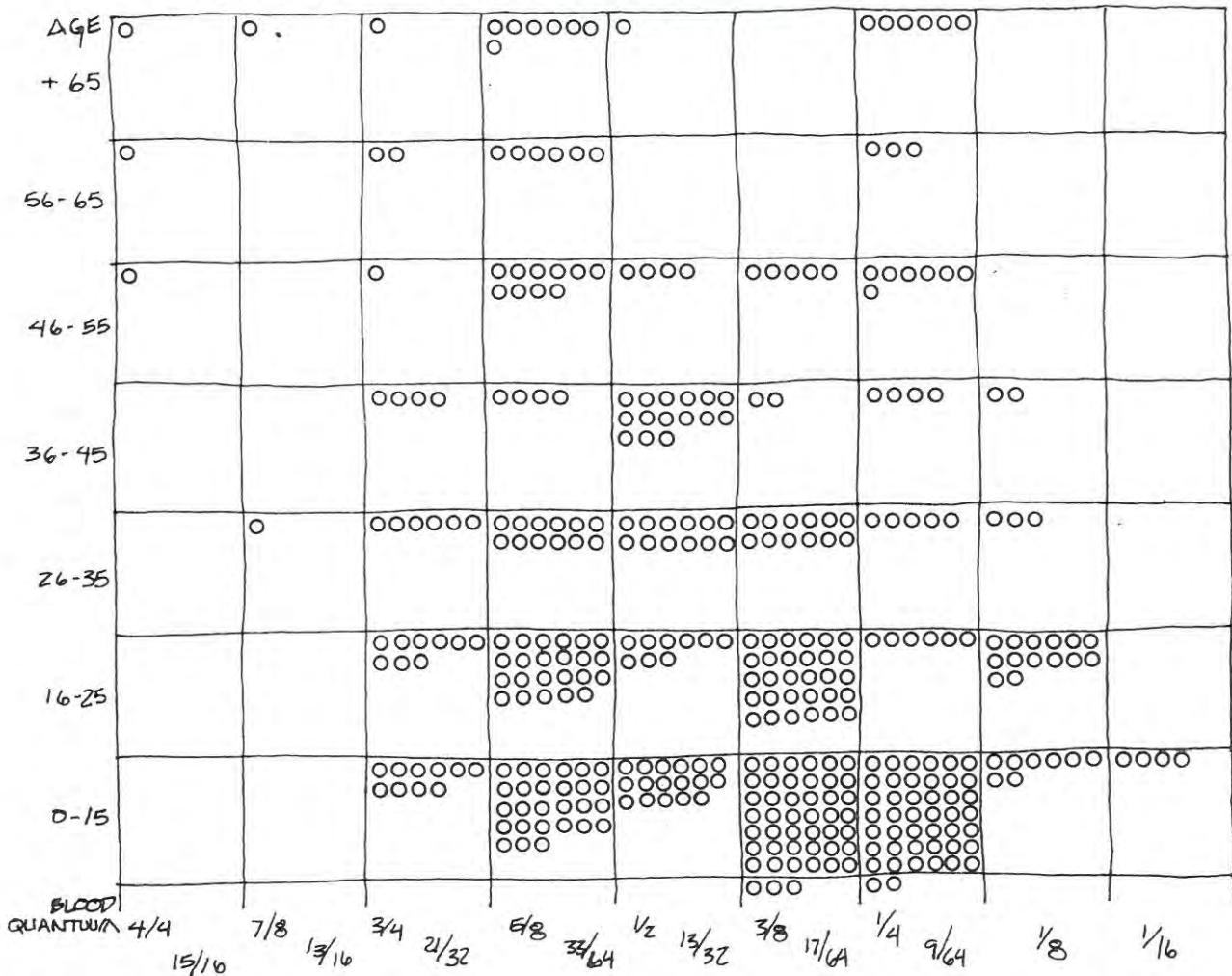
Comparative data on educational achievement levels is sparse, primarily because separate records indicating performance of Indian students are not kept by the local school or by Bay Mills.

42% of the total population at Bay Mills is of school age. Indian students comprise 24% of the student body in the Brimley schools. Though the history of educational attainment at Bay Mills is bleak, the future holds some promise. In 1950 median education level at Bay Mills was about the national average of 9.3 years. But while the median national figures have advanced to 12.3 years in 1974, Bay Mills is at 10.9. Of Bay Mills youth between 18-24 and out of school, 75% are high school graduates, but over 20% of the population between 16-18 has already dropped out.

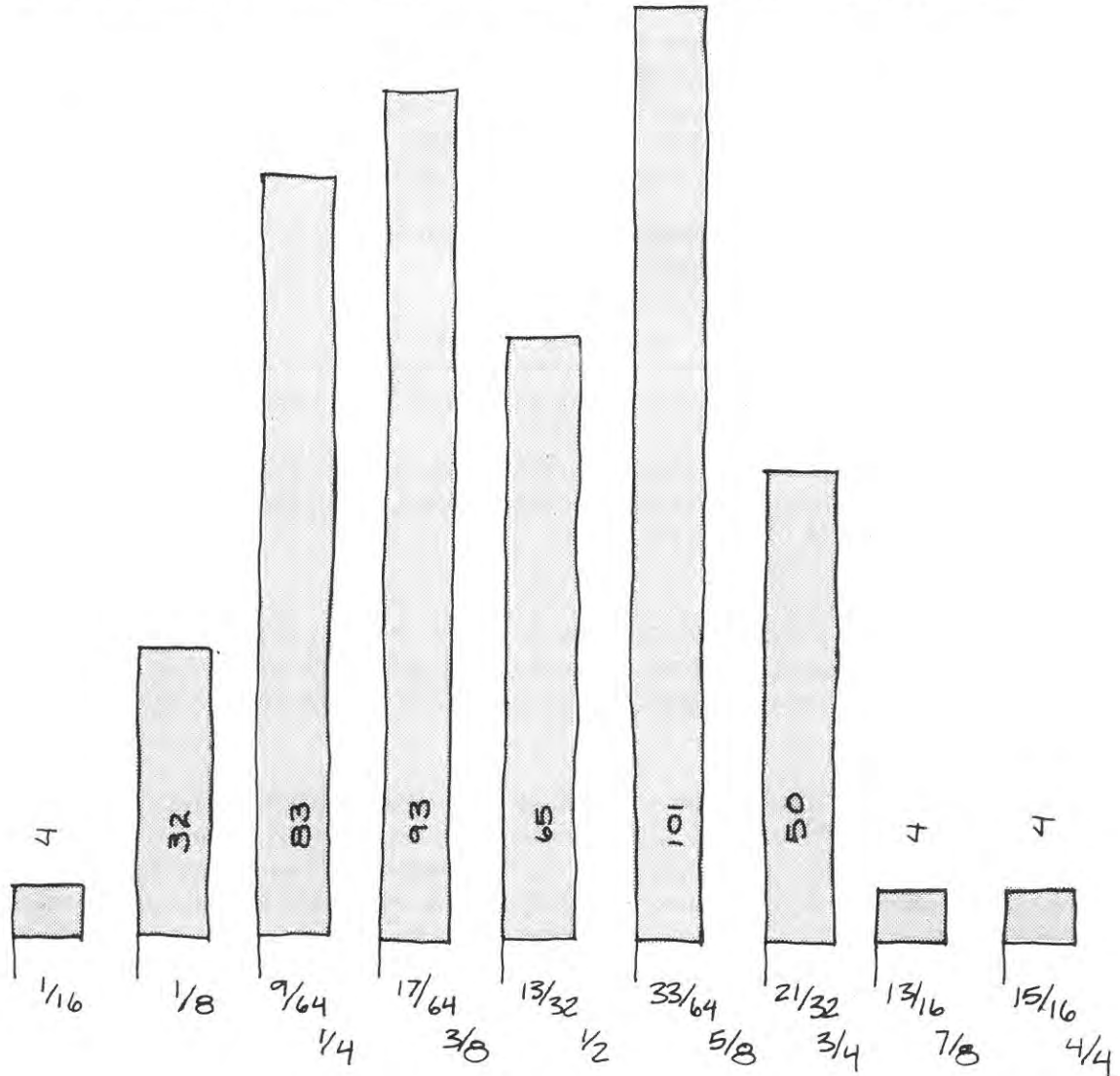
**Blood Quantum**

The area around Sault Ste. Marie was one of the first areas in the United States to experience interaction with Europeans. The French traders and missionaries arrived over 350 years ago. At Bay Mills there has been historically considerable intermarriage with the local white population. Because of this, percentage of Indian blood, or blood quantum, has been diminishing. The eligibility guideline of several agencies, most notably the Bureau of Indian Affairs, limit delivery of services to those with one quarter or more Indian blood. Consequently, this diminution of blood quantum has and will continue to raise eligibility questions.

DISTRIBUTION OF BLOOD QUANTUM BY AGE



## DISTRIBUTION OF POPULATION BY BLOOD QUANTUM/A



### Migration

Bay Mills has experienced several waves of out-migration. Though many would prefer to stay, the limited opportunities for jobs, community services and facilities has driven many Bay Mills members off the reservation to seek residence and employment elsewhere. A substantial number of Indians in Chippewa County are eligible for Bay Mills membership. Many of them are ancestors of former Bay Mills members who, because of the declining job opportunities were forced to seek work off the reservation. It is for this reason that Indian persons adjacent to the reservation are considered when planning for Bay Mills. A resurgence in opportunity at Bay Mills could lead many of these people to return to the reservation. Of those who are members of Bay Mills but living off the reservation the distribution is wide, though concentrations are obvious, in Chippewa County and in the Detroit-Flint area. A clear migration stream is evident. Most of those now living on the

reservation have at one time followed one of two paths. One path is to the car plants in Detroit-Flint, the other path, no longer so available, was to follow dredge work around the Great Lakes. Many reservation families are separated by this pattern but heavy returns during the summer and holidays indicates a clear identification with Bay Mills. It is also common for children with relatives at Bay Mills to spend the summer on the reservation, returning down below in fall for school. Other targets of migration tend to be other Chippewa reservations (Minnesota, North Dakota, Canada) or areas with high employment opportunities.

This pattern of migration has certain implications, especially regarding economic development, expectations of tribal development and education. The exposure of community members to the outside world usually raises their expectations regarding service and facilities. Such exposure is also useful for the job skills it brings back to the community. Exposure to other ways also enriches the culture of the community, providing more perspective on day to day affairs and helping to prepare the younger community members for what awaits them in the outside world.

In many ways, the community suffers from outmigration. But if the community can develop to the point where the reservation can attract its members back, the cycle of migration can be integrated into the way of life of the community.

### **Variables**

The population of the Bay Mills Community seems to be determined by the usual factors of fertility, jobs and health. However, the residential population of the reservation seems to be aligned very closely with the availability of housing and jobs as well as with cultural preferences and family ties.

It is difficult to rank these variables because their impact differs within various sectors of the population, though jobs seem to be a major factor for everyone. The recent rise in employment via tribal programs and the resurgence of fishing has made the reservation a more attractive place to live. A firm decision by the courts regarding fishing rights and the new fish processing plant should open up additional job opportunities for both men and women.

The availability of housing on the reservation is not necessarily sufficient cause for reservation residence, but the lack of housing is a definite impediment to reservation residence. The large Indian population immediately adjacent to the reservation, the current crowded conditions, the habitation of any structure regardless of condition and the proliferation of mobile homes all confirms that if more housing were available more people would remain on the reservation.

The cultural preference for life on the reservation has many components, both subjective and objective. There are many material benefits to be realized by having reservation status. First consideration in reservation programs for housing, jobs, health benefits etc. goes to reservation residents. Indian identification is also a factor. Reservation status makes it plain for the world to see that one is proud to be an Indian. The reservation also serves as a sanctuary from the outside world, a place where one can feel at home and not be subjected to the assaults and questions of the outside world. The reservation as home, is a magnet for off reservation members of Bay Mills, be they living in the Soo or downstate. This is evidenced by seasonal migrations back to Bay Mills during the summer and holiday seasons.



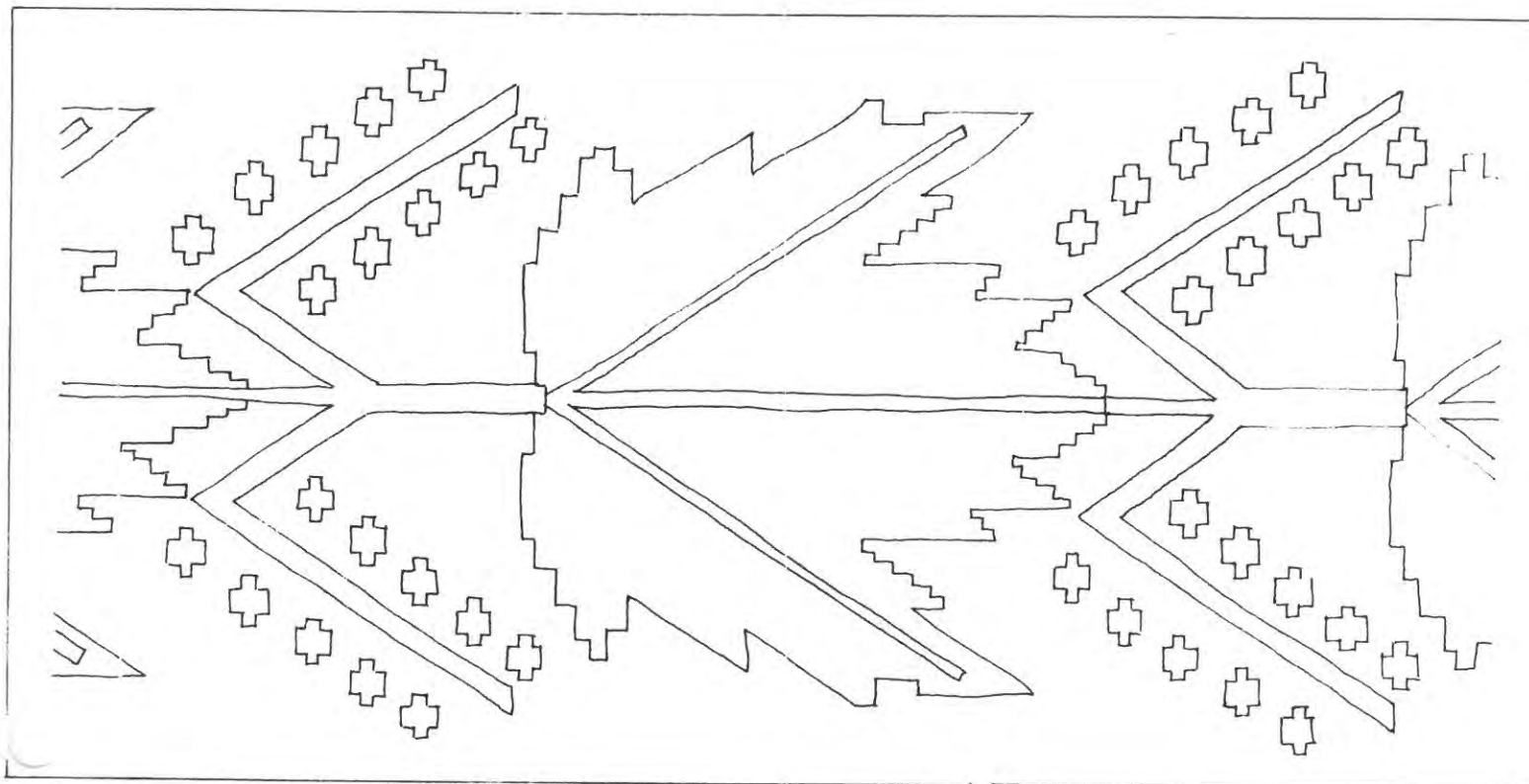
PLACE OF RESIDENCE, B.M.I.C. MEMBERS, 1976

		<u>NO. OF MEMBERS</u>	<u>PERCENT</u>
<b>Bay Mills</b>		276	60%
<b>Chippewa County</b>		60	13%
Strongs	3		
Brimley	26		
Raco	6		
Sault Ste. Marie	24		
Whitefish Point	1		
<b>Upper Peninsula</b>		4	0.9%
Rapid River	1		
Newberry	3		
<b>Lower Peninsula</b>		50	10.9%
Detroit and Suburbs	21		
Flint	13		
Harbor Springs	1		
Stanwood	1		
Gladwin	1		
Battle Creek	2		
Alanson	4		
Perry	1		
E. Jordan	6		
<b>Other States</b>		34	7.4%
Virginia	2		
North Dakota	1		
South Dakota	1		
Minnesota	6		
Maryland	3		
Illinois	2		
Colorado	10		
Ohio	2		
Pennsylvania	3		
California	4		
Canada	7	7	1.5%
Unknown	29	29	6.3%
<b>TOTAL:</b>		<b>469</b>	<b>100.0%</b>

This return migration also confirms the role of the family as a variable in determining reservation population residence. The family serves in other ways to affect population on the reservation. Many unmarried individuals continue to live with their families after leaving high school. In other instances, lack of additional housing is overcome by young couples or new families remaining in a parent's home. Older or handicapped individuals are also taken care of by the family, frequently in the home. Institutionalization is used only as a last resort; Bay Mills takes care of its own.

Family also serves to explain the dramatic drop in the female population between 14-25 years of age. An Indian woman who marries a white man historically moved off the reservation, though this now shows signs of changing. An Indian man who marries a white woman can work at, and retains priority for, reservation job programs. Currently many young Indian men from Bay Mills, though working, are not marrying. Hard evidence is lacking, but lack of housing and eligible spouses are thought to contribute to this. The age of marriage at Bay Mills, as with the nation, is rising.

A final factor is health. Though not a reason to live on or off the reservation, the historically high mortality rate and short life expectancy can be cited as the reason for the very small percentage of older Indians, on or near the reservation. Those that survive play an active role in the life of the community and in the raising of children.



HOUSING

## Introduction

Housing should function as an aid not an obstacle to what we want to do with our lives. Homes should reflect the personalities and life styles of its residents. Housing is a tool that should help us carry out functions important to us, such as: relations with family, friends and neighbors; eating and sleeping; many forms of recreation; and a part of how we earn our living. There are many aspects of housing that can aid or hinder how we carry out these activities.

The home also affects an individual's relationship to the rest of the community. Good relations with neighbors can depend to a large degree upon striking the proper balance between privacy and neighborliness. A house designed and located in harmony with nature can be cozy and pleasant, rather than cold, expensive to heat and inaccessible. Another factor to be considered is the relationship between the home and community services and facilities. Access to recreation, health services, schools, fire and police protection and similar items can all make a house a pleasure or a problem to live in.

The final and, perhaps most important aspect of housing is that without sufficient available housing, nothing else matters. The current situation is that people who would like to be a part of the reservation community often can not because there is no place available for them to live.

If Bay Mills or any community wants to keep its young people and attract those living off the reservation, there must be more housing. How much housing depends on how many people. That is a decision the community must make. Among the over three hundred members of the Bay Mills Community living off reservation, a desire is frequently expressed to return to the reservation if housing were available. There are approximately 1,500 Indian people in the area surrounding the reservation. Many of them are eligible for membership in the community and would join if housing were available. Housing needs then, when projected, will take into consideration the sizable off reservation population but the emphasis will be based primarily on an analysis of the needs of existing reservation populations and households. The following section will outline the factors that should be taken into consideration when making decisions about housing. Included are household demographic characteristics, a review of existing housing conditions, discussion of site and design considerations, land problems and the situation with utilities. Alternate courses of action will be considered and evaluated and some recommendations for specific action made. The final decision, as always, must rest with the community itself. What kind of community do we want, and how do we go about doing that?

The housing of the Bay Mills Indian Community has its own special strengths and weaknesses related very much to its being an Indian Community in the Eastern Upper Peninsula. Areas of strength include a strong sense of community and a willingness on the part of the governing bodies to see that satisfactory housing is developed for community members. Some land is available for development and the natural environment provides a beautiful setting within which a utilitarian and aesthetically pleasant site can be achieved. Also available are special monies for providing housing for Indian communities, though this is a problem as often as it is a potential. (More detail on land suitable for housing in land use section).

Problems of financing are complex both from public and private sources. Land tenure questions, low income, and high operating and material costs add to the burden of developing and maintaining a home in the Bay Mills Indian Community.



The climate and remoteness of the community impose their own costs. Rapid social and economic developments in the area have considerably burdened the existing housing stock. Depletion of the housing stock is occurring, with fifteen houses lost in the last sixteen years. The traditional neglect of Indian communities means that housing development in the area has historically been sporadic. Hence, existing housing stock is limited in terms of quantity and suitability.

### **Household Characteristics**

There are 76 homes on the reservation for a resident population of over 300. Though average household size is 4.8 members, household size ranges from one to eleven. Compared to the national profile, Bay Mills has fewer small households and a greater percentage of large households. However, most existing homes do not provide for adequate space needs. Crowding is severe with over 25% of homes having more than 1.1 persons per room. An examination of existing households also reveals that there is a potential thirty-three additional households within the existing households. Not all of these potential households wish to become separate, particularly those of the older people. Also, there are twenty-four young single men out of school who are living with their folks who would like to have places of their own but can not because of the housing shortage. There are no federal housing monies provided for young singles unless they are handicapped.

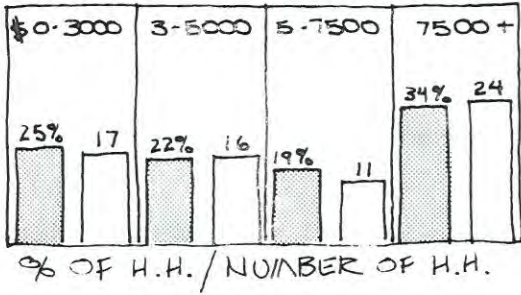
In addition, policy level discrimination regarding distribution of tribal housing resources to single people inhibits full participation of young singles in the Bay Mills housing market. In the competition for the scarce housing resources of the community, the needs of the young singles occupy a low priority. While the need for family housing is acute, the shutting off of the young from the housing supply has very serious consequences for the present and future.

The fact that most of the inhabitants of the trailers are young families underscores the serious lack of available housing for young people. The fact that this group lacks housing presents an opportunity for development since young people with no children or with small families are best able financially and physically to develop and care for new housing. A higher priority for housing of young people could mean an actual increase in housing stock, rather than increased competition for existing housing. A variety of programs could be initiated by the community to put the considerable energies and talents of the young to work developing and building homes. Though by no means an easy task, recognition of the need and exploration of options is the first step towards easing the tensions created by this situation.

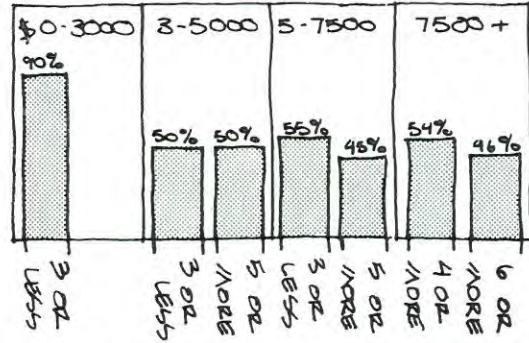
Though those over 55 years of age are only 5% of the population, almost 20% of the homes have a head of household 55 or older. Many persons in this situation have neither the physical ability or income to maintain the home to the standards they desire. Their homes are almost exclusively the older owner-occupied homes and so are not as able to take advantage of such programs as they might if they lived in community owned housing.

Another 20% of households are headed by a female. 90% of these households have either children or relatives of the head of households. Such households are often plagued by the same maintenance and income problems as elderly households. (More detail on households headed by female are available in the demographics section.)

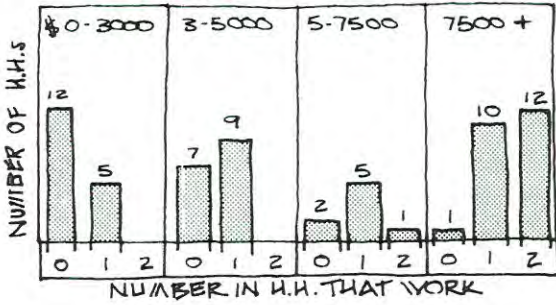
TOTAL HOUSEHOLDS



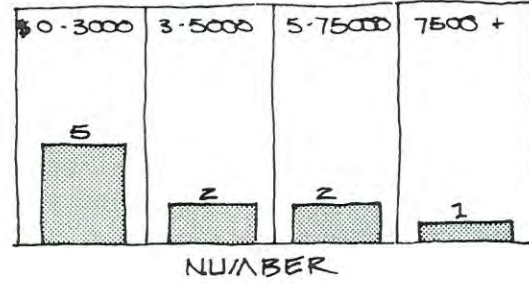
SIZE OF HOUSEHOLDS



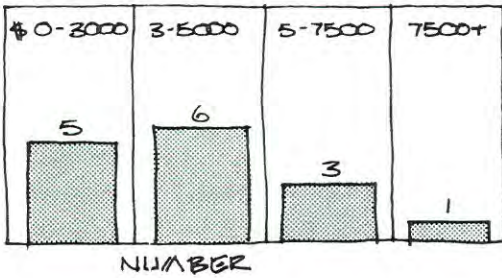
NUMBER IN HOUSEHOLD THAT WORK



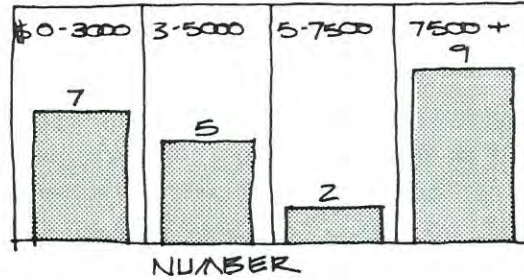
FE/MALE HEAD OF HOUSEHOLD



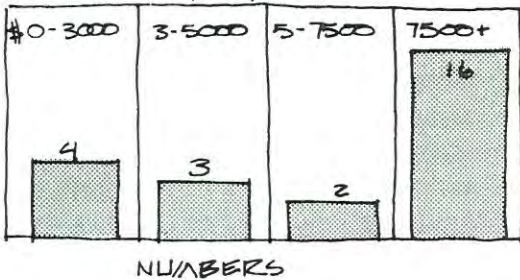
ELDERLY HEAD OF HOUSEHOLD



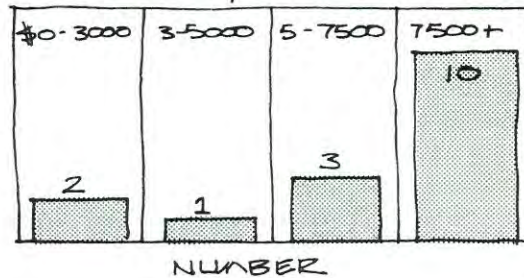
WORKERS W/OUT HIGH SCHOOL ED.

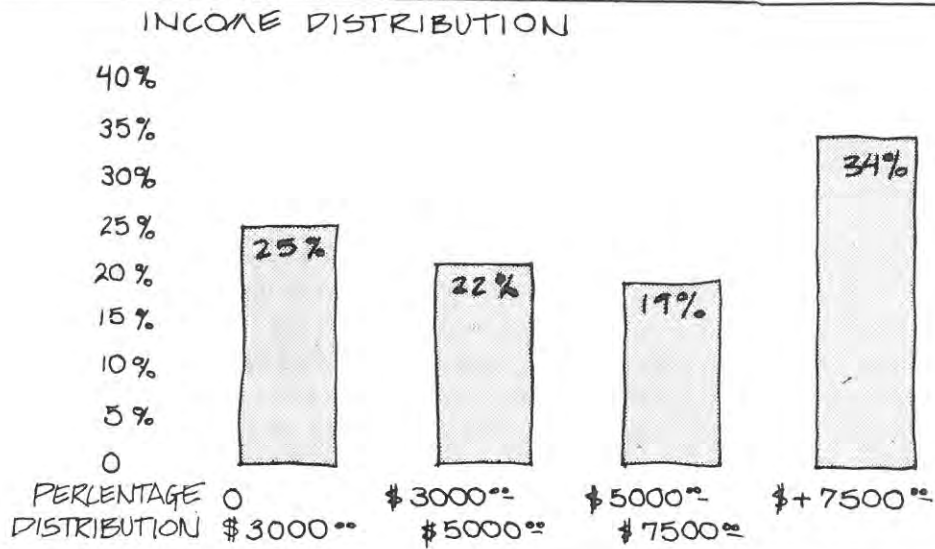
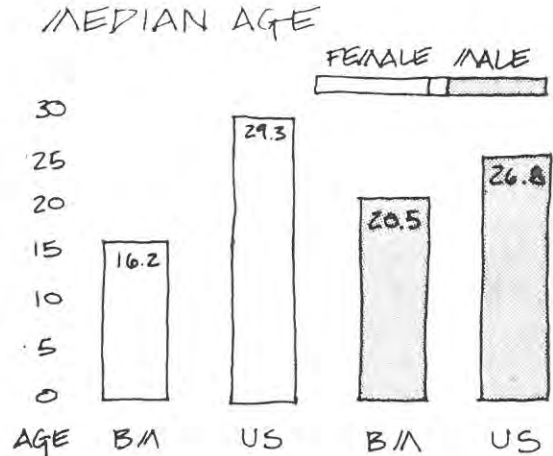
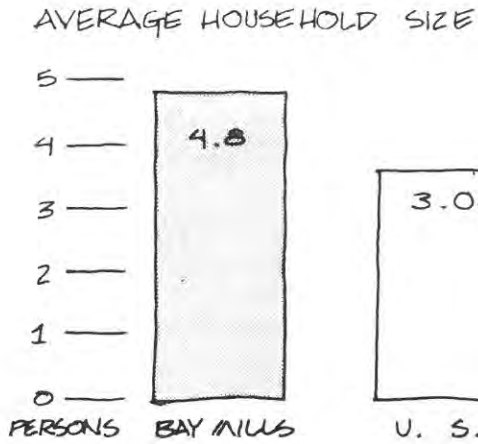


WORKERS W/HIGH SCHOOL ED.



WORKERS W/MORE THAN H.S. ED.





### POTENTIAL HOUSEHOLD ANALYSIS BY AGE, RESIDENCE & FAMILY COMPOSITION

Age Group	Family Type	Residence	NO KIDS		W/KIDS		TOTALS
			Count	Count	Count	Count	
18 - 34	SINGLE	IN HOUSE WITH FOLKS	24	3		27	
		IN SEPARATE HOUSEHOLD	4	5		9	
	COUPLE	IN HOUSE WITH FOLKS	1	0		1	
		IN SEPARATE HOUSEHOLD	4	15		19	
35 - 55	SINGLE	IN HOUSE WITH FOLKS	3	0		3	
		IN SEPARATE HOUSEHOLD	4	2		6	
	COUPLE	IN HOUSE WITH FOLKS	0	1		1	
		IN SEPARATE HOUSEHOLD	2	19		21	
55 - UP	SINGLE	IN HOUSE WITH FOLKS	1	0		1	
		IN SEPARATE HOUSEHOLD	1	3		4	
	COUPLE	IN HOUSE WITH FOLKS	0	0		0	
		IN SEPARATE HOUSEHOLD	3	5		8	
TOTAL			47	53		100	



## **Housing Conditions**

Three types of housing exist on the reservation; single family detached homes, usually owner occupied; trailers, all owner occupied; and 10 units of HUD built housing managed by the Indian Housing Authority as rental properties. Though they share many characteristics, each form of housing has its own special maintenance, utilities and general adequacy problems.

The owner-occupied houses are mostly older homes. They are difficult to expand or improve upon. This is a consequence of age, location, climate, income, contemporary building practices for structure and utilities, and limited facilities and procedures for repair. As the largest part of existing housing stock, these homes must be maintained at a reasonable level. However, looking at the home as an economic investment for the family and the tribe, it is not as economical to make a large investment in such a house as it is to invest in a house more likely to last. Some of the homes are substantial and well worth the time and money that would be necessary to bring them up to current standards. Other homes are already quite adequate. Given the zero vacancy rate right now, every house must be considered a potential home. In terms of a housing plan and the short term decisions necessary to achieve a long range plan, a decision maker must be realistic. Whether that decision maker is head of a household looking for a place to live, or a member of a housing program, it must be recognized that many of the existing homes are not worth the repair cost investment. This is already widely recognized by those working with housing, but due to the lack of housing options, it is difficult to do much about it.

The situation with trailers is more extreme and urgent. There are a number of problems with the trailers, some inherent in the design and others unique to this usage. Trailers provided important short term relief from a severely overcrowded situation. In 1974 over 20 trailers, used by HUD as temporary housing after the floods in Wilkes-Barre, were made available to the community for the cost of transportation. As these trailers were sited and moved into, problems began. Economically, they are a poor investment. Any money put into a standard house increases its value, but money put into a trailer is lost, because of depreciation, in five to ten years. Not only is equity not built up, but also any money invested is lost. In terms of livability, trailers are generally inadequate. Due to poor construction and insulation, they are expensive to heat in the winter and too hot in the summer. There is not enough living space or storage space. Structurally, they are shoddily built and equipped. Doors fall apart, roofs leak and the walls peel and buckle. When repairs have to be made, replacement parts are difficult and expensive to obtain.

The mobile homes are currently being used mostly by young families. Within two to four years they will not be functional as acceptable living units. Before that happens, provisions must be made to insure adequate replacement housing. In providing that housing, we should keep in mind not only the problems of the structure itself but also those of appropriate siting. Current trailer sites were short term accommodations and were not considered as appropriate sites for permanent development.

The situation with the HUD units is somewhat different. The original design was not the choice of the community, but was a "take it or leave it" proposition from HUD. The design of these houses does not take into account the challenging nature of the environment at Bay Mills. There is also a lack of understanding as to who is accountable and responsible for the various maintenance and financial functions that go with rental property. This lack of clarity has led to a breakdown in efficient operation and has engendered conflict among the parties involved.



### **Site Selection**

A house is not just a social phenomenon or a shelter for a household. It is also a product of, and has an impact on, the forces of nature. Subject to the forces of climate, soils, vegetative cover and topography, a house also affects the local surroundings because the activities and wastes of the home must be accommodated.

Much of the costs of heating a house and the adequacy of the drainage field are functions of house design and site selection. There are also many factors that should be taken into account when developing effective criteria for site selection and house design.

The current criteria for site selection include: availability of water and septic, desire for privacy, proximity to the road, view and desire to live close to parents. These preferences often come into conflict. The pattern engendered by these factors has resulted in scattered clusters of housing around desirable locations with occasional solitary residences. Little advantage is taken of natural features. Some of the best lakeshore property is marked by conspicuous development. Because the community has not established a policy for site selection, sites are developed that end up being unsuitable and expensive for both the resident and the community. The overall absence of community developed and approved goals and policies leaves the community decision makers with no guidelines from the community. In such a policy vacuum conflicts and incompatibilities grow into serious problems, such as the long standing conflict between some residents of the farms and Indian Health over wells and septics in poor drainage areas.

The recent placement of twenty three trailers only aggravated past problems of site selection. The long term consequences of the environment have already affected most of the permanent houses. The placement of some trailers in inappropriate sites simply started the cycle all over again. While no amount of information or persuasion can change a decision about where to locate, the inevitable forces of nature can not be denied. (For further information, consult land use section).

### **Housing Design**

Current house designs are not readily adaptable to the particular environment of this community. This is true for the houses and particularly true for the mobile homes. The rapid rate of deterioration of the trailers speaks most obviously of inappropriate design. Other repair problems such as necessary replacement of doors and windows, lack of insulation, and deterioration of concrete steps at the HUD houses are due to a failure to design for climate and use.

People involved with housing, both maintainers and consumers, see the above problems reappearing constantly. The community knew from the start that the housing HUD was offering was not right for this climate but the community had no alternative. Future housing can be developed in accordance with a community developed standard for appropriate housing design.

### **Land Availability**

The major advantage the community has regarding land is that all land on the reservation is tribally controlled. This allows the community a great deal of flexibility in the use of tribal lands. The major disadvantages are that there isn't enough land for tribal purposes and that much of the land the community does control is of marginal utility, due to high water table and poor drainage. Very little of the land that is part of the contiguous Bay Mills Indian Community holding is really

suitable for housing development. The land suitable for housing is also in heavy demand for other uses, especially for recreation and roads. Much of the land immediately adjacent to Bay Mills is very well suited to housing development. Much of that land was, at one time, also part of the Bay Mills holdings, but was usurped by others because of its desirability. The current users to the south are predominantly private. Holdings to the west and north belong to the Hiawatha National Forest, U.S. Forest Service, U.S. Department of Agriculture. The U.S. Forest Service has a reputation for being extremely zealous of land holdings. While this could hinder reservation expansion, negotiation with the Forest Service is politically more realistic than with a number of the private land owners. This land is also more convenient and suitable for development by the community in terms of community services and facilities. While recent efforts at amelioration of the condition at Bay Mills have been helpful, the land base at Bay Mills reflects the long term abuse that has historically been the lot of the Indian Community. Given the importance of land as a development resource, the most fundamental aspects of Bay Mills needs have yet to be addressed. Any serious improvement effort at Bay Mills must include an expansion of the land base to include areas where suitable housing can be developed in an appropriate fashion.

#### **Land Tenure**

Tribal control of land, while an advantage, hinders bank financing of incontrovertible homes on reservation property. Because the land is in trust, banks are unable to secure land as collateral for loan money. The banks are therefore reluctant to grant loans. Similar land tenure problems with HUD have been handled by long term lease arrangements to the Indian Housing Authority. Lack of platting and assignment have also led to confusion regarding who has rightful use of a piece of land.

#### **Utilities**

In an area of severe environmental forces, the role of utilities goes beyond the normal consideration of amenities into the realm of survival. The inability of a family to heat a home adequately, whether through malfunction or cost, has very serious implications. And though not so dramatic as loss of heat, the freezing up of a water system or loss of power to a family's freezer can impose very severe restrictions on a family's health and activities.

#### **Heat**

Heat is a major household concern for approximately ten months of the year, with all but one or two months of the year requiring some form of supplemental heating. Home heating plants are nearly equally divided between oil stoves and wall furnaces. Wood burning stoves, a frequent supplemental heat source, are the primary source of heat in about 10% of the homes.

Fuel oil for heating is expensive. Costs average around \$80 per month in the winter and is escalating due to inflation and transportation problems. Effective utilization and retention of heat in a home would help reduce that cost.

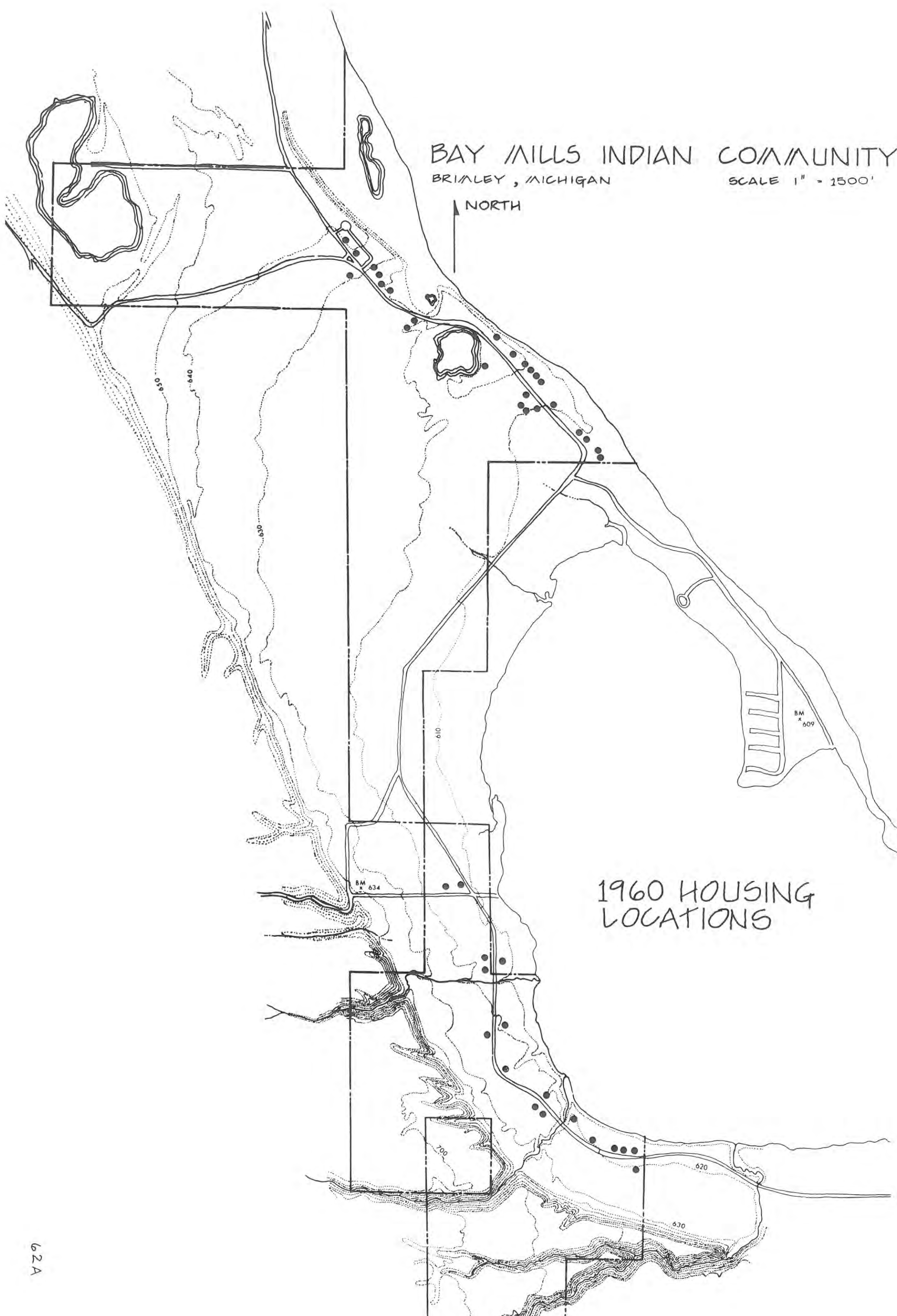
Adequate insulation is generally prevalent but over 30% of the homes still require additional insulation. Probably more important than insulation in the walls, for heating economy, is the problem of drafty doors and windows. Over 65% of the existing homes require major repairs to windows and frames. Only 50% of the homes have a chimney in good repair. These factors become particularly significant in light of the strong winds which tax to the limit the capability of a home to retain what heat it has.

# BAY MILLS INDIAN COMMUNITY

BRIMLEY, MICHIGAN

SCALE 1" = 1500'

NORTH



1960 HOUSING  
LOCATIONS

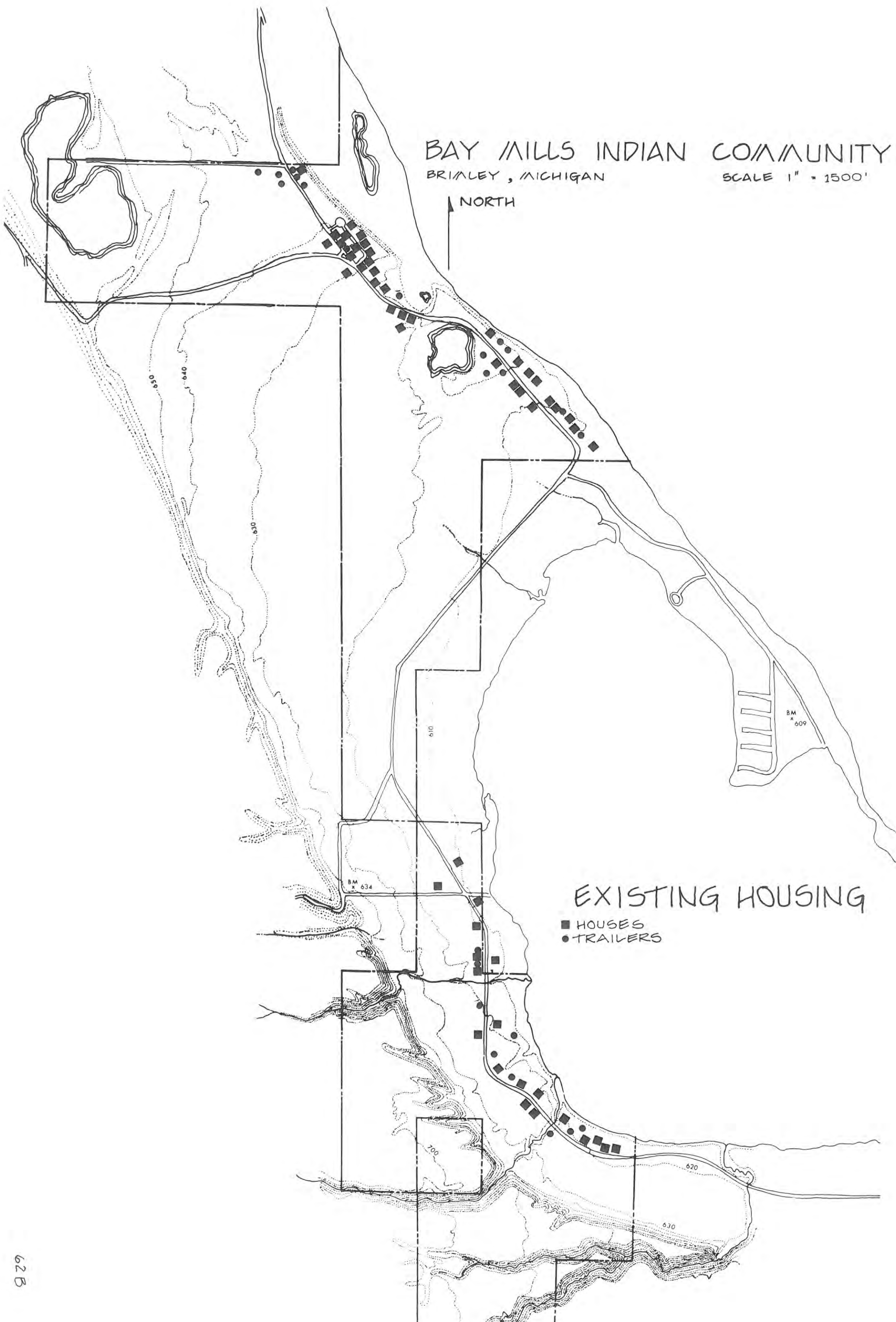


# BAY MILLS INDIAN COMMUNITY

BRIMLEY, MICHIGAN

SCALE 1" = 1500'

NORTH





There are perennial problems such as ice dams on the roof and the wholesale deterioration of exterior doors which is an indication of substantial heat loss through the roof and doors. Heat loss of this nature tends to tax more heavily the already burdened resources of the housing authority and the community.

Very minimal use has been made of existing environmental features which could help to protect the home against the wind and snow. The design, materials and construction method of the HUD homes did not take into consideration the problems of heating a home in such an environment, nor do many other homes or trailers.

### **Electricity**

Electrical service, provided by Cloverland Electric Company, became available to this community in the late 1940s. Distribution and rate structure of power to Bay Mills and the problems of costs and lapses in service are the same as experienced by the surrounding communities. Bay Mills can not affect the rate structure on its own. Power outage, caused by power company lines going down due to wind, snow or ice, is also something Bay Mills can not prevent.

Within the community, however, there are problems with the distribution of electricity that Bay Mills can correct. Less than one-third of the service entrance boxes are standard and the electrical wiring in over 60% of the homes is sub-standard. Obviously, this is a risky, unsafe situation and results in additional interruption of power. There are homes without electrical service, but this is a function of income or condition and age of the structure, not lack of access to service.

### **Sewage And Water**

Sewer and water service are provided primarily by individual household wells, pumps and septic tanks. The exception is the HUD units which have a joint water supply system and a modern pump station. These HUD homes also have individual septic systems. The Indian Health Division of the U.S. Public Health Services has provided a total of 35 wells and 31 septic tanks for the reservation. Most of the maintenance is the responsibility of the householder. Some of the home-owners have paid private contractors to do the well drilling while others have done the work themselves.

At the present time, about 30% of the housing units are without adequate sewage facilities, while 25% of the homes have an inadequate water supply. Reasons for these drawbacks vary but are primarily due to inadequate soil suitability for septic tanks on the south end of the reservation. Many trailers have been added there recently.

Questions exist concerning the feasibility of providing a water septic system which would be worth more than the trailer itself. There is also the question of providing a complete system when the housing unit in question is seriously substandard.

The issue of water and sewage serves as a good focus for the issue of how the community must make and enforce decisions regarding long term development. Installing a water and sewage system is a sizable community investment in a housing site. This investment can be an important factor in deciding whether or not to settle in certain locations.

Because all water systems are not adequately protected from the severe winter weather, frozen

pipes is very frequently a problem. This problem is most often encountered by mobile home dwellers. Occasionally the existing sewage systems require pumping which is done with a pumping truck owned and operated by the Indian Health Division.

## GOALS

- Expand land base for future housing development.
- Select and develop appropriate housing sites.
- Increase housing stock to accommodate population demand.
- Provide housing appropriate for the environment.
- Develop an enforceable housing code.
- Coordinate housing development with the supporting services and facilities.
- Increase housing options available to those desiring to reside on the reservation.

## OBJECTIVES

- **Acquire more land to meet tribal housing needs.**  
Land adjacent to the reservation and suitable for residential development should be acquired soon to meet future housing needs. Land is to be placed in trust status and handled like other tribal lands used for residential purposes.
- **Plat and register all land suitable for residence.**  
All land to be used for residential purposes must be specifically designated as such by Tribal Council. All such land shall be platted into lots and registered with Tribal Council. Any member of Bay Mills wishing to have a house, trailer or any other residential structure on Bay Mills land must apply to Tribal Council for a written lease on a lot. No lot shall contain more than one residence — continue with last of objective. A minimum and maximum lot size should be established by the Tribal Council. Any residence currently occupied full time by a member of the community must be accepted as platted but the site can be withdrawn from residential use if the ownership or residence changes. Any plat assigned but not developed according to development schedule shall revert to Tribal Council for reassignment. (See appendix for development schedule).
- **Secure funding for 100 units of housing.**  
This housing would be used for the replacement of 25 trailers, 15 new units for the elderly and 50 units for new families and replacement of existing substandard units. An additional 10 units will be developed on Sugar Island.

- **Develop twenty individual sites over the next five years in the pine plantation.**

These sites are to provide incentive for building by potential owners in approved locations. These twenty sites are a part of the projected need for 90 additional homes at Bay Mills. Developing sites in this fashion allows and encourages new housing that can be owner-occupied and financed by sources other than HUD.

- **Insure full range of housing opportunities for elderly.**

This includes upgrading maintenance of existing housing and development of new housing specially designed for elderly.

- **Increase housing opportunities for young single people.**

Encourage self-help and group efforts to develop new housing. Prohibit discrimination against young singles regarding distribution of tribal housing resources.

- **Develop housing on Bay Mills land on Sugar Island.**

This development should be undertaken on the same terms and conditions as housing on Bay Mills proper, including leases, site criteria, technical assistance and encouragement of ownership efforts.

- **Centralize decision making for housing.**

All decisions regarding distribution of housing resources should be handled by the Indian Housing Authority (IHA). This includes all HUD and Housing Improvement Program (HIP) monies, well and septic systems, code enforcement

- **Expand resources available for appropriate housing development and maintenance.**

Within five years, provide funding for a full time housing position, to coordinate development, management, maintenance and enforcement of all housing on tribally owned land. Continuing education related to the job should be part of the job description. Provide resources for increased technical assistance to those who wish to build. Technical assistance should include financing, construction, maintenance and remodeling, classroom work, library resources, cooperative buying.

- **Discourage development in unsuitable areas.**

Prohibit the use of any tribal housing resources to anyone developing a new site in an area not designated as residential by the tribe. No protection by lease assignment, no well or septic, no HIP or other fix-up money.

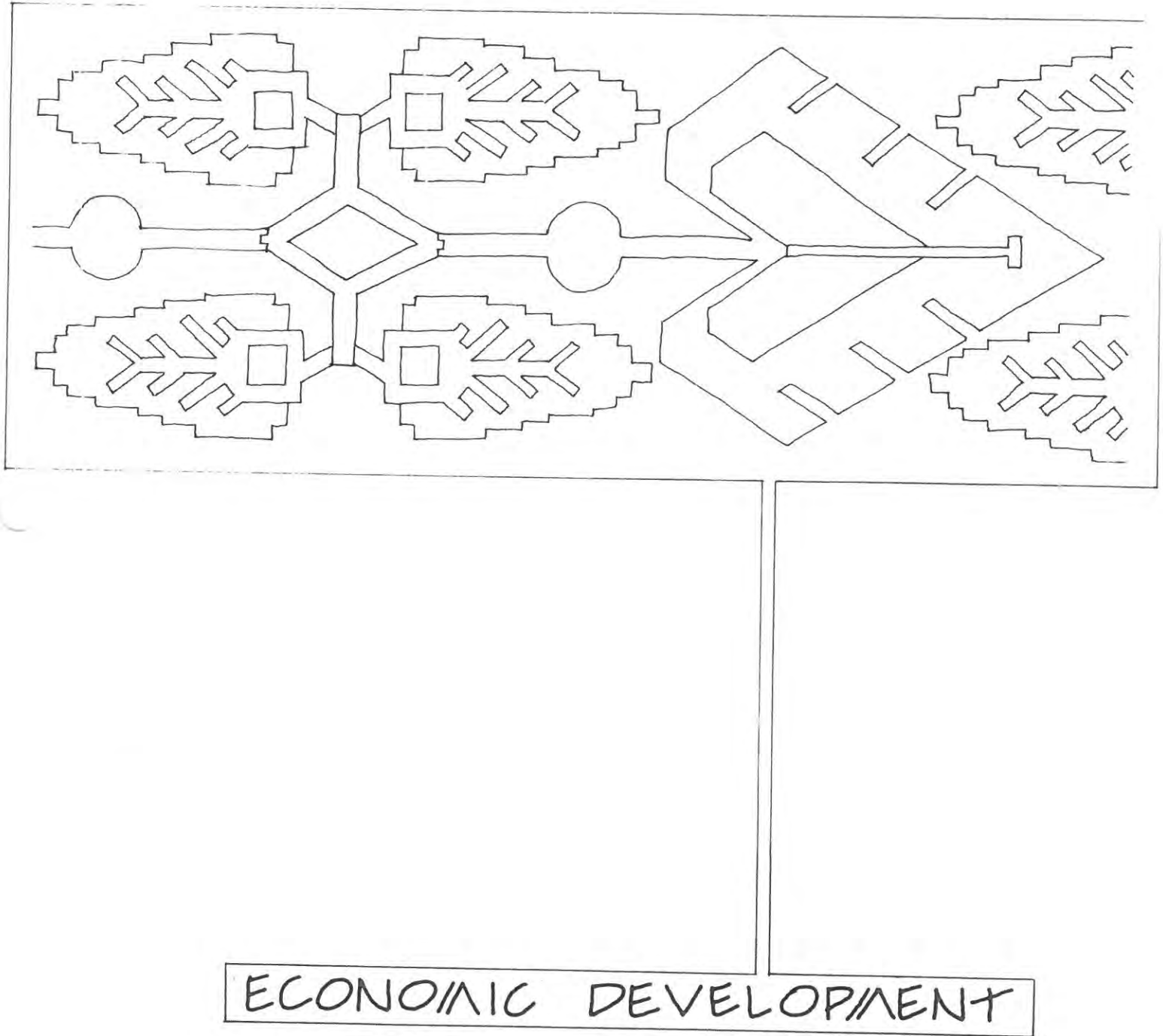
- **Establish a priority system for home repairs to govern distribution of tribal fix-up resources.**

Determine standards every home should meet and allocate resources (labor, money and materials) according to deficiencies. Priorities should go first to items of safety, health and major structural deficiencies.

- **Develop and/or adopt a building code that includes design and construction appropriate to the environment at Bay Mills.**

Such a code should pay particular attention to insulation, weather-tight, weatherproof doors and windows, foundation systems, economical heating/cooling systems, and air circulation within the home.





## Introduction

The following economic development section deals with the potential future development actions of the Bay Mills Indian Community. Economic development will be defined for our purposes in terms of any job producing or generating activity, whether it is in the government, manufacturing or service sector. To stabilize the Bay Mills Community we must keep in mind that it is not necessarily the size of any one operation activity but the number and diversity of independent activities created which will lead to the economic independence of the community. It is important that as many activities as possible be related to one another in order to add stability to the overall development. This section will discuss those potential developments which would have both short and long range benefits for the community. A community profile outlines the existing characteristics of the Bay Mills labor force, as well as general conditions for the community as an economic unit. There is a review of employers and employment opportunities on and off the reservation, and a discussion of the tribe's role as a government. Many specific elements of the development climate are discussed, as well as a historical review of development efforts. Specific alternatives are examined, recommendations made and an action plan charted. In addition there is a discussion of the costs and benefits to be associated with tourist development. It is important to consider that it will take years of dedicated work to make significant changes come to pass. One must maintain a vision of the future and see beyond the recommendations and proposals set forth in the following economic development section.

## COMMUNITY PROFILE

There are 296 year-round Indian residents on the Bay Mills Reservation. Total membership in the band is 460. In addition to the 296 year round residents, there are 164 Bay Mills Community members living off reservation. Many of these off reservation members would return to the reservation if suitable employment opportunities existed.

On the reservation there are 139 adults (over 20) and 178 children and youth (under 20). Distribution is illustrated in the following chart:

### POPULATION DISTRIBUTION

AGE GROUP	U.S.* %	BAY MILLS %	BAY MILLS # NUMBER	CHIPPEWA CO.* %	MICHIGAN* %
Under 5	8.4	10.8	32	8.4	9.0
5-14	19.9	27.7	82	22.7	21.4
15-24	17.8	23.3	69	20.6	17.7
25-44	23.6	22.9	68	22.1	23.4
45-64	20.5	11.5	34	17.9	19.7
65+	9.9	3.7	11	8.2	7.8
<b>TOTAL</b>	100.0	99.9	296	99.9	99.0

\* = 1970 census

# = On reservation residents: 1976 census

The population group which constitutes the productive element of most communities in terms of labor output and earning power is under represented at Bay Mills. The age group which includes workers, civic leaders and businessmen between 24-64 comprise 34.4% of the Bay Mills population verses 44.1% for the United States. This condition inevitably limits the strength and potential productive capacity of the reservation community. A low representation among the working middle class at Bay Mills can be attributed to a number of factors. A high out-migration due to lack of job opportunities in the area is one likely cause. Another is average lifespan, for Bay Mills residents averaging only 45 years for female, 47 years for male compared to 67 male, 75 female for the United States. 61.8% of the Bay Mills population is under 24 years of age compared to 46.1% for the United States. This indicates a dramatic increase in the productive consumptive age bracket (25-44) within the coming 10 years. While this will supply the need for manpower in the Bay Mills Indian Community, it will simultaneously create a great demand for jobs on and near the reservation. Failure to meet this demand will likely mean a continued out-migration.

### INCOME

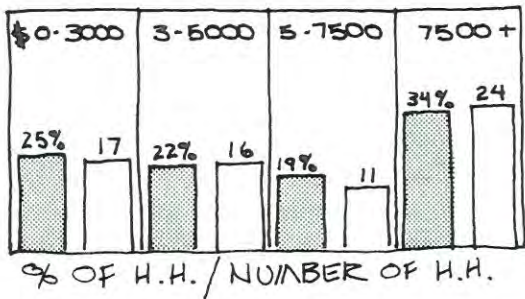
#### Table #2

The survey conducted by the Bay Mills Planning Staff in January 1976 reveals information as shown on Chart A.

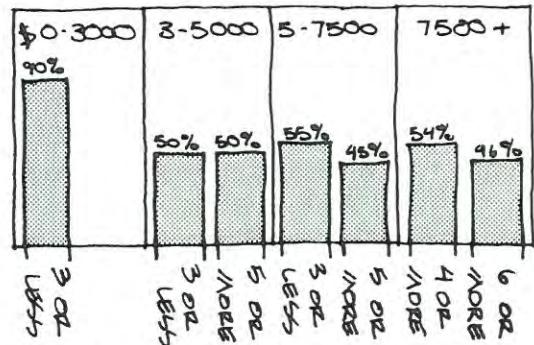
Tendencies revealed by this chart tell much about conditions at Bay Mills. The lower the family income the more likely the head of household is to be elderly or a woman with high school education, or less, who is not working. The higher the family income, the more likely it is that more than one person in the household is not female or elderly and has high school education or more. Other characteristics of household are discussed in demographics. Though income levels at Bay Mills have improved somewhat in recent years, about 66% of Bay Mills residents household earn less than \$7500 a year. The average income for households is \$5200 per year. This is below state and regional figures which are respectively: State \$12,206 and Regional \$8,164.

Chart A

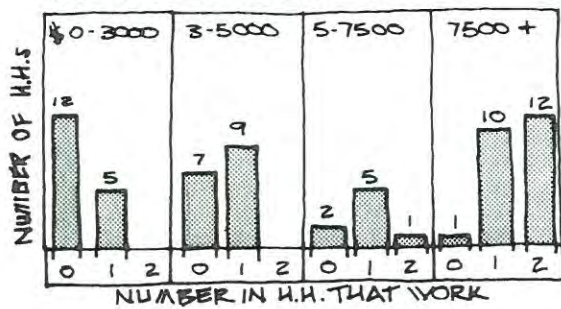
TOTAL HOUSEHOLDS



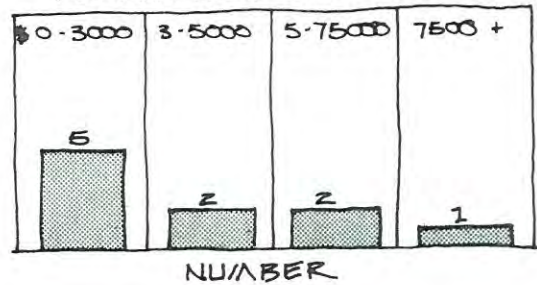
SIZE OF HOUSEHOLDS



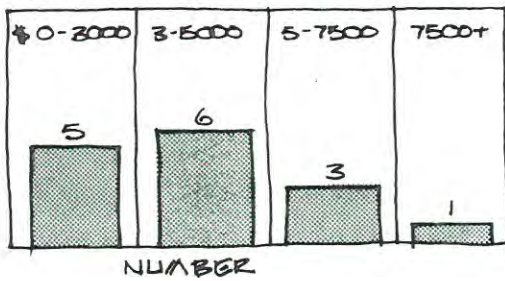
NUMBER IN HOUSEHOLD THAT WORK



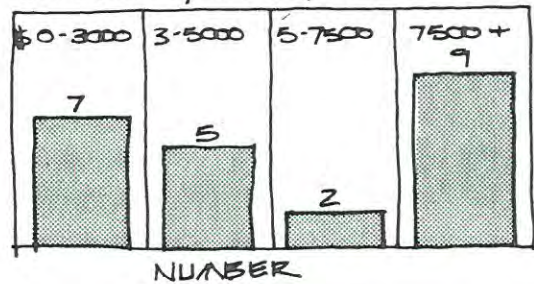
FEMALE HEAD OF HOUSEHOLD



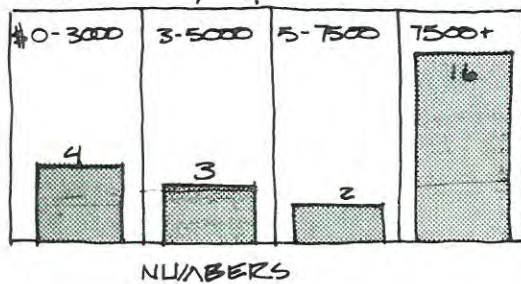
ELDERLY HEAD OF HOUSEHOLD



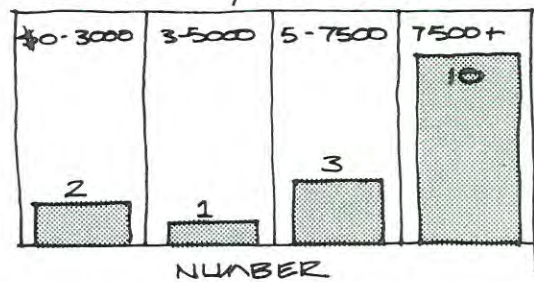
WORKERS W/OUT HIGH SCHOOL ED.



WORKERS W/HIGH SCHOOL ED.



WORKERS W/MORE THAN H.S. ED.





### Bay Mills resident employment in the region

The primary source of employment for Bay Mills residents comes from various forms of government jobs. Jobs include positions in the local school system, Indian Action Team carpenters and Tribal Government Development employees. Other full time positions include fishing and service related positions. A number of community members work at low paying seasonal and part time jobs. Overall, the employment picture is bleak. Unemployment in January, 1976 was 58.7% of the total labor force compared to 27.8% for Chippewa County. A breakdown of employment by sector comparing Bay Mills to Chippewa County is as follows:

	BAY MILLS RESERVATION		CHIPPEWA COUNTY	
Total employment	61		8,975	
Total Labor force	148		12,425	
Number unemployed	87		3,450	
Percent unemployed	58.7		27.8	
	<b># EMPLOYED</b>	<b>% OF TOTAL</b>	<b># EMPLOYED</b>	<b>% OF TOTAL</b>
<b>MANUFACTURING INDUSTRIES</b>				
- Durable goods industries	1	1.6	275	3.8
- Non durable goods industries	9	14.7	125	1.7
<b>NON MANUFACTURING INDUSTRIES</b>	10			
- Construction	1	1.6	150	2.0
- Transportation	1	1.6	525	7.2
- Wholesale trade	1	1.6	100	1.4
- Retail trade	0	0	1200	16.6
- Finance, real estate, insurance	0	0	200	2.8
- Service includes mining	7	11.4	775	10.7
Government	<u>41</u>	<u>67.2</u>	<u>3875</u>	<u>53.6</u>
<b>TOTAL</b>	<u>41</u>	<u>99.7</u>	<u>7225</u>	<u>99.8</u>

Source: Bay Mills Planning Staff Survey January, 1976

Source: MESC January, 1976

It can readily be seen that Bay Mills is not participating to the extent possible in the surrounding economy. The community is under-represented in all categories except service and government.

Particularly significant deviations are those regarding retail trade, transportation, construction and financial businesses. Retail trade represents 1/3 of all non-government work in the Chippewa County economy, yet no one from Bay Mills is so employed. Such jobs, though paying only moderately well and often seasonal, are of particular importance as second incomes. Retail jobs are usually held by women, youth, or older persons; all categories of the labor force particularly, under-represented among the employed at Bay Mills. Transportation and construction are of note because so many workers at Bay Mills are skilled in these areas but are not finding job openings. Although there has been almost a million dollars worth of construction at Bay Mills in the last two years, Bay Mills workers have gotten only a few weeks work on any of those projects. This is in spite of clear legal mandates requiring minority hiring on construction projects.

The lack of participation in financial businesses has ramification beyond the mere lack of employment. Financial and business managers for the community are a priority. That management experience comes from working in a financial business. With the high profile that the Soo banks have maintained, they would seem to be likely candidates for hiring of Bay Mills residents. Jobs within such institutions are available at many different skill levels and offer a ladder of advancement with additional education and experience.

All of the categories mentioned above offer opportunities in two areas. The opportunity of employment for income is obvious. More subtle and important to long term development efforts, are the skill, contacts and expectation to be developed. Only thru the long term development of an administrative and skilled economic infrastructure, will the community be able to continually sustain the development level it anticipates.

Next to government, the primary source of on-reservation employment is fishing. There are currently nine members of the Bay Mills Community who derive primary income from this industry and several other members who derive income from fishing on a part time or supplemental basis. As a traditional and historic livelihood, fishing has been and will likely continue to be the economic mainstay of the community. With the completion of the fish processing plant in the late summer 1977 (see Action Plan), the tribe will be able to process and market fish directly. This operation will provide up to 13 additional jobs to the community. The development potential of the fishing industry is very great. The level of future activity will be determined when a series of legal and public health questions are answered. The State of Michigan Supreme Court is currently considering the issue of the legality of State commercial fishing laws pertaining to Indian fishing. Bay Mills argues that its fishing and hunting rights are guaranteed by federal treaty and that the State cannot deny these rights. A final decision on Indian Treaty rights may take a period of years. The public health issue concerns the level of PCBs (Poly Chlorinated Biphenyl's) in Lake Superior fish. The Food & Drug Administration and Environmental Protection Agency are concerned that high levels of PCB's in food fish constitute a hazard to human health. The allowable level of PCB in fish which is sold for human consumption would determine species, catch levels and volume of operation of the fish processing plant. Recent studies have substantiated that lean lake trout and whitefish taken from Whitefish Bay are safe for human consumption.

### **Employment on the Reservation**

The following table illustrates on-reservation salaried employment by source from 1974 to 1976. Government programs, primarily federal, provide 67% of the jobs for residents of the Bay Mills Reservation. Summer is the season of highest employment when the Neighborhood Youth Corps (NYC) employs youth from 13 to 18 years of age. These jobs are not nearly as stable as civil service or regular government employment. This is because of the susceptibility of these programs to budget cuts resulting in partial or complete cessation of programs and jobs. Additionally, these government programs are slated to operate for a specific period of time, usually from fiscal year to fiscal year; sometimes as short as six months.

The comparison of government employment figures between Bay Mills and Chippewa County is deceptive. Although Bay Mills shows a higher rate of government employment, they show very little in substantial government jobs including government at the local levels. Jobs in such areas as school teaching, the Soo locks, and the various county agencies have not included any significant numbers of Bay Mills residents.

An exception to this situation is the Pendill's Creek Fish Hatchery, which has a history, under the management of Mr. Drake, of employing Bay Mills residents and is in the process of training a Bay Mills resident in hatchery work.

### **Employers off the Reservation**

A contributing factor to high unemployment among Bay Mills residents is the scarcity of job opportunities in the Chippewa County area. In January, 1976, unemployment in the county stood at 27.8%. It is estimated by MESAC that if Kincheloe Air Force Base closes in late 1977 as planned by the Department of Defense, unemployment in the county would approach 40%. There are no major industries within 20 miles of the reservation and very few small businesses which offer year round employment opportunities. The few job opportunities which exist in Sault Ste. Marie (20 miles away) are predominantly low paying, low skill and low status positions. The rural isolation of Bay Mills, poor transportation facilities, high transportation costs and harsh winter weather provide formidable obstacles when commuting to any job. In addition, many Bay Mills residents lack education and skill level requirements for the better jobs in the area. For these reasons the tribe considers it imperative that job opportunities are developed on or near the reservation. Those Bay Mills residents which are fortunate enough to have found work off the reservation are employed in such areas as Grave's sawmill at the Raco Industrial Site (2 members as of January 1975); short term construction projects in the area; program administration at Inter-Tribal Council of Michigan in Sault Ste. Marie; Brimley School system; restaurants in Sault Ste. Marie; Pendill's Fish Hatchery; Kincheloe A.F.B.; MESAC in Sault Ste. Marie; Chippewa Tube Company. A number of these jobs are part time and seasonal.

### **Michigan Inter-Tribal Council**

The Michigan Inter-Tribal Council, Inc. is a multi-tribal consortium comprised of representatives from the federally recognized Indian tribes in Michigan including the Bay Mills Indian Community. Its purpose is to foster unity among the various tribes and to organize cooperative efforts to achieve common goals. It employs people on the reservation and administers the funding of many government grants to the tribes. Among the many programs at Bay Mills which Inter-Tribal

Council administrators include: Alcoholism coordinator; Community Home Representatives (CHR's); Winterization; Indian Action Team; and Neighborhood Youth Corps.

The Inter-Tribal Council of Michigan is not a governmental unit and does not exercise control over Bay Mills or any other reservation. Employees of ITC at Bay Mills are responsible to the Bay Mills Tribal Council.

### **Tribal Revenue**

The Bay Mills Tribal Council like other representative government agencies, require operational monies to carry out its administrative functions. Unlike most governments Bay Mills does not levy any taxes, including taxes on income property, business activity or sales. The predominant source of revenue is funds for various programs administered by the tribal government. Revenue sharing has provided a nominal source of revenue but is not scheduled for renewal beyond 1976. A major concern to the tribe is the loss of funding through the termination of the Tribal Government Development Program. The conversion to the Indian Self Determination and Education Assistance Act (93-638) will have the immediate effect of a net loss of three funded tribal government positions. New sources of revenue must be found if the tribal government is to continue to function. (See also: Tribal Government)

There are few other sources of income to the tribe. Garbage pick up fees have recently been set, but revenues are only expected to meet operation costs. There are no other service fees collected. The tribe supposedly collects money through lease of the Raco Industrial Site Buildings but so far, this source has proven unreliable.

A long range consideration for providing revenue for operational expenses of the Tribal Council would be to levy a tax on businesses on the reservation both Indian and non-Indian. This tax could be postponed for a certain period of years so that developing businesses could be firmly established before payments began. A deferred graduated tax would provide a minimum deterrent to new industry and business development and would generate much needed income for tribal services. Tax limitations could ensure that the tax obligations would not be burdensome or too restrictive.

### **The Climate for Economic Development at Bay Mills**

Economic development at Bay Mills has been hindered by a number of problems. Some of them are of a general nature and pertain to development of Indian reservations nationwide. Others are indigenous to the reservation community and its remote location in a region which has a history of chronic unemployment.

One of the major problems encountered in stimulating economic activity is acquiring development capital. This problem is complicated because it is imbedded in both economic and legal factors. The special ownership status of Indian lands makes it difficult for financial institutions to accept lands as security. Reservation property is not owned by individual Indians; rather, each occupant has an undesignated interest in the property. This property cannot be sold as title is held in trust for the Indians by the federal government.

Another problem associated with Indian land occupancy is that Indian land is not subject to property taxes. As a result of this arrangement, services traditionally provided by local



**BAY MILLS TRIBAL RESIDENT EMPLOYMENT BY SOURCE**

	CETA	TGDP	ITAC	CHD	JOM	LEAA	BIA	U.S.D.A. COUNTY EXT.	INDIAN HEALTH	ITC	GRAVES	TITLE IV	CHR	NYC	PART TIME VARIOUS	TOTAL W/O NYC & PART TIME
1974	4	4		1	1	2	2			9	5			12		28
1975	8	2	10	1	5	2	2	1	1		3	1	1	55	7	37
1976#	2		7	1	1	3	4	1	1	3	2		2	37		27

# Figures obtained subsequent to planning team survey of January, 1976.

Source: Bay Mills Executive Council.

Abbreviations: **CETA** - Comprehensive Employment Training Act  
**TGDP** - Tribal Government Development Program  
**ITAC** - Indian Tribal Action Team  
**CHD** - Campaign For Human Development  
**JOM** - Johnson O'Malley  
**LEAA** - Law Enforcement and Administration  
**BIA** - Bureau of Indian Affairs  
**USDA** - U.S. Department of Agriculture (County Extension)  
**ITC** - Inter-Tribal Council of Michigan, Inc., Sault Ste. Marie  
**GRAVES** - Ed Graves' Sawmill at Raco  
**TITLE IV** - Indian Education Act, Title IV, Part A  
**CHR** - Community Health Representatives, Indian Health Service  
**NYC** - Neighborhood Youth Corps

government, namely, schools, hospitals, streets, police and fire protection, have been provided either directly or indirectly by the federal government. Any meaningful concession or monetary incentives to industry at the local level necessarily require federal government cooperation. Some reservations are more fortunate than others in having non tax sources of revenue such as land leasing, timber or oil and mineral reserves. In such cases the reservation is in a better position to assist in the effort to attract industry and sustain economic growth and stability. With the exception of the fishing industry, which has growth potential but faces a series of legal management and financial questions, Bay Mills has a limited resource base.

Another general problem is a lack of knowledge in business operations. Census figures indicate that only two or three percent of the employed Indian population in the Upper Midwest can be classified as managers, officials, or proprietors, except farms. Bay Mills experiences the same deficiencies. The business world has excluded most Indians, since they have not been entrepreneurs. General economic development in any community depends heavily upon the enterprising individuals in that community. The lack of business experience and market orientation among many of the most capable leaders makes it more difficult to develop the reservation economy.

One of the disappointing aspects of past efforts to industrialize and expand reservation economics has been the rather large number of newly established businesses which have failed or shut down after relatively short periods of operation. The firms which are attracted are often firms which would probably not start at all, or would not locate on reservations, except for the added promotional effort on the part of the development specialists and political bodies at all levels of government. Many of the past firms which have failed appear to have been firms which would not have been initiated if they had to rely on normal channels for credit and would have had to bear the full cost of training their work force, constructing a building and determining the marketability of their product. In the struggle to create employment opportunities on reservations, both tribal officials and government agencies may overlook certain facts which would suggest problems for the firm. This may be encouraged by the fact that they are evaluated in terms of the success they achieve in producing jobs in a short period of time rather than in terms of the permanence of those jobs.

To counteract some of the disadvantages associated with economic developments on reservations a number of incentives have been offered to industry and business by federal and state agencies. These include feasibility studies, technical assistance, employment assistance and other services. In addition to these incentives, industry can be attracted by the tax advantages of locating on Indian land. Federal and State training programs are available to train or retrain new employees. Because of high unemployment, an abundant labor supply is also available. Specific factors inhibiting economic development at Bay Mills have included the following:

- Distance from major markets.
- Poor transportation services and lines.
- Size and skill of available labor force.
- Low educational level of Bay Mills people.
- Inadequate public service facilities-sewer and water.
- Lack of venture development capital.

- Limited resource base: Poor soils, minerals, no agriculture, limited forests.
- Failure to specifically relate development efforts to community needs and resources.
- Intangible leadership factors.
- Limited government infrastructure.
- Limited land base.
- Absence of tax base to support local services and programs.

These factors which limit or inhibit economic development are not insurmountable. They do provide an indication of community needs which will be identified followed by a series of developmental goals and an action plan designed to provide economic stimulus to the reservation.

#### GOALS:

- Develop permanent jobs in an integrated and diverse reservation economy.
- Increase participation in the local economy.
- Increase job opportunities for youth and women.

#### OBJECTIVES:

- **Develop the resources in the community for operation of the fish plant.** These resources should include training of administrative and production personnel, establishment of personnel policies, investigation of marketing and transportation alternatives, quality control procedures, maintenance policies and schedules and contacts in the event of technical or financial crisis.
- **Investigate possible spin-off activities related to fishing.** Such activities could include establishment of a facility and/or training for boat and motor repair, net manufacturing and retailing of fishing supplies ranging from nets to boats or motors.
- **Conduct a feasibility analysis for tourist park development.**  
While not recommending for or against a tourist park, a feasibility analysis would provide in a systematic fashion the costs and benefits to be derived from such an activity.
- **Secure funding to determine feasibility of Raco development.** Working in cooperation with the U.S. Forest Service, EUPPAD and BIA, apply for funds to conduct a feasibility study as to possible uses of Raco site. Study should include shared development and administrative costs and benefits to developer. Study should be conducted by a consultant not attached to any of the agencies involved. If funding cannot be secured for such a study, it is recommended that Raco be allowed to revert to Forest Service, or contract renegotiated to relieve Bay Mills of maintenance costs.
- **Investigate feasibility and funding options available for the construction and operation of an automotive service station.** The traffic running thru Bay Mills could be tagged as a resource

to develop a service station which could also serve the community. The study should determine probable volume, overhead expenses, level of management expertise required, opportunities available in vocational education, or high school co-op students and any possible costs to the community.

- **Determine feasibility of a restaurant operation on the reservation.** An Indian owned and operated family restaurant would seem to have potential. Traditional Indian meals such as fish, fry-bread and corn soup could be served as a speciality in addition to a regular breakfast, lunch and dinner menu. Such a restaurant could be developed in conjunction with the fish plant and would be expected to draw summer and fall tourist traffic from surrounding campgrounds, as well as regular meals for employees of the tribal center, fish plant and other community programs. It is recommended that the initial operation be relatively modest and build a reputation for quality and cleanliness before expanding to a big operation.
- **Tie tribal educational benefits to the local job market and reservation development priorities.** As recommended in the education and tribal government sections of this plan, maximum use of tribal educational benefits can be had by giving priority to those individuals pursuing careers related to tribal development needs. Areas of priority include education, health care, administration, accounting, careers related to resource management, planning and evaluation.
- **Explore with local employers job opportunities for Bay Mills residents.** Local employers should include commercial, industrial, professional and all layers of government employment. Exploration should include possible cooperative training efforts, long term job opportunities towards which education or training programs can be aimed, as well as current jobs for which Bay Mills has qualified personnel available.
- **Increase career counseling for youth.** Such counseling should include full utilization of existing services such as MESC, as well as bringing diverse career counseling and exposure programs into the schools, or as a tribal program. Programs could include presentations by representatives of different fields, field trips to various job sites, college or career night programs. Use of NYC as career experiences, use of students as aides for tribal programs in addition to the usual career counseling packages of literatures, films, etc.
- **Clarify responsibility for job placement and career counseling.** Responsibility and accountability to tribal council should be vested in one person who could be a tribal employee, inter-tribal staff or employee of an agency with general employment responsibilities. Job description would include maintaining files on job openings, assembling and presentation of career programs, planning field trips and monitoring status of work history or career development of Bay Mills residents.



## ACTION PLAN

The first step in designing a community economic development program is to establish the types of development which will be acceptable to the residents of the community. The geographic location of the Bay Mills Indian Community presents a difficult challenge when looking at the overall development potential of the reservation. With the inherent problems facing Indian communities, Bay Mills has an additional hardship due to the depressed conditions of its surrounding area. With little to draw from in the neighboring counties, Bay Mills must create its own activity and growth. All activities and undertakings should have the effect of generating new job and business opportunities. The most positive factor in this process are the basic skills within the existing labor force to draw and build upon, and the fish resources of Whitefish Bay.

Since the tribal government has very little ability to generate its own funds for capital improvement or business developments they must rely on federal or state funded programs. For each program by which Bay Mills seeks funds, they must be able to realize the full scope of activities which may accompany any funded program. Not only must they concentrate on the direct employment activities which may result, but be able to stimulate those activities which are natural spin-off results.

With funding programs constantly changing and thereby affecting the communities priorities it is extremely difficult to develop a comprehensive development program. A focus has been made on those major items which have the most immediate need, potential and probability. These areas also hold the greatest potential for sustained growth over the next five to ten year period.

The following action plan divides the total program into three phases. Each phase is a two year period involving:

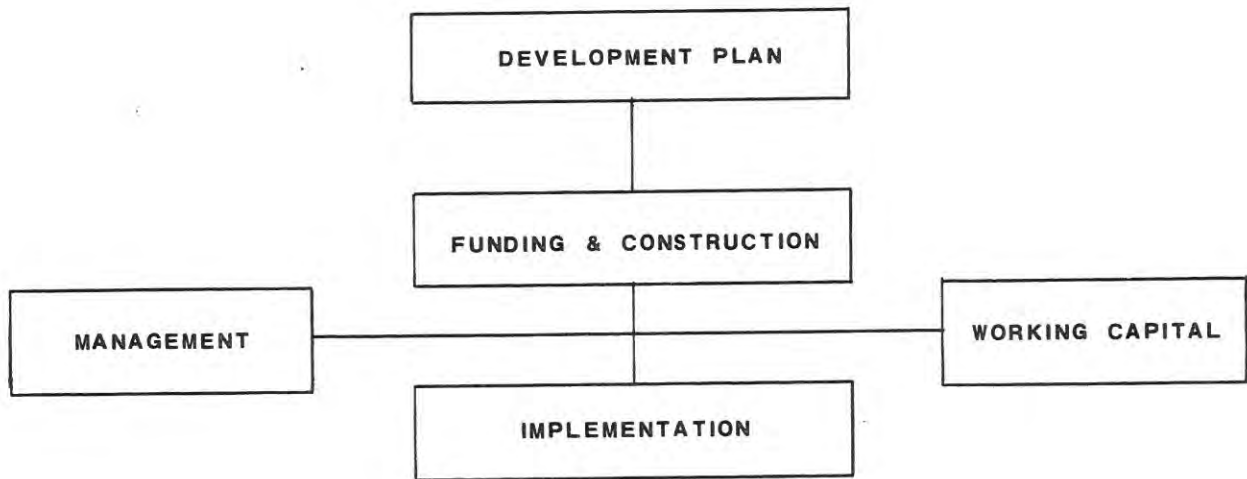
- Identification and evaluation of on-going activities.
- Preliminary planning to identify areas which merit further study and possible implementation later on.
- Detailed planning for and initiation of new projects.

It is important to keep in mind that the proposed action plan is designed to be flexible and responsive to changes in community priorities and needs. Availability of funding will be a key factor in the implementation process. A detailed inventory of funding sources for proposed projects for economic development is provided in the appendix. A step by step procedure for conducting a feasibility analysis for proposed projects is also included in the appendix.

### **1. Tribal Fish Processing Plant**

In April, 1975, the Economic Development Administration (EDA) of the U.S. Department of Commerce in Chicago approved a 100% public works and development grant to the Bay Mills Indian Community for \$393,000 to be used to create Indian job opportunities by building and operating a fish processing plant on the Bay Mills Indian Reservation. The plant will, it is projected, provide eventual employment for up to 13 community members. Site selection,

## FISH PROCESSING PLANT



### Potential Employment Activities

#### Directly Related

- Plant Management
- Fishing Operations
- Plant Labor
- Office Staff
- Plant Maintenance
- Shipping
- Fish Farming

#### Indirectly Related

- Boat Repair
- Motor Repair
- Refrigeration Service & Repair
- Metal Fabrication
- Restaurant
- Electrical Service & Repair

architects drawings, cost estimates and tribal ownership plans have all been approved. The Office of Minority Business Enterprises (OMBE) has recently completed a management study for the fish processing plant. The Bay Mills Indian Community has agreed to accept the EDA grant, to meet the conditions, to build the fish processing plant, to organize a fish cooperative to run the plant and to lease the plant to the cooperative for a nominal fee of \$1.00 per year. It is anticipated that bids will be let and construction of the plant will begin during the fall of 1976. The fish cooperative members have met with several institutional buyers and retail chain store buyers of fish to work out a direct selling program for the fish its plant will process. Initial production will be fresh whitefish and lake trout. There is a possibility that the plant will eventually process under utilized Great Lakes fish such as suckers, burbot and alewives. Feasibility and market analysis studies on increasing the economic value of Upper Michigan's commercial fishery are currently being undertaken by the Departments of Fisheries and Wildlife, Food Science and Human Nutrition and Agricultural Economics at Michigan State University, East Lansing, Michigan. The processing of under utilized fish species offers additional potential for future operation of the fish processing plant.

In addition to those jobs directly associated with the operation of the fish processing plant, it is hoped that a spin off effect will generate additional subsidiary jobs. A thriving fishing industry would likely support the development of ancillary industries such as boat and motor repair; refrigeration service and repair; restaurant; electrical service and repair; net and equipment manufacture and repair. Many Bay Mills residents already possess the basic skills necessary for operation of these support enterprises.

The most significant consideration in the implementation of the fish processing plant and spin off enterprises is competent management. It cannot be over-emphasized that for the fish processing plant to operate successfully, knowledgeable management must be found at the outset. If the community must go off reservation to obtain management expertise it is recommended that community members be trained on the job to eventually assume plant management responsibility.

## **2. Raco**

The Raco Industrial Site is located approximately fifteen miles south of the Bay Mills Indian Community on M-28. The abandoned missile site was turned over to the U.S. Forest Service, U.S. Department of Agriculture and leased to the Bay Mills Indian Community on a ten year renewable basis in 1974. The Raco Industrial Site is currently occupied by Graves Sawmill which leases the occupied property from Bay Mills at 25 cents per square foot. A number of problems have surfaced from this arrangement, most of which can be traced to the absence of a comprehensive development and management plan for the site. Lacking any short or long range perspective on the development potential of the site, Bay Mills does not have within its grasp the information it needs to assess costs and benefits to the community of continued involvement in the site. A market study and cost benefit analysis of the site must be made to give Bay Mills the facts it needs to support a decision to withdraw from Raco completely or to pursue a long range development program. It may be that the short range burden on the reservation would render a long term commitment unfeasible. Unless Bay Mills commits itself to the development of the site, there can be no realization of future development potential. Bay Mills must soon make a decision as to whether or not this long term commitment would be in the reservation's best interests.

Sources of funding are available and included in the appendix. Master plan suggestions, prepared by C. Hazen in 1975 are included in the appendix. Should the tribal council elect to proceed with development of Raco it is estimated that it will require a ten year development program to reach maximum utility. It is recommended that in the initial stages the entire complex be shut down except for the main building.

### **3. Additional Housing**

For information on housing development please refer to Housing Section.

### **4. Service Station**

One business activity with development potential for the Bay Mills Community would be an Indian owned and operated automobile service station. This operation could provide a full range of services including gasoline and oil, providing a major brand or independent agent could be induced to establish a branch on the reservation. If not, the station could provide minor to major repair services from tune ups to engine overhaul. Skill levels already exist among Bay Mills residents to provide such repairs and training programs could be instituted to provide training for specialized repair services. There is now no such facility in the Bay Mills area and the considerable resident and non-resident traffic along Iroquois Road should provide sufficient clientele to support such a business venture. In addition to automobile services the location and nature of the facility could provide a base for spin off sales such as a small grocery store, arts and crafts sales, concessions and gift shop. It is the type of business which could start off on a small scale and expand as future demand warrants. It is recommended that the service station be located in the designated commercial activity area on the north end of the reservation.

### **5. Restaurant**

An Indian owned and operated family style restaurant offers significant potential. Traditional Indian meals such as fish, fried bread and corn soup could be served, as a specialty, in addition to a regular breakfast, lunch and dinner menu. Local demand for such a restaurant is great and should create additional business with the numerous summer tourist traffic through the area. Federal, state and private campgrounds locally would provide clientele. Management and funding assistance is available through Bureau of Indian Affairs, Small Business Association, Economic Development Administration and Farmer's Home Administration.

### **6. Comprehensive Community Development Plan**

Planning is an ongoing process. It is recommended that the tribe annually review the comprehensive community development plan prepared in November, 1976 and that it be updated at a minimum of once every five years. This will enable the tribe to revise its goals and objectives in line with changing needs and priorities.

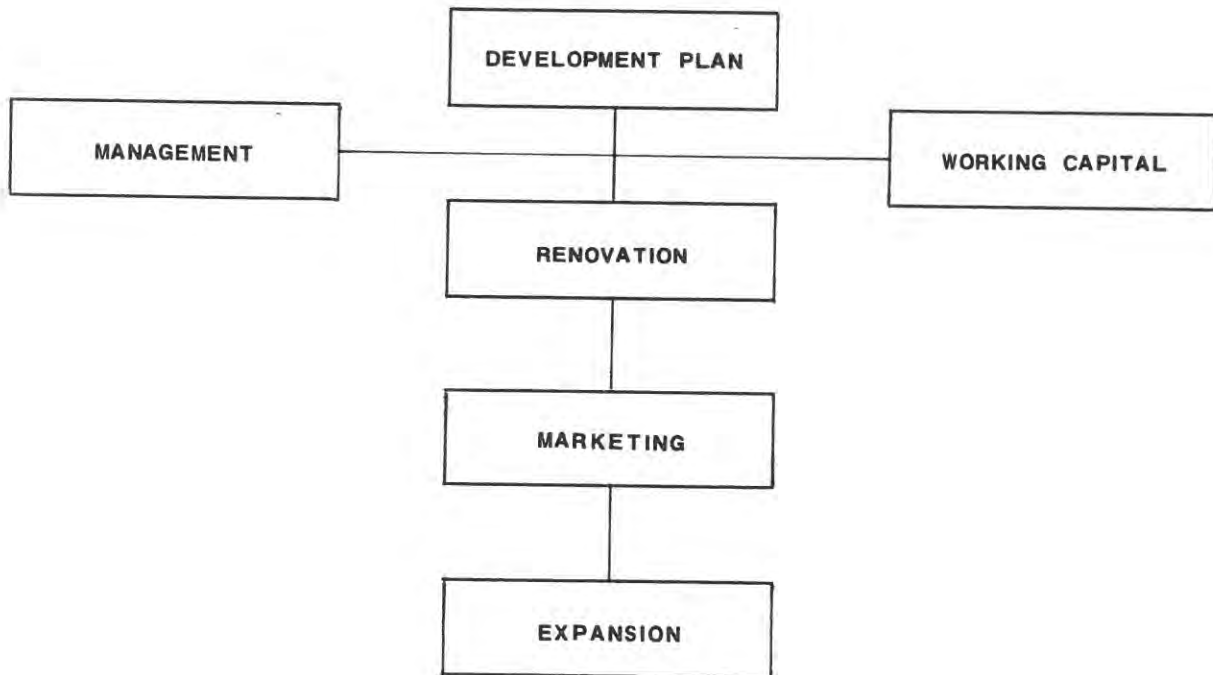
### **7. Tourism**

A persistent and highly controversial issue in the Bay Mills Indian Community concerns the question of the desirability of tourism development. Among those who are in favor of tourism, there is controversy over the type and extent of development. Then there is a sizable body of individuals who are flatly opposed to any tourist related enterprise on the reservation.

A heads of household survey recently conducted by the Bay Mills Planning Staff demonstrated that 55% of the households contacted (38 of 75) felt that tourism would benefit the reservation,



## RACO INDUSTRIAL SITE



### Potential Employment Activities

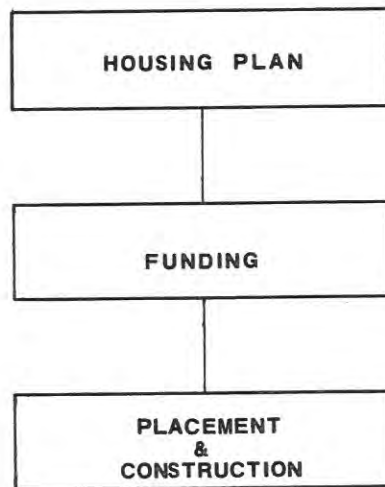
#### Directly Related

Park Management  
Office Staff  
Park Maintenance Force  
Job Created by Expanding or locating operations

#### Indirectly Related

Boiler Repair  
Heating & Plumbing Repair  
Welding Shop  
Metal Fabrication  
Tool & Die Shop  
Construction Jobs  
Electrical Services & Repair

## HOUSING



### Potential Employment Activities

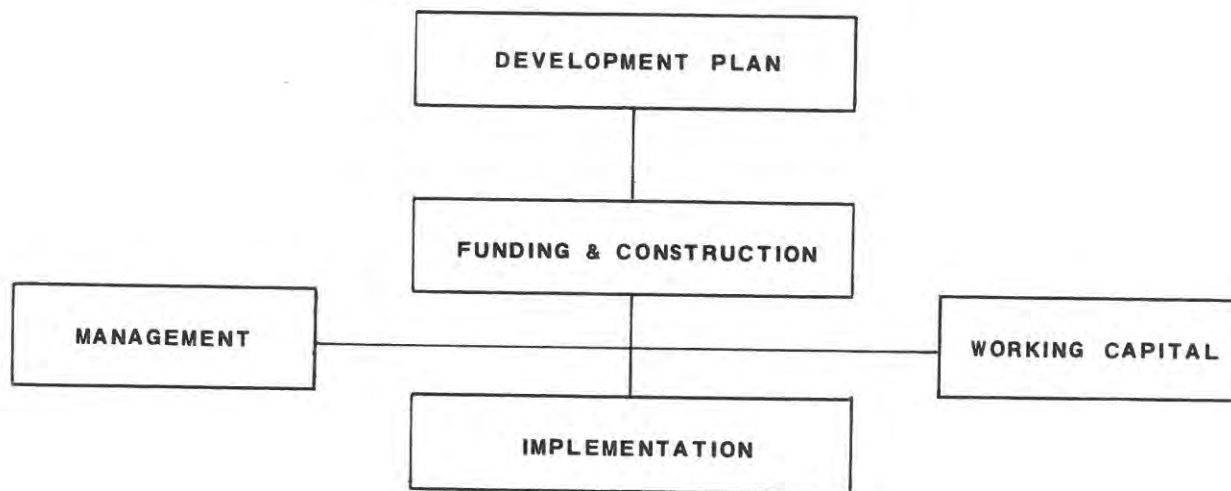
#### **Directly Related**

Housing Coordinator  
Construction Jobs  
Potential Maintenance Force

#### **Indirectly Related**

Heating & Plumbing Repair  
Insulation Service  
Electrical Service  
Roofing Installation  
Siding Service

## AUTOMOBILE SERVICE STATION



### Potential Employment Activities

#### Directly Related

Station Manager  
Auto Repairmen  
Filling Station Attendants  
Office Staff

#### Indirectly Related

Concession Salespersons

**ECONOMIC DEVELOPMENT PROGRAM-ACTION PLAN \***

PROJECTS	FIRST ACTION PHASE 1976-1978			SECOND ACTION PHASE 1978-1980			THIRD ACTION PHASE 1980-1982		
	Review / Mod- ification of Existing Enterprises	Preliminary Feasibility Analysis	New Projects To Initiate	Review / Mod- ification of Existing Enterprises	Preliminary Feasibility Analysis	New Projects To Initiate	Review / Mod- ification of Existing Enterprises	Preliminary Feasibility Analysis	New Projects To Initiate
1. Tribal Fish Processing Plant (Site Confirmed)			XXX	XX			XX		
2. Raco Development	XXX	XXX							
3. Additional Housing	XX	XXX	XXX	XX			XX	XXX	XXX
4. Service Station				X	XX		X	XX	XX
5. Restaurant				X	XX				XX
6. Comprehensive Com- munity Development	X		XXX	XX			XX	XX	XXX
7. Tourism Development on Sugar Island				XX	XX		XX		XX

\*Priorities indicated by # of X's

X - Low Priority    XX - Moderate Priority    XXX - High Priority

# - First Comprehensive Community Development Plan Completed November 1976



33% felt it would not and 11.6% were uncertain. This warrants a close look at community resources which may be tapped to encourage tourism.

Generally speaking, the younger and senior members of the community are strongly opposed to tourism development. They cite associated problems which might develop such as: 1) Increased traffic flow through the reservation. 2) Cultural degradation. 3) "Gawking" tourists. 4) Littering. 5) Vandalism. These factors can loosely be termed social costs. Intangible and difficult to forecast, these detrimental effects of development are often not taken into consideration in computing benefit-cost.

These social costs tend to assume disproportionate significance because of the limited resource base at Bay Mills. Demand for housing sites, community recreation needs, industrial development (fish processing plant) community service and utilities must all be considered as land uses in potential conflict with certain types of tourist enterprises. This isn't to discount the very real need for economic development and employment opportunity in the Bay Mills Indian Community which the development of a tourist industry might provide. It is merely to point out the necessity for careful consideration, by members of the community, of benefits and costs accruing in resource policy decisions.

Recreation/tourism developments are not necessarily a panacea for economically depressed areas. Private investments in outdoor recreation have been limited by the following considerations:

1. Recreation enterprises are generally seasonal.
2. Initial capital investment is generally high.
3. Recreation is a consumer expenditure which can be foregone rather easily so it is among the first items in a family budget to be trimmed when times get tough.
4. In many cases recreation requires a high labor input.
5. Recreation is often subject to capricious and unpredictable changes in public taste. Investments tend to be risky!

An additional consideration in any proposed tourism development at Bay Mills is the economic phenomenon known as the multiplier value. A multiplier value is a measure of how "new" income is spent and respent in an area, contributing to the flow of goods and services in that particular economy. Money which leaves the area is known as import propensity or "leakage" and for the tourism industry in general, is often great. Bay Mills should guard against recreation investments which tend to maximize benefits to users and financiers while costs are primarily born by the community. The very real costs of increased public services needed to support tourist enterprises include sewage, utilities, police and roads. These effects should be taken into consideration in tourism planning.

On the positive side of tourism development, those enterprises with high multiplier effects can and do generate significant monies into local economies. Recreation industries are comparatively "clean" and less environmentally disruptive than other types of industry. Marginally productive or unproductive land can often be utilized and employment opportunities may be increased.

## **TOURISM DEVELOPMENT POTENTIALS FOR THE BAY MILLS INDIAN COMMUNITY**

### **1. Spectacle Lake**

The Spectacle Lake site has recognized potential for a campground type tourist park. There are also possibilities for lakeshore property land subdivision and leasing to outsiders. Neither of these possibilities happen to have strong community support. The overwhelming consensus of community members contacted is that the Spectacle Lake area be preserved for the primary recreation needs of the community.

### **2. Gumshoe Lake Area**

This area is comprised of low lying swamp conifers, bog lake (Gumshoe Lake, a.k.a. North Pond) and adjacent swampland. The lake is within 100 yards of the Lake Superior (Whitefish Bay) shoreline which is comprised of sand and rock with a dramatic birch and pine vegetation border. The aesthetic qualities of the area are most impressive. As a natural area, it is one of the most attractive on the reservation, though largely inaccessible except by pedestrian trail. Because of the uniqueness of the ecosystem and the significant alteration of the landscape which would be required, it is recommended that development not be encouraged on this site. A carefully designed trails system could be provided to enhance pedestrian access to the area for scenic, nature study and passive recreation activities.

### **3. Arts and crafts retail outlet near Tribal Council Center**

Employment opportunities and income return to the reservation could be realized by marketing items provided by cottage industry operations within the community. The retail establishment could offer a variety of products such as: Handcrafted products utilizing authentic materials, design and techniques; Mass produced articles of Indian origin or motif; Mass produced articles without an Indian motif but which utilize the special skills of Indians; Sale of items not of Indian manufacture such as books, postcards and film; and the sale of Indian culture and activities to that broad and expanding tourist market.

### **5. Sugar Island**

The 607.75 acres of largely undeveloped land, part of the Bay Mills Indian Community properties, present a novel location for a tourist park development. The water based recreation development potential for a portion of these island lands is considerable. Location and site criteria give preliminary indication that a successful tourist campground could be operated on Sugar Island. While the isolation of the island has been a deterrent to past development, the aesthetic and solitude qualities of the area could provide the setting for a popular tourist attraction.

It is recommended that a market analysis be conducted to determine demand patterns, revenues, investment criteria, operating costs, feasibility and impact of the facility. Composition and preferences of tourists who travel in the Sault area should be examined as indications of the type of development which might be successful.

The General Tribal Council, with recommendations and findings from the market analysis, would be in a position to make a decision as to the type of attraction desired. Developments could range from rustic with minimum facilities, to extensive with deluxe accommodations.

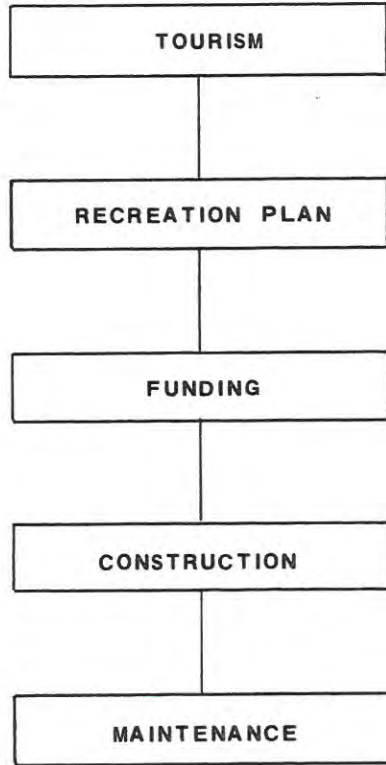
One example of a potential extensive development might be an Indian Theme Park and Campground with amenities including:

- electricity
- flush toilets
- showers
- laundry
- playground
- heated pool
- general store
- horseback riding
- snowmobiling
- hunting
- ski hills nearby
- tourist attractions in area
- picnic area
- restaurants nearby
- able to accommodate:
  - tents
  - vans
  - travel trailers
  - bus
  - motor home
  - boat rental
- boating nearby
- fishing nearby
- sanitation disposal
- recreation room
- reservations accepted
- hookups:
  - electricity
  - water
  - sewer
- boat rental
- firewood
- differentiated sites
- hiking trails

Such a level of development would require an investment of perhaps one million dollars or more. Funding assistance for such projects is made available through E.D.A. (Economic Development Administration), Upper Great Lakes Regional Commission, et.al. The Sugar Island properties present a unique set of possibilities for tourism development. It is recommended that any proposed major scale tourist enterprises be located on Sugar Island as opposed to mainland Bay Mills Indian Community lands.

#### <sup>1</sup>Footnote

Driver, B.L. **Elements of Outdoor Recreation Planning**. Proceedings of a national short course held in Ann Arbor, Michigan, May 6-16, 1968 P. 171



Potential Employment Activities

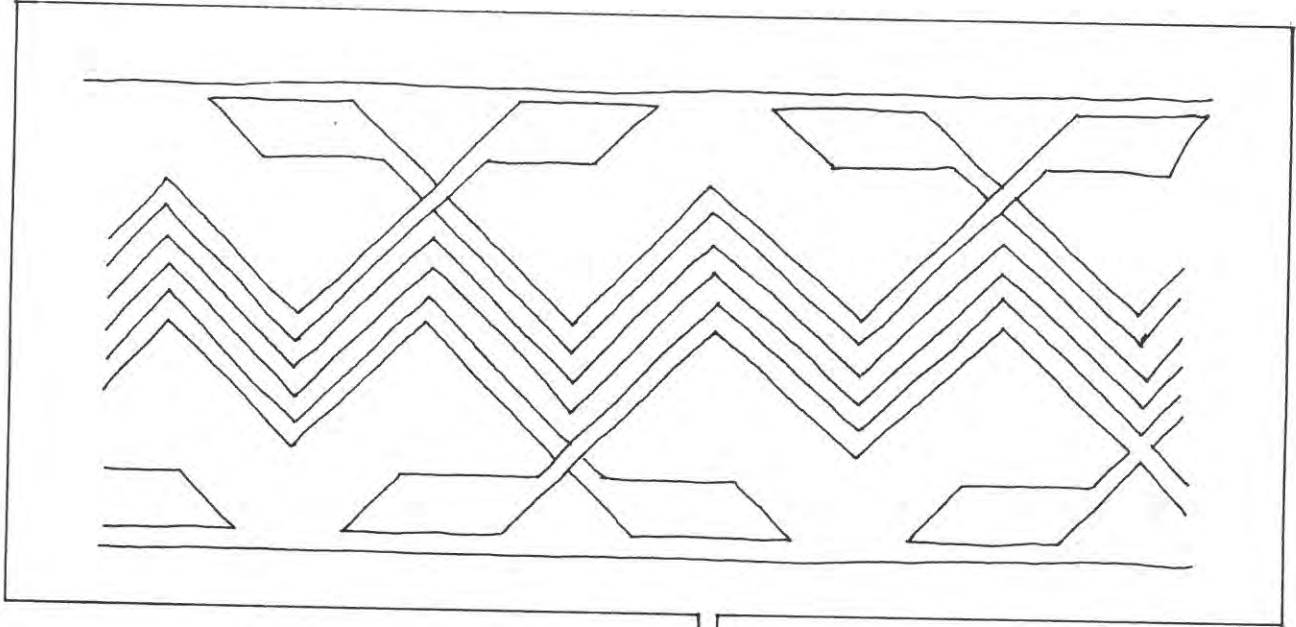
**Directly Related**

- Recreation & Parks Director
- Construction Jobs
- Maintenance
- Supervisors

**Indirectly Related**

- Concessions
- Tourist Facilities
  - (Gift Shops)
  - (Restaurants)
  - (Tourist Parks)





TRANSPORTATION

## Introduction

The transportation network is the lifeline of any community. When considering an area as isolated as the Bay Mills Indian Community, transportation becomes a matter of paramount concern and transportation planning becomes crucial. This transportation plan has two purposes: 1. To link people and services and 2. To link people with other people.

Some of the major issues to be considered with regard to transportation planning for Bay Mills must include: economic development, medical needs, recreational needs, domestic business, tourist traffic and safety. Because of the individual importance of these areas, further attention shall be given to each of them.

An inventory of existing roads and conditions is followed by Average Daily Trips data. Origin-destination data derived from a household survey is included, as well as a review of types of trips on reservation roads, and various conflicts among users of the transportation net. There is also a brief discussion regarding the proposed scenic highway. Finally, some specific recommendations are made, including some administrative measures.

## Inventory

The transportation net at Bay Mills consists of paved roads, gravel or sand roads and two track trails. There is 3.82 miles of paved roads including Iroquois Road and the road serving the housing units provided by the U.S. Department of Housing and Urban Development. Sand or gravel roads are 2.54 lineal miles providing access to Spectacle Lake, Mission Ridge and the road to the dump. Two track roads include 2.49 lineal miles of fragments of the original trail along the lake, within the pine plantation and the old dump road. The main road for internal and through traffic is Iroquois Road (also known as Lakeshore Drive) a blacktop road installed and maintained through an easement arrangement with the Chippewa County Road Commission. Being the major road along the south shore of Lake Superior, it carries a great deal of through traffic as well as internal traffic for the reservation.

Average daily traffic counts were taken at three points along this road on or near the reservation. The 1971 figure represents actual counts, adjusted for season and day of week. The 1976 figure represents a standard adjustment figure based on the 1971 count.

	<u>1971</u>	<u>1976</u>
Iroquois Road-West of Brimley	835	875
Iroquois Road-On reservation between pond	435	475
Iroquois Road-West of lighthouse and east of ranger road	309	325

Average Daily Trip (ADT) counts are not available for any other roads. While origin destination counts are not available, survey work by the planning team has defined major destinations for reservation traffic.

**Employment**

Local 57%	Whitefish Point 17%	Sault Ste. Marie 10%
Raco 6%	Kincheloe A.F.B. 5%	Dafter 4%

**Shopping**

Sault Ste. Marie 83%	Local 17%
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**Medical**

Sault Ste. Marie 80%	Sault Ste. Marie, Ontario, Canada 8%	
Local 6%	Kincheloe A.F.B. 5%	Petoskey 3%

Besides vehicular traffic on reservation business, there are two other major categories of trips as part of the reservation traffic pattern; non-vehicular trips and vehicular trips through the reservation. No counts are available for these trips but they can be observed as major components of the reservation traffic pattern, particularly in view of the conflicts they create.

Non-vehicular trips refer to the use of the road by people walking or riding bicycles. These people are most often children or young people without cars. Trips include walking home from school in Brimley, walking to visit someone, trips to the store or tribal offices, or simply walking alone or in groups for recreation. Iroquois Road is also the only place a bike can be ridden for any distance.

Vehicular trips through the reservation break easily into two categories. Permanent residents living north and west of the reservation must pass through the reservation to get almost anywhere, particularly Sault Ste. Marie. Because they drive through frequently and thus tend to be more careful, they are not as much of a problem as the tourists who pass through the reservation on their way to the various campgrounds, national forests and resorts in the area. Volume for the facilities of the U.S. Forest Service near Bay Mills is heavy. Between Memorial Day and Labor Day over 22,000 visits were recorded for the Monocle Lake Campground and over 33,000 visits to the beach and boat launch area. The lighthouse site had over 22,000 visits and Bayview had over 16,000 visits. In addition there are 2,000 recreational residences. Aside from the heavy traffic, the tourists view the reservation as a tourist attraction. The community does not welcome all this attention, particularly the individuals stopping to gawk and the theft of items from the old cemetery, such as carved grave markers and commemoratives.

**Conditions**

At present, maintenance of the road surface is being handled by the Chippewa County Road Commission. Their actions consist primarily of annual patching of Lake Shore Drive and grading of the unpaved roads to Mission Ridge and Spectacle Lake. Chippewa County is also responsible, as part of their easement arrangement, for plowing the snow from Iroquois Road.

Bay Mills has limited capabilities for maintenance of roads. The Bureau of Indian Affairs has provisions for limited monies for road maintenance. There is no tribal government capacity for plowing, although there are several four wheel drive vehicles with blades belonging to community members. Because the area receives in excess of 150 inches of snow annually, the issue of snow

plowing is a major consideration the majority of the year. Lack of plowing imposes severe restraints on mobility of some sectors of the population, particularly the elderly. It is also a related factor in accidents.

Maintenance problems also include water over the road in spring. While this is mostly a problem on the Mission Ridge Road, it occurs with some frequency on the south end of the reservation on Iroquois Road. The flooding is related to the very high water table of the swampy areas, exacerbated by beaver dams built in areas near the roads.

### **User Conflicts**

The condition of the road has been described in terms of the effects of nature. It can also be described by the conflicts between various users. These user conflicts are described two ways; reservation — non reservation traffic and vehicular — non-vehicular traffic.

The essence of the reservation — non reservation traffic conflict is that the major route for internal circulation on the reservation is also a major thoroughfare for traffic passing through. Through traffic tends to travel at highway speeds in excess of the speed limit and internal traffic tends to move nearer the posted speed limit. Much of the conflict between vehicular and non-vehicular traffic is affected by this phenomenon. Internal traffic is attuned to such features as children playing, people walking along the road and traffic from driveways. This is particularly severe in the winter when visibility is limited, stopping distance substantially greater and foot traffic is on the plowed road surface.

In the winter, though capabilities are diminished, at least the traffic is mostly people from the locale. In the summer, though road conditions are better, much of the traffic is tourists unfamiliar with the special condition of driving on the reservation.

The central issue throughout is that, although Iroquois Road is the major circulation corridor for reservation traffic, it is designed only for motorized traffic and primarily as a through route.

An additional vehicle — non-vehicle conflict is the operation of motor vehicles (cars and motorcycles) in areas not meant for vehicle access. Even occasional traffic on such areas as the beach or the dunes causes deterioration and erosion, not to mention being unsightly. Litter problems in scenic areas also seem to accompany vehicle access. If preservation or simple respect for the physical environment is a community concern, access to off road sites must be controlled.

Another concern is the operation of vehicles in the vicinity of small children playing. These vehicles are often operated by minors or unlicensed drivers. Though not recommending total prohibition of such operation, restriction to appropriate designated areas would separate a potentially tragic conflict of uses.

Other impacts of traffic on housing, recreation, the economy and environment are covered in the sections on housing, recreation, economic development and land use.

### **Scenic Highway**

As part of the Scenic Highway Program, a rerouting and upgrading of Iroquois Road has been under consideration for several years. Work has already begun on portions of 123 south of

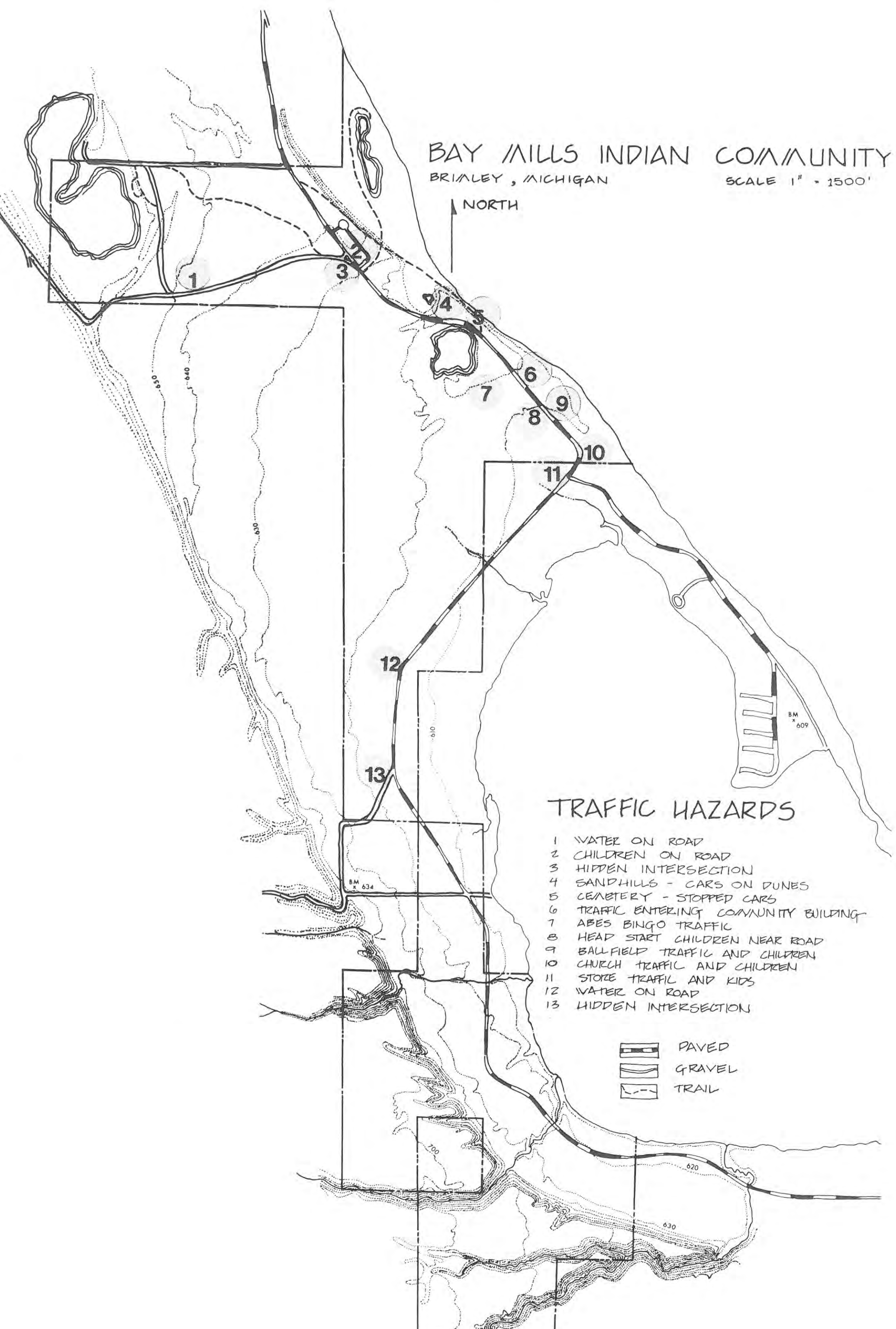


# BAY MILLS INDIAN COMMUNITY

BRIARLEY, MICHIGAN

SCALE 1" = 1500'

NORTH



## TRAFFIC HAZARDS

- 1 WATER ON ROAD
- 2 CHILDREN ON ROAD
- 3 HIDDEN INTERSECTION
- 4 SANDHILLS - CARS ON DUNES
- 5 CEMETERY - STOPPED CARS
- 6 TRAFFIC ENTERING COMMUNITY BUILDING
- 7 ABES BINGO TRAFFIC
- 8 HEAD START CHILDREN NEAR ROAD
- 9 BALLFIELD TRAFFIC AND CHILDREN
- 10 CHURCH TRAFFIC AND CHILDREN
- 11 STORE TRAFFIC AND KIDS
- 12 WATER ON ROAD
- 13 HIDDEN INTERSECTION

-  PAVED
-  GRAVEL
-  TRAIL

Paradise. The plans call for a 66 foot right of way to run along the top of Mission Ridge, coming down on the south end of the reservation. Although such a plan would have a major impact on the reservation, Bay Mills residents have not had a chance to systematically review or comment on such a plan. There is concern that plans may proceed in such a fashion as to preclude effective review by the community.

Two major concerns affect the reservation: 1. The proposed route will seriously infringe on the Mission Ridge Cemetery and 2. Such an upgraded facility is bound to increase traffic volumes and speeds. The concern for the cemetery is a highly sensitive issue, as all members of the community have friends or relatives interred there. Not only does the proposed route require portions of the cemetery itself for right of way, but it is feared depredation and vandalism of the cemetery will occur from tourists seeking "Indian Souvenirs", which is already a serious problem at the burial grounds on the reservation.

The concern for traffic volumes and speeds is long term. If the proposed route is adopted, a high volume of high speed traffic will intersect Iroquois Road at an area of high residential concentration. If only portions of the road are completed or Iroquois Road upgraded without re-routing, highway level traffic will be funneled directly into the community, making worse an already hazardous traffic situation.

The actual schedule of this plan has been very hazy and information on route, schedule etc. is fragmentary. In such a situation rumors and anxiety flourish, fueled by the very real concerns of the community. Clearly more substantive information is needed so that the reservation concerns can be met in an orderly and comprehensive manner.

#### **GOALS:**

- Reduce the negative impact of vehicular traffic on reservation conditions.
- Support and supplement the existing transportation resources for employment, shopping, emergencies, medical needs and recreation.
- Maximize safety aspects of transportation users.

#### **OBJECTIVES:**

- **Increase separation between reservation life and through traffic.**  
Design future housing and recreation sites away from Iroquois Road. Develop non-through road in Pine plantation to serve housing sites off Iroquois Road. Provide buffering between Iroquois Road and housing or recreation sites to minimize casual physical or visual impact. Develop separate paths for bikes or foot traffic where possible.
- **Identify areas of traffic hazard.**  
Signs should be placed to control traffic for such hazards as children playing on road by HUD housing, hidden intersections or corners, vehicles entering road by community building or parking by the cemetery.

- **Restrict vehicle traffic to roads, trails and appropriate storage area.**  
Provide signs and sanctions to keep vehicular traffic (cars and motorcycles) off the beach, fragile environments such as the dunes, and areas where children play.
- **Put the sanction of law behind safety programs.**  
It is the prerogative of the community to regulate its vehicular traffic and thus legally possible to require driver training, registration and safety inspection of all vehicles, helmet laws and other safety programs. Prohibition against unsafe operations, unlicensed drivers or unsafe vehicles can be legally enforced.
- **Supplement efforts of Chippewa County Road Commission on road maintenance.**  
Seek Bureau of Indian Affairs (BIA) funds for upgrading road, installation of drainage culverts and plowing of road for new housing in Pine Plantation.
- **Participate in planning efforts to serve reservation transportation needs.**  
Seek representation and review of plans for scenic highway; consult with Eastern Upper Peninsula Transportation Authority; improvement of 6 mile road and other plans and policies of county, state and federal bodies.
- **Make maximum use of community owned vehicles.**  
Secure maintenance and operating funds for community bus and coordinate as transportation supplement for reservation programs. Also provide blade for community truck for supplemental plowing efforts.



RECREATION



The park and recreation resource section was prepared in a format which would allow it to be submitted as an independent unit to appropriate governmental agencies as a prerequisite to securing grant assistance for proposed recreation projects. The section was purposely designed to be a comprehensive recreation plan and it therefore contains descriptive information, land use and demographic, which is discussed in other sections of the comprehensive plan.

## **PARK AND RECREATION RESOURCES**

### **Introduction**

The recreation plan for the Bay Mills Indian Community will attempt to identify local recreation needs and to establish a procedure whereby these vital needs can be met. By any standard of comparison, the community is recreationally deprived. With the exception of the ball diamond area, used primarily by teen age and adult males, organized facilities are all but non-existent. The most heavily utilized recreation area in the community is its main highway-Iroquois Road. Residents of all ages can be seen walking, playing and socializing on the road day or night at all times of the year. The hazards posed by heavy utilization of this inappropriate "recreation" area are obvious.

To correct existing inequities, an organized, well balanced and administered park and recreation system which considers facilities and programs developed to suit the specific needs of the community will be proposed. The plan format will include a community description, population analysis, inventory, standards and criteria, deficiencies, goals and objectives and action programs which will chart the course toward improving the existing park and recreation environment.

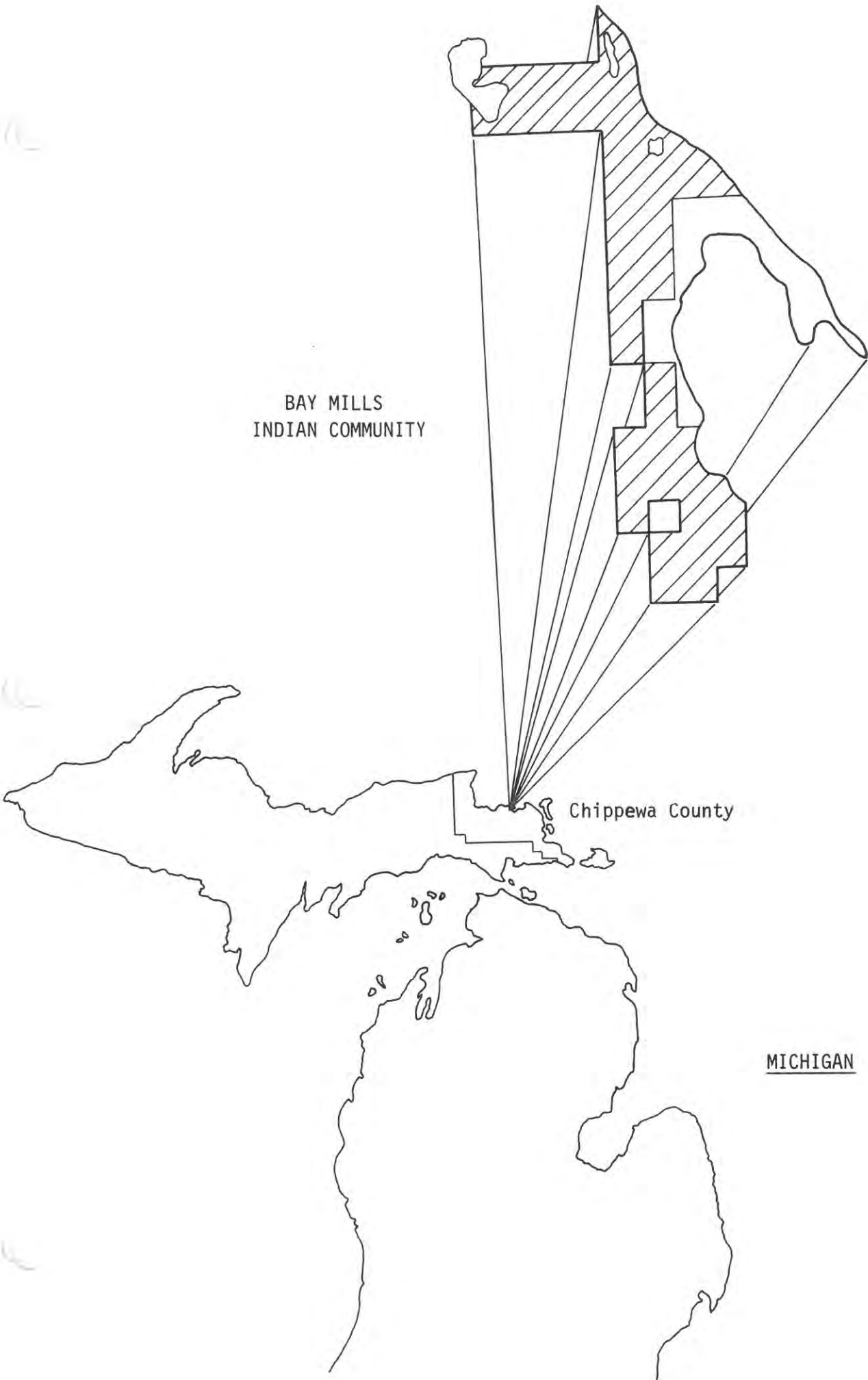
## **COMMUNITY DESCRIPTION**

### **Physical Characteristics**

The Bay Mills Indian Community is rurally isolated in the north central part of Chippewa County on the extreme northeastern side of the Upper Peninsula of Michigan. The village of Bay Mills is located about five miles west and north of Brimley, Michigan and 20 miles west of Sault Ste. Marie, Michigan. The Soo is located 448 miles from Chicago and 339 miles from Detroit.

Chippewa County is bordered on the north and east by Lake Superior and the St. Mary's River, Lake Huron and Mackinac County to the south and Luce County to the west.

Land surrounding the Bay Mills Indian Community is owned primarily by the U.S. Forest Service (U.S. Department of Agriculture) and is essentially heavy forest with spruce, pine, aspen and birch, the predominant species. Many lakes occur within the forest area, interspersed by streams running into Lake Superior and low lying swamp and muskeg from the Lake Superior shoreline



BAY MILLS  
INDIAN COMMUNITY

Chippewa County

MICHIGAN

approximately one mile south where the land begins to rise forming a parallel ridge to the lake. Recreational opportunities in this area, most of it comprising the Hiawatha National Forest, are typically: camping, fishing, hunting, snowmobiling, cross country skiing, snowshoeing, hiking, sightseeing, swimming, trail biking and off road vehicle use and other quasi wilderness activities.

The Bay Mills Indian Community comprises 1,581.76 acres as a unit with 607.75 acres of additional, relatively underdeveloped, land on Sugar Island, approximately twenty miles east, near Sault Ste. Marie, Michigan. For purposes of description, all reference, unless otherwise cited, will include the 1,581.76 acres known as the Bay Mills Indian Community.

The following description of the natural resources of the Bay Mills Indian Community will be generalized with reference to features which have particular significance to park and recreation resource development.

### **Land**

The Bay Mills Indian Community is five miles long and about one and one half miles wide. The north residential area is located on a nearly level sand ridge with good drainage and shoreline. The south residential area is located in an area of impermeable clay with some peat and level topography. Drainage is a problem, particularly in the spring.

Undeveloped associated lakeshore includes lands on Spectacle Lake and the area between Gumshoe Lake and South Pond. Topography in both areas is level and uniform with soils being sand or sandy loam and no drainage problems. Nonproductive swamp, brush and water includes lands located east of the Mission Hill Ridge and west of the Iroquois Road. Topography is level with a high water table and soils are principally peat in excess of 48 inches in depth. The pine plantation is located east of Spectacle Lake on well drained sand and loam soils with level and regular topography. The remainder forest acreage is comprised primarily of mixed swamp conifers in the lowland and aspen in the upland. This area has been cut over in the past with fair to poor reproduction. Soils vary greatly from sandy loams in the upland to clay and peat in the lowlands. Topography is generally irregular with considerable variation, especially in the southern portions. Included in this class is formerly cleared farmland which is submarginal and semi-productive.<sup>1</sup>

The topography of Bay Mills is well suited to a variety of outdoor recreational uses and activities. However, well drained, sandy soil areas, with potential for active games and sports development, are in very short supply and will likely come under intense competition for housing site locations in the near future.

### **Water**

Surface waters are an extremely important natural resource of the Bay Mills Indian Community. The reservation is bordered on the east by Lake Superior and Whitefish Bay and several small lakes and ponds are contained within its boundary. There are no streams or rivers of significant size. The scenic and recreational value of the existing water base is considerable.

Bodies of water include Spectacle Lake located on the northwest end of the reservation, comprising 88 acres of water surface. The reservation boundary transects about two thirds of the lake from the northeast to the southwest. Average depth is five feet with a one to three foot muck bottom over cobbly sand. The fish population is primarily small perch and northern pike. The lake

is in a moderately eutrophic stage and significant oxygen depletion occurs in the wintertime. Forest cover in the area includes mixed hardwoods along the lakeshore with a pine plantation behind. Currently, the lake is used by residents for fishing and sightseeing. There is a small, primitive park on the southeast shore of the lake.

Gumshoe Lake or North Pond, as it is sometimes called, is located on the far north end of the reservation about 100 yards from and parallel to, the Lake Superior Shoreline. It occupies approximately twenty acres and is completely undeveloped. The lake has a bog shoreline and is in an advanced state of eutrophication. The variety of fish life is not known. Average depth is five feet or less. There is no current active use of Gumshoe Lake, due to its relative isolation and bog shoreline. Sightseeing and hiking occur along certain sections of the shoreline.

South Pond is located west of the old Indian burial ground just north of the Tribal Council Center. The pond is about ten acres in size and completely undeveloped. A considerable degree of eutrophication is in process. Average depth is five to ten feet. Little use is made of South Pond for recreation purposes. It is too weed choked and muck filled to provide comfortable swimming in the summer. Ice skating is an occasional winter time activity on the east shore of the pond.

The Lake Superior Shoreline stretches along approximately seven miles of the north end of the reservation. It is primarily rock with some sand beach. Water quality is very high — classically oligatrophic and the scenic over-views are most impressive. The shoreline area is utilized recreationally by residents for swimming, hiking, sightseeing, fishing, picnicing and boating. Residential and commercial use dominate much of the setback area of the shoreline.

Waiska Bay, which borders the reservation to the south, is connected to Lake Superior. Water quality is high with depth ranging from five to fifteen feet. Emergent vegetation, primarily eel grass, is common along the shoreline. Recreational activities common to Waiska Bay include fishing, hunting (waterfowl), swimming and boating.

Much of the interior of the reservation is comprised of swamp and a generally high water table. This provides ideal habitat for beaver and numerous ponds and floodings created by their activities are reputed to contain brook trout. Access to much of the interior is rendered difficult by heavy underbrush and swampy terrain.

### **Wildlife**

A diversity of habitat contributes to a proliferation of wildlife species in and around the Bay Mills Indian Community. Ecosystems include marsh, forest, lakeshore, bog lake. Game species common to the Bay Mills area include deer, bear, snowshoe hare, fox, grouse, bobcat, mink and otter. There is an extensive beaver population on the reservation which periodically contributes to flooding problems along certain sections of the lakeshore road. Occasionally, moose cross the ice bridge from Canada during the winter. Hunting for both large and small game is popular on the reservation and is not considered exclusively a recreational activity. Due to the absence of regulated hunting seasons, the larger game species tend to be kept in low numbers. These populations are reestablished and supplemented from the surrounding area. There is a prodigious variety of waterfowl on the reservation. Geese and ducks abound in the spring and fall, attracted by favorable resting and reproducing areas. Habitat diversity and the rural undeveloped character of the area account for a variety of non-game species. A count will not be attempted.



## **Climate**

Climate is a very important determinant of the type of recreation activity participation in a community. The Bay Mills climate is characterized by long, comparatively cold and snowy winters and short, comparatively cool summers. Winter snows range from 32.1 inches (1899-1900) to 164.4 inches (1964-1965). The proximity of Bay Mills to the Lakes Superior, Michigan and Huron, results in frequent cloudiness and precipitation. In a word, the Bay Mills climate could be described as rigorous. There is a well defined four season climate at Bay Mills though spring, summer and fall tend to be of short duration.

Winter sports include snowmobiling, hunting, snowshoeing, ice hockey and sledding. The length and severity of the winter limits outdoor activity, particularly for younger and older members of the community. Consequently, indoor activities such as bingo, billiards, cards, TV and visiting relatives and friends are commonly pursued during this time. The comparatively cool summers are ideally suited for a variety of outdoor activities. Slo-pitch baseball, swimming, fishing, driving for pleasure, basketball and picnicing are popular summertime activities. These activities are less actively pursued in the fall. As cold weather approaches, hunting becomes a common activity.

The climatological diversity provides a constantly changing backdrop for a broad variety of recreational activities at Bay Mills. Park and recreation facilities and programming should be advantageously designed to capitalize on the potential that each season offers.

## **Cultural Resources**

The Bay Mills Indian Community has a rich and varied cultural and historical background. It is an historically significant fact that the Bay Mills area constitutes one of the oldest continually occupied sites in the Eastern Upper Peninsula. One item of historic interest on the reservation is the old Indian burial ground dating from 1844. It is located just north of the Tribal Council Center on the east side of the Lakeshore Road. Entry is prohibited by non-residents to prevent vandalism.

## **Land Use**

Future land use developments will be limited and defined by the availability of areas with suitable soil type. Since suitable soil areas are in critically short supply within the Bay Mills boundary, competition for alternate uses such as housing, recreation and industry will be intense. Land use decisions must be very carefully made if the physical and social integrity of the community is to be maintained. Major land use developments proposed within the next two years, that relate to the recreational use of land include:

1. Twenty (20) HUD housing units to be completed in 1977. Fifteen (15) family units will be sited on the west side of Iroquois (Lakeshore) Road within the pine plantation. Five (5) senior citizen units will be sited on the east side of Iroquois Road north of the existing HUD housing.

In addition, 70 additional HUD units have been proposed by the Bay Mills Housing Authority to be constructed within the coming five years. Proposed site location is within the pine plantation.

As this report is written, a housing site plan for the proposed housing units has not been formally approved by the Bay Mills Housing Authority. It is highly recommended that the final plan include provisions for adequate park and recreation facilities to serve the residents of these new housing

units. The existing ten HUD housing units, built in 1970, provide an example of a poorly conceived design in terms of recreational, aesthetic and amenity features.

2. The Bay Mills Indian Community has received an Economic Development Administration (EDA) Grant for construction of a fish processing plant, to be completed in late 1977. The plant will be located east of Iroquois Road approximately one half mile north of the Tribal Council Center. Social costs incurred would result in an increase of commercial traffic in the area, some increase in noise, odor problems downwind and possible insect problems associated with refuse disposal.

3. A Land and Water Conservation Fund Grant pre-application has been registered with the Michigan Department of Natural Resources and Bureau of Outdoor Recreation (BOR) U.S. Department of Interior. The grant would provide 50% match for improvements to the existing ball diamond area directly south of the Tribal Council Center east of Iroquois Road. Facility developments would include reorientation of ball diamond area with bleachers, athletic field, parking lot, well, restrooms, concession stand and maintenance shed and magic square (tennis, skating, volleyball and basketball). Construction would begin April, 1977 if funding is approved.

In addition to surface land uses planned or contemplated, utilities, roads, and other facilities will be provided to service those developments.

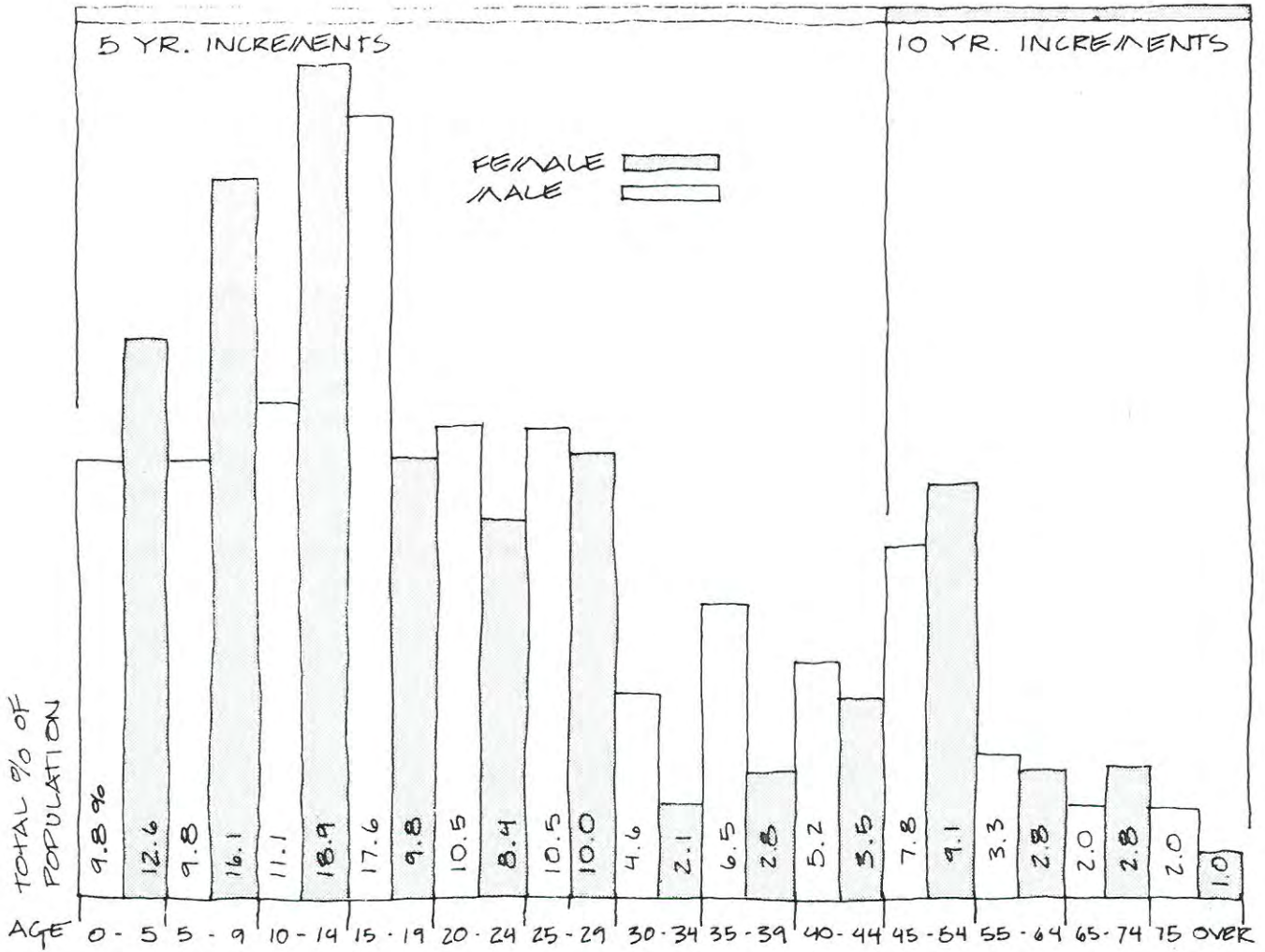
## POPULATION CHARACTERISTICS

### Age

The latest census information collected via household survey (95% of households) by the Bay Mills Planning Staff in April, 1976 indicates 296 permanent residents and 21 seasonal residents. 38% (112) of the permanent residents are under fourteen years of age and 62% (184) under 24 years of age. The skewed nature of the population curve emphasizes an extreme percentage of younger residents. 23% (68) of the residents are between 25 and 44 years of age and 15% (44) are 45 years or older. Under the age of fourteen, a sex breakdown shows 16% of the total population as male and 48% as female. Under the age of 24, there are 34% male and 66% female (total population).

A closer look at the population figures for Bay Mills indicates that children, ages five and under, will not increase in percentage significantly in the coming three years. However, 50% of the women in the five to fourteen age group will be moving into the age 15-24 group within three to five years. This is significant in that this age group represents a profile of high fertility, mobility and consumption of material goods and commodities, including recreation provisions. A heavy demand will likely be put on recreation facilities servicing this population in the coming three to five years. It can be expected that demand will increase assuming population increase, for such outdoor activities as court games, participation sports, playgrounds and equipment.

FEMALE / MALE BAY MILLS AGE STATISTICS 1976 CENSUS DATA



In addition to anticipated population increase due to births by the fifteen to twenty four age group, there is likelihood of a significant population expansion due to "in" migration. There are an estimated 250 Indians affiliated with the Bay Mills Indian Community living off the reservation who would return to the reservation given the provision of adequate housing and job opportunities. Assuming construction of an additional 90 HUD housing units, the construction of the fish processing plant, employing up to thirteen community members and further development of the Raco Industrial Site, the Bay Mills Community could experience a population explosion in the fifteen to twenty four age group in the coming ten years. Park and recreation services planned should anticipate this possibility and reserve adequate recreation areas for future development. Should this "in" migration not occur, the intermediate population age group (ages 25-64) will likely remain stable over the coming five years. The upper end of the population age group (65+) will likely decline in the coming five years with a dramatic increase in members that age in ten to fifteen years.

### Density

Population density on the Bay Mills Indian Community is currently clustered in two general areas in the north and south ends. Future housing development will likely be limited to the north end of the reservation due to limitations in suitable soil type on the southern half.

### Income

Income is a significant variable in determining recreation demand. The following is a breakdown of household income from 68 of 75 households on the reservation. An estimated 20% of the households are single parent. Average household size is 4.8 occupants. 47% of household incomes are under \$5,000. 66% of household incomes are under \$7,500.

INCOME	NO. OF HOUSEHOLDS	PERCENT
\$ 0-\$3,000	17	25
\$3,000-\$5,000	15	22
\$5,000-\$7,500	13	19
\$7,500+	23	33.8

It can be generally assumed that low income limits the opportunity to participate in a wide variety of recreation activities. Also, distance travelled to participate in a recreation activity has a bearing on costs incurred. The greater the cost, the less low income families can afford to participate in certain activities. The low income profile of Bay Mills households illustrates the need for the provision of adequate community facilities. Economic barriers deny many Bay Mills residents the opportunity to participate in area, regional and state recreation attractions.

## INVENTORY

A necessary step in determining recreation deficiencies is an inventory of recreation resources. A detailed inventory of off reservation county wide recreation lands and facilities is available in the Chippewa County Recreation Plan<sup>2</sup>.



## On Reservation

The following is an inventory of on reservation recreation areas and facilities, indoor and outdoor:

### ORGANIZED OUTDOOR

<u>Area or Facility</u>	<u>Size</u>	<u>Location</u>	<u>Use/Description</u>	<u>Condition</u>
1. Baseball field	7 acres	N. End	Slo-pitch baseball	Fair
2. Spectacle Lake Campground	10 acres	N. End	Trails, outhouse	Primitive
3. HUD housing unit Playground	1/10 acre	N. End	Fenced asphalt court	Poor
4. Tot lot adjacent to Head Start Bldg.	1 acre	N. End	Swings, tot equipment	Fair
5. Abe's Bingo Field	15 acres	N. End	Drive-In Bingo	Fair

### UNORGANIZED OUTDOOR

1. Pine Plantation	40 acres	N. End	Undeveloped red pine tract
2. Gumshoe Lake	20 acres	N. End	Undeveloped bog lake
3. South Pond	10 acres	N. End	Skating, boating, fishing
4. Spectacle Lake	88 acres	N. End	Snowmobiling, canoeing, fishing, swimming, scenic view
5. Area around Spectacle Lake	2 miles	N. End	Cranberry & mushroom picking
6. Lake Superior Shoreline	7 miles	East Boundary	Swimming, walking, boating and canoeing
7. Road in front of HUD housing	500 yds.	N. End	Play area
8. Iroquois Road	7 miles	Length of reservation	Play area

## INDOOR

<u>Facility</u>	<u>Size</u>	<u>Location</u>	<u>Use</u>	<u>Condition</u>
1. Basement of Head Start	20'x 20'	N. End	Games	Undeveloped Poor

### OFF RESERVATION (Nearby)

1. Basement of St. Catherine's Church	60'x 40'	N. End	Bingo	Good
2. Basketball areas	2 hoops	N. End		Poor-No Courts
3. Brimley School		Brimley, 4 miles S. of Bay Mills	Ballfield Playground, Football, Gymnasium	Good
4. Monacle Lake	80 acres	N. of Spectacle Lake	Swimming, Camping, Fishing	Good
5. Brimley State Park	151 acres	5 miles S. of reservation	Camping, Swimming, Fishing, Boating	Excellent

### Private

1. Chippewa Landing	75 acres	Middle of reservation on Bay Mills Point Rd.	Camping, Marina, Retail Boat & Supply Sales	Good
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### **School Facilities and Programs**

The Brimley School System, located four miles south of the Bay Mills Indian Community in Brimley, Michigan, has a well developed recreation program. Facilities include: 1) gymnasium with provision for basketball, volleyball, indoor hockey and various games; 2) multi-purpose room with provision for basketball, volleyball and cafeteria; 3) football field, baseball diamond and playground.

The Brimley School supports the community school concept. School facilities, including recreation areas and classrooms, are available to organized groups after school hours when there is no conflict with school related activities. Adult supervision must be provided for younger participants. Any extra costs incurred by the school in providing supervision, instruction or materials are charged to the program. Programs are set up in response to a given demand. Once demand has been established, the community school system can be expanded to include the requested program. Four area schools participate in the community school program. They are Brimley, Rudyard, Cedarville and Pickford Schools. Rudyard School has a swimming pool which is available to the public on Monday and Thursday night from 7:00 to 9:00 p.m. at a charge of fifty cents per student. Bus service is available from Brimley.

Brimley also has a summer recreation program in coordination with the Consolidated Community School Services (CCSS). Transportation and schedule information is available through the Brimley High School.

The Rudyard School sponsors a three day recreation clinic open to area residents during mid March. Called Non Academic Week (NAW), it offers instruction in a variety of programs and activities from ice fishing to macrame to cooking wild game.

Voluntary agencies providing recreation service in the Bay Mills area include: County Extension Service, 4-H, Boy Scouts, Girl Scouts and Junior Achievement.

### **Public Outdoor Recreation Facilities**

The Hiawatha National Forest is located adjacent to the Bay Mills Indian Community. Operated under a multiple use concept by the Forest Service of the U.S. Department of Agriculture, the lands provide a diversity of renewable resources: outdoor recreation, range, timber, watershed, wildlife and fish. Available recreational pursuits include picnicing, camping, driving for pleasure, snowmobiling, cross country skiing, snowshoeing, hiking, fishing, hunting, boating and bird watching. Public campgrounds are nearby at Monacle Lake, just north of Spectacle Lake and at Bay View on Lakeshore Road about five miles west of Monacle Lake. The Brimley State Park, six miles south of Bay Mills, has facilities for swimming, camping, boating and features 270 campsites with electrical hook-ups, flush toilets and sewage disposal.

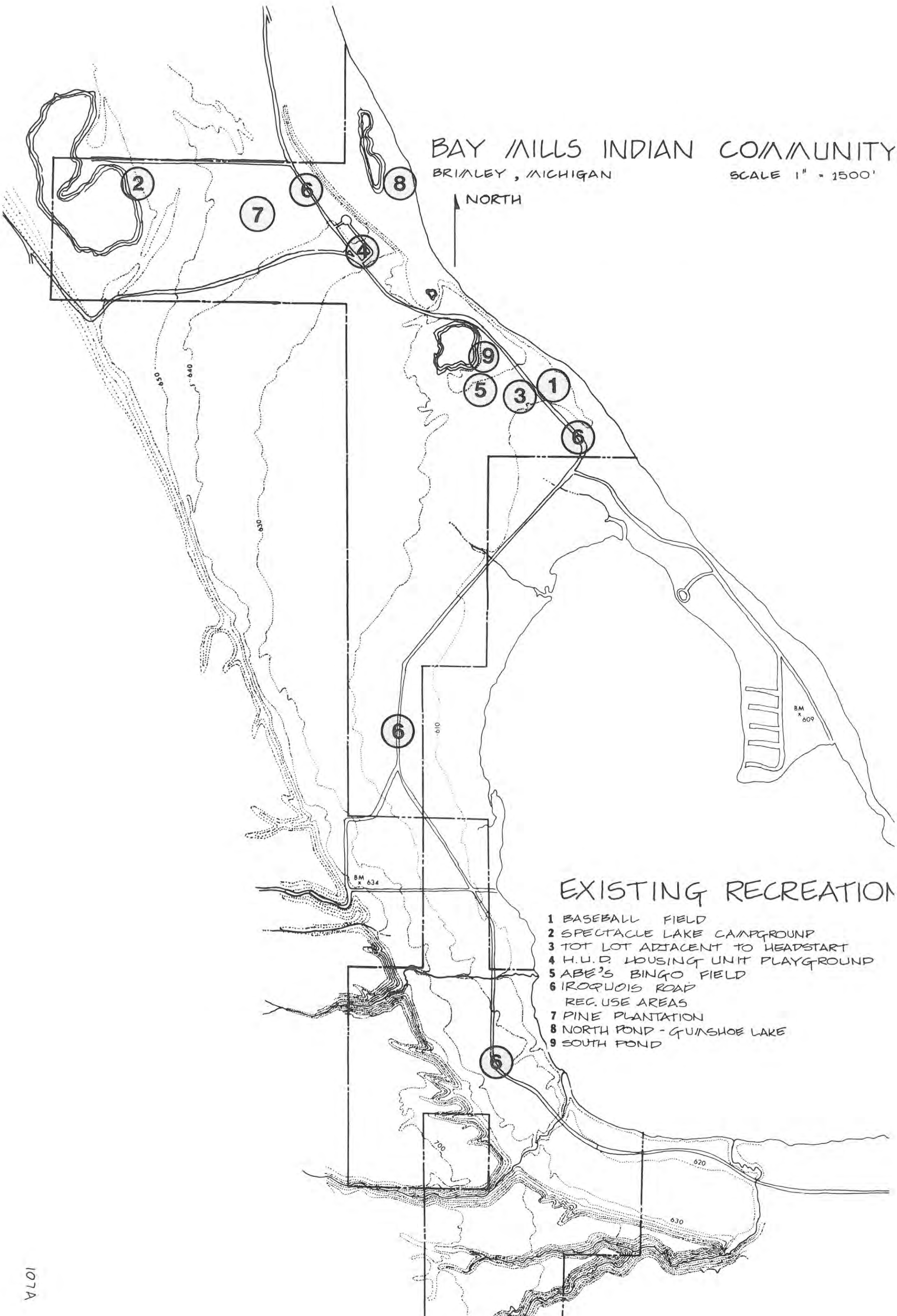
A truly magnificent array of outdoor amenities literally surround the Bay Mills Indian Community but participation by residents is limited primarily by the unavailability, to some members, of adequate means of transportation.

# BAY MILLS INDIAN COMMUNITY

BRIALEY, MICHIGAN

SCALE 1" = 1500'

NORTH



## EXISTING RECREATION

- 1 BASEBALL FIELD
- 2 SPECTACLE LAKE CAMPGROUND
- 3 TOT LOT ADJACENT TO HEADSTART
- 4 H.U.D. HOUSING UNIT PLAYGROUND
- 5 ABE'S BINGO FIELD
- 6 IROQUOIS ROAD  
REG. USE AREAS
- 7 PINE PLANTATION
- 8 NORTH POND - QUINSHOE LAKE
- 9 SOUTH POND



## COMMUNITY NEEDS & DEFICIENCIES

While the application of standards can be useful as a general guideline in assessing facility and program needs, their applicability to the Bay Mills Indian Community is questionable. Because of the remote rural nature of the community, its limited population and acreage, current National Recreation and Park Association standards will not be used for comparison of park and recreation resources adequacy. Instead, needs and deficiencies will be determined by an analysis and consideration of:

1. Existing recreational opportunities
2. Cultural values
3. Information from heads of household survey and personal interviews with residents and Tribal Council leaders.
4. Distance from off reservation facilities
5. Low income levels
6. Proportion of young people in population

These factors tend to provide a unique profile of the Bay Mills Community and serve to illustrate a paucity of park and recreation resources. A particular problem in providing recreation facilities accessible to all members of the community is the longitudinal configuration of the land base. End to end, the reservation measures seven miles along Iroquois Road. This condition illustrates the importance of placing facilities in locations which are convenient for residents of all ages. There currently is no recreation development of any type on the south end of the reservation. Based on personal interviews and public meetings on the subject, there is an expressed need for establishment of an athletic field, located near the south end, which would be used for slo-pitch baseball and active field sports. Since future growth of the community will be encouraged on the north end, adequate park and recreation facilities should be planned for this area.

Twenty (20) HUD housing units are proposed for construction during FY 1976-77 with an additional 70 units under consideration in the general area of the pine plantation within the coming five years.

The existing neighborhood park in the HUD housing unit has no facility provisions and is of insufficient area to serve the expanding north end population.

Located north of the Tribal Council Center off Iroquois Road is a fifteen acre area known as Abe's Bingo Field. On week ends throughout the summer and fall the field is used for drive-in bingo, a popular local activity. The need for open space recreation areas might warrant expansion of the area to include a broader variety of recreational activities. These activities could be compatible with the existing use of the field.

The ball diamond area, centrally located one quarter mile south of the tribal council center, is

utilized principally by older teen age and adult male members of the community. There is a well defined need for a major outdoor recreation area development, centrally located, which would contain facilities for the entire community. Demographic data indicates a large number (62% ; 184 persons) of Bay Mills residents under the age of twenty four. Two thirds of the youth under twenty four are female. Special attention should be paid in the provision of recreation facilities and programs for pre teens, ages five to twelve and teens and young adults ages thirteen to twenty four. There is a demand at Bay Mills for youth activities including baseball, basketball, volleyball, tennis, ice skating, dancing and gymnastics. There is currently no indoor facility for programmed or supervised recreation activities for youth on the reservation and an identified need for such exists. A major contribution to the satisfaction of indoor recreation needs for youth will be the proposed conversion of the Head Start Building (located one quarter mile south of the Tribal Council Center) into a supervised recreation center for youth. An additional need for youth is improvement in the transportation system between Bay Mills — Brimley — Sault Ste. Marie. This would enhance the availability of programs and facilities associated with the Brimley School System and with recreational opportunities in the Sault.

There exists an expressed need for the establishment of a meeting center for adult social events and activities. Completion of the community center in November, 1976 should provide adequate facilities for this purpose. There is no developed area or facilities for passive outdoor activities such as camping, picnicing and swimming. Bay Mills residents have indicated a need for a park which would feature facilities for such activities and would be used primarily by members of the community. Additional outdoor recreation needs identified include improvement of the trails system leading to the Gumshoe Lake area. Senior Citizen's recreational needs are somewhat difficult to identify. Traditional cultural patterns hold that the elder members of the community are cared for in the households of their offspring. Most of their personal needs are provided within the nuclear family structure. In addition, senior citizens 65+ comprise only 5% (11 total) of the Bay Mills population. Bingo, card games and social visiting are popular activities among senior citizens in the community. There is an indication that transportation systems could be improved to older members of the community so that they could participate in a wider range of off reservation activities. Also, programs and activities associated with the soon to be completed community center could serve this population group.

In addition to facilities needs, there is a noted deficiency in recreation programming, particularly for the younger members of the community. At the present time there exists no independent recreation administrative structure which would serve to plan and manage the park and recreation facilities and programs for the Bay Mills Community.

#### **PARK AND RECREATION RESOURCE DEVELOPMENT GOALS**

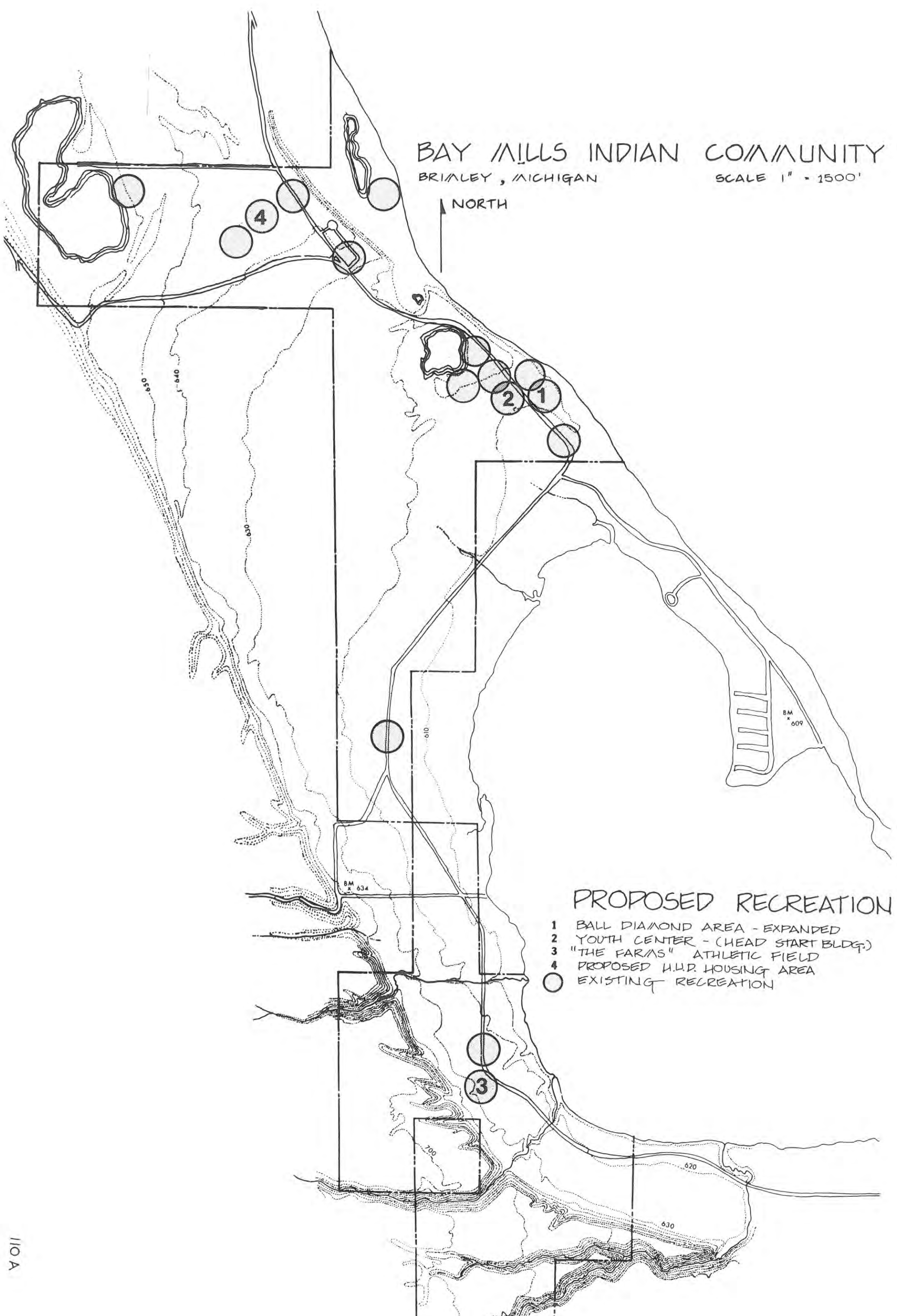
- Promote an equitable distribution of parks, recreation areas and facilities in the community.
- Encourage the development of recreation programs which involve all age segments and both sexes of the community in a variety of year round activities.
- Maintain and improve the quality of the community environment.

# BAY MILLS INDIAN COMMUNITY

BRIALEY, MICHIGAN

SCALE 1" = 1500'

NORTH



## PROPOSED RECREATION

- 1 BALL DIAMOND AREA - EXPANDED
- 2 YOUTH CENTER - (HEAD START BLDG.)
- 3 "THE FARMS" ATHLETIC FIELD
- 4 PROPOSED H.U.D. HOUSING AREA
- EXISTING RECREATION

## **PARK AND RECREATION RESOURCE DEVELOPMENT OBJECTIVES**

- **Develop neighborhood playgrounds in each neighborhood.**  
This would serve to provide outdoor recreation areas in convenient locations for young and adult members of the community.
- **Include recreation plans in future housing developments.**  
This would insure adequate recreation facilities and open spaces with new neighborhoods.
- **Develop water based day use facility for community use.**  
This would provide a natural resource based recreation facility for such activities as swimming, picnicing and day camping.
- **Develop indoor recreation facility for community youth.**  
This would serve the expressed need for a teen and young adult center at Bay Mills. It would provide young people of the community a common meeting place and social and activities center.
- **Adopt park and recreation resource administrative structure.**  
This would be responsible for planning, administration and management of facilities and programs. A management system will be necessary to operate, plan and supervise proposed recreation developments.
- **Develop programming for Bay Mills youth.**  
Facilities development will require parallel program development to achieve maximum benefit and use.
- **Increase participation in community school and regional recreation programs.**  
Barriers to participation in existing off reservation recreation opportunities should be eliminated.

## **ACTION PROGRAM**

Previous sections of this plan have dealt with supply and "demand" factors at Bay Mills which provides a picture of recreation needs and deficiencies. This section of the plan will identify specific projects to be accomplished within defined time periods which will effect basic improvements in park and recreation resources. The action plan divides the total program into phases over a five year period. Each phase is a two or three year period which involves:

1. On going activities review.
2. Preliminary planning to identify potential developments, or projects.
3. Detailed planning and implementation of approved new projects.



**PARK AND RECREATION RESOURCE DEVELOPMENT PROGRAM – ACTION PLAN\***

PROJECTS	FIRST ACTION PHASE 1976-1977			SECOND ACTION PHASE 1978-1980			THIRD ACTION PHASE 1981-1982		
	Review / modification of existing projects, programs Facilities	Preliminary feasibility Investigation	New projects to initiate	Review / modification of existing projects, programs Facilities	Preliminary feasibility Investigation	New projects to initiate	Review / modification of existing projects, programs Facilities	Preliminary feasibility Investigation	New projects to initiate
Bay Mills Community Recreation Area (Ball field)	X		XXX #	XX			XX		
Athletic Field for South end "Farms"				X	XX		XXX		
Improvements to existing HUD recreation area	X	XX	XXX						
Recreation plan for proposed HUD units	X	XX	XXX	X	XX	XXX	X		
Spectacle Lake Campground development	X	XX		X		XXX	X		
Youth Center	X		XXX #	XX			XX		
Development of Park and Recreation Administrative Structure	X	XX	XXX	XX			XX		

Priorities indicated by No. of X's

X - Low priority  
 XX - Moderate priority  
 XXX - High priority

# - In process

## COMMUNITY NEEDS & DEFICIENCIES

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The ball diamond area, centrally located one quarter mile south of the tribal council center, is

utilized principally by older teen age and adult male members of the community. There is a well defined need for a major outdoor recreation area development, centrally located, which would contain facilities for the entire community. Demographic data indicates a large number (62% ; 184 persons) of Bay Mills residents under the age of twenty four. Two thirds of the youth under twenty four are female. Special attention should be paid in the provision of recreation facilities and programs for pre teens, ages five to twelve and teens and young adults ages thirteen to twenty four. There is a demand at Bay Mills for youth activities including baseball, basketball, volleyball, tennis, ice skating, dancing and gymnastics. There is currently no indoor facility for programmed or supervised recreation activities for youth on the reservation and an identified need for such exists. A major contribution to the satisfaction of indoor recreation needs for youth will be the proposed conversion of the Head Start Building (located one quarter mile south of the Tribal Council Center) into a supervised recreation center for youth. An additional need for youth is improvement in the transportation system between Bay Mills — Brimley — Sault Ste. Marie. This would enhance the availability of programs and facilities associated with the Brimley School System and with recreational opportunities in the Sault.

There exists an expressed need for the establishment of a meeting center for adult social events and activities. Completion of the community center in November, 1976 should provide adequate facilities for this purpose. There is no developed area or facilities for passive outdoor activities such as camping, picnicing and swimming. Bay Mills residents have indicated a need for a park which would feature facilities for such activities and would be used primarily by members of the community. Additional outdoor recreation needs identified include improvement of the trails system leading to the Gumshoe Lake area. Senior Citizen's recreational needs are somewhat difficult to identify. Traditional cultural patterns hold that the elder members of the community are cared for in the households of their offspring. Most of their personal needs are provided within the nuclear family structure. In addition, senior citizens 65+ comprise only 5% (11 total) of the Bay Mills population. Bingo, card games and social visiting are popular activities among senior citizens in the community. There is an indication that transportation systems could be improved to older members of the community so that they could participate in a wider range of off reservation activities. Also, programs and activities associated with the soon to be completed community center could serve this population group.

In addition to facilities needs, there is a noted deficiency in recreation programming, particularly for the younger members of the community. At the present time there exists no independent recreation administrative structure which would serve to plan and manage the park and recreation facilities and programs for the Bay Mills Community.

### **PARK AND RECREATION RESOURCE DEVELOPMENT GOALS**

- Promote an equitable distribution of parks, recreation areas and facilities in the community.
- Encourage the development of recreation programs which involve all age segments and both sexes of the community in a variety of year round activities.
- Maintain and improve the quality of the community environment.

The action plan is designed to be flexible. As priorities change, it may be necessary to update or postpone certain projects as the community sees fit.

### **Facilities**

#### **1. Bay Mills Community Recreation Area. (See illustration)**

A Land Water Conservation Fund grant pre-application is currently pending with the State of Michigan, Department of Natural Resources, Grants in Aid Division, Lansing, Michigan. The LAWCON program is administered by the Bureau of Outdoor Recreation, U.S. Department of Interior and provides 50-50 money for outdoor recreation planning, acquisition and development. It is expected that the 50% match required by Bay Mills will come through private foundation donations which are currently being solicited. The recreation area site is currently occupied by a ball diamond which is the major recreation development at Bay Mills. The facility is actively used from the end of May until Labor Day for slo-pitch baseball. Over twenty area teams participate in league play with several week end tournaments sponsored through the summer.

It is recommended that the diamond area be improved and reoriented and that additional facility and program development be incorporated within the existing site boundary. The recreation area created would be centrally located on the reservation and would provide a nucleus of recreation activities 300 yards South of the existing Tribal Council Building and Community Center. The site has exceptional aesthetic qualities and suitable soil conditions and would require minimum topographic alterations. Activity supervision and police services would be readily available from the nearby community facility buildings. The proposed youth center is located directly across from the recreation area.

Expanded facilities and programs recommended include:

1. Renovation of existing ball diamond area.
2. Redesign of ball diamond to include bleachers, dugouts, lighting.
3. Incorporate 100 yard athletic field and baseball outfield.
4. Magic square facility including:
  - a. Tennis
  - b. Basketball
  - c. Volleyball
  - d. Ice Hockey
5. Concession stand, vault toilets, maintenance shed (combined).
6. Picnic Tables
7. Water supply
8. Parking lot

Development improvements to the ball diamond area including the concession stand, could provide increased revenue to the reservation. Slo-pitch tournaments could generate additional income by increased fees charged participating teams and by increased concession sales resulting from greater spectator control through the provision of a bleacher area. Monies generated could be used for operations and maintenance of the area and, possibly for other recreation facilities as well.

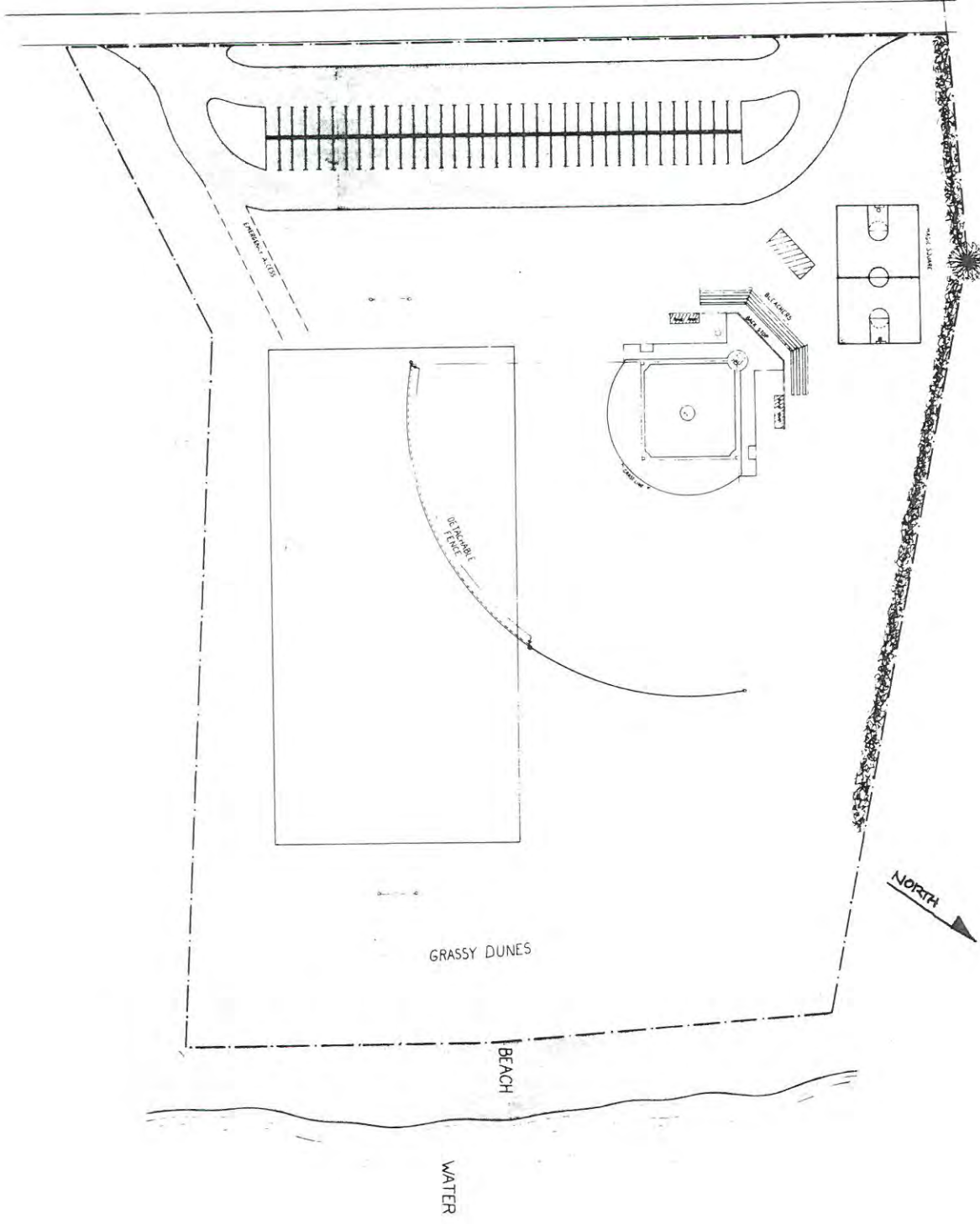
The recreation area would provide outdoor facilities for pre teens, teens and adults both male and female, on the reservation. Total estimated projects cost is \$37,300.00. The project, if approved, would be under construction by late April, 1977.



# BAY MILLS RECREATION FIELD

SCALE 1" = 100'

CORNER OF  
HEADMAN BLD.



## **2. Athletic Field For South End "Farms" Area.**

South end residents have requested that an open space area be provided for active games and sports. Initial use activity would be slo-pitch baseball. Additional facilities development could be added as demand requires, pending availability of funding. It is recommended that the land once used as a cattle grazing area be considered as a primary site choice, and that a soils analysis and perc tests be completed before construction begins. There are severe soils limitations and a high water table in much of the south end land which would preclude its use for active field sports recreation. Once a location has been selected, grading and clearing could be done by Indian Action Team members with assistance from men and equipment of the Army Reserve Unit attached to Sault Ste. Marie, Michigan. Construction could begin following feasibility analysis in early summer, 1977.

## **3. Improvements to Existing HUD Housing Recreation Area.**

The existing HUD recreation area located at the north end of the reservation has deteriorated and is devoid of facilities. It is recommended that the fenced area be repaired and that active recreation equipment be installed for pre teens and teenage members of the community. Expansion of the area could be considered as future demand requires.

## **4. Recreation Plan For Proposed HUD Units.**

Twenty (20) HUD housing units have been proposed for construction on the north end during FY 1976-77. In addition, seventy (70) additional units have been proposed in the same general area to be constructed within five years. It is recommended that a quality recreation environment be designed with the housing site plans, not added as an after thought. Possible considerations such as tot lots, play lots, a neighborhood park, ice rink and other facilities should all be designed for a harmonious and livable neighborhood.

## **5. Spectacle Lake (See proposed development plan).**

Interviews with tribal officials and several members of the Bay Mills Indian Community have substantiated a need for a community day use swimming/picnic area located on the southeast shore of Spectacle Lake on the site of the existing rustic campground.

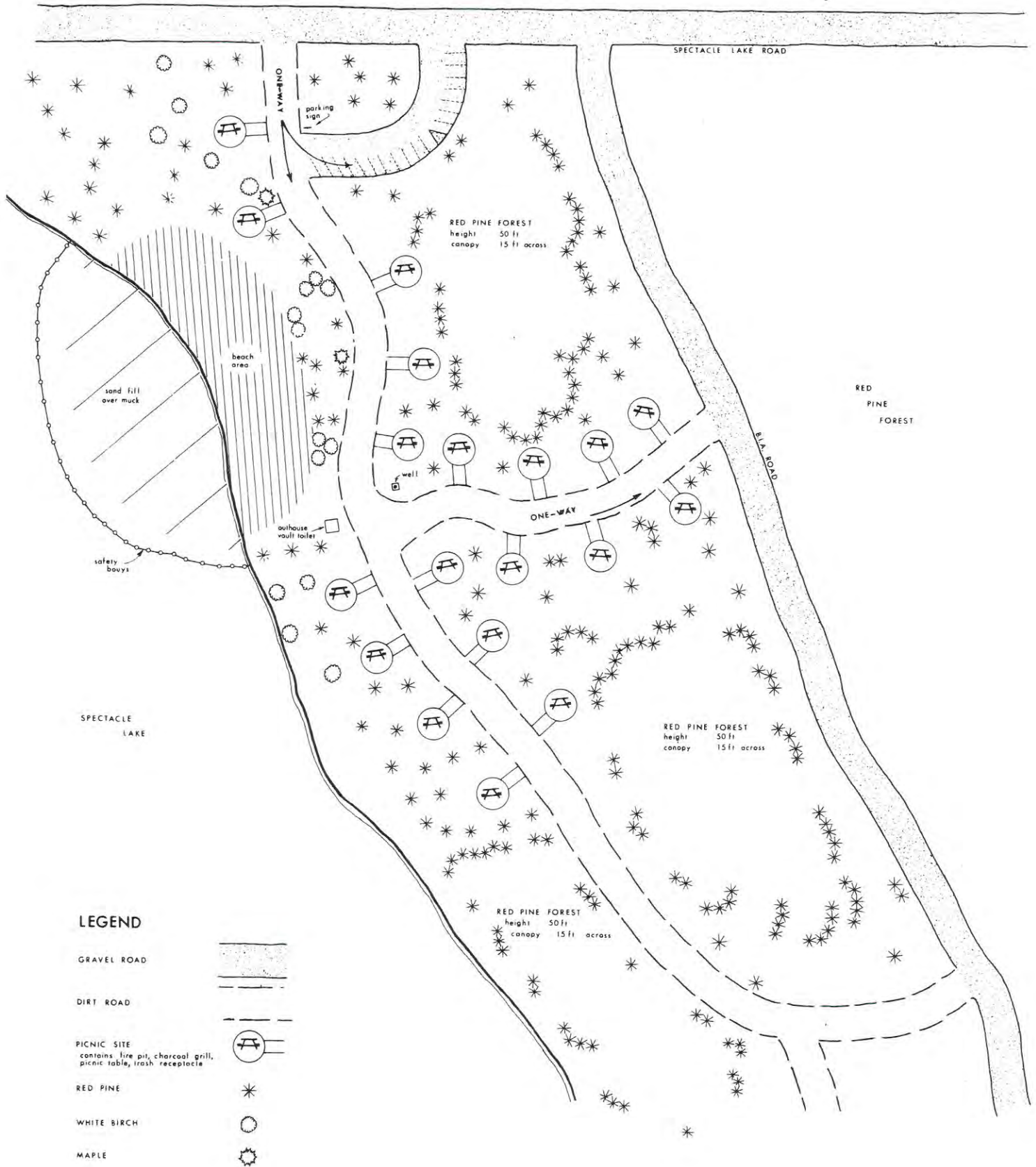
Site improvements would include:

- Picnic/campfire sites (20)
- Well construction
- Vault toilets
- Beach improvement (clearing - sand fill)
- Trail construction
- Brush clearing and selective tree cutting for picnic sites, deadfall and insect control.

Total project cost is estimated at \$30,000. (\$20,000 labor and \$10,000 materials).

Funding possibilities for this project are Economic Development Administration (EDA Title 10), and Resource Conservation and Development Program, (RC&D) Soil Conservation Service, U.S. Department of Agriculture. RC & D projects are designed to assist local communities in improving their economy and environment by working with the natural resource base. Money for specific

# SPECTACLE LAKE PARK

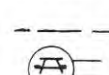


## LEGEND

GRAVEL ROAD



DIRT ROAD



PICNIC SITE  
contains fire pit, charcoal grill,  
picnic table, trash receptacle



RED PINE



WHITE BIRCH



MAPLE



projects approved by area S.C.S. is provided on a 50-50 matching basis. Bay Mills could contribute match from local labor and materials. Commencement of project construction is contingent upon funding availability. It is recommended that grant applications be submitted Fall, 1977.

#### **6. Youth Center**

There is currently no indoor recreation facility for the Bay Mills youth — pre-teen and teenage. The Bay Mills Community has donated the Head Start Building which will be vacant late fall, 1976, for use as a youth center. The facility would serve as a social center for dances, meetings and other youth oriented activities. A game room to be included will contain ping pong tables, dart boards, chess games, pool tables, pin ball and foos ball machines, juke box and kitchen facilities for snacks. Renovation of the building will be done by Indian Action Team carpenters with materials provided by the community and Inter-Tribal Council and is scheduled to begin late fall, 1976. Operations and maintenance monies will be generated from concession sales at slo-pitch tournaments; from use charges for equipment and games installed in the youth center; from raffles and donations by foundations. Estimated operating costs are \$2,000 per year.

#### **Administrative Structure**

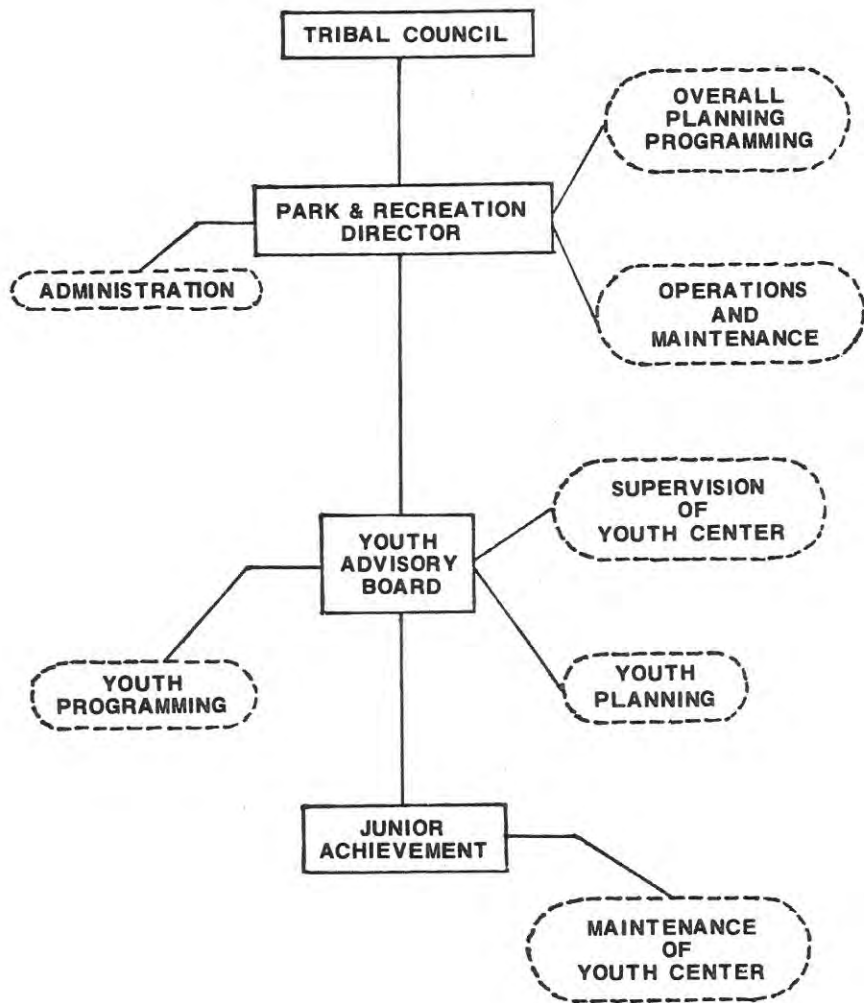
There is currently no formal park and recreation administrative hierarchy existing under the auspices of the Bay Mills Indian Community Tribal Council. Reasons for this include the absence of park and recreation facilities provisions at Bay Mills and the lack of financial wherewithal to support future development. It is highly recommended that an official park and recreation administration be established for the Bay Mills Community. Recommended expansion to the ball diamond area, Spectacle Lake, south end playfield and recreation provisions for the north end will require responsible management and administration. A proposed structural hierarchy is as follows:

This organizational structure would suffice for the short term (3-5 years) expansion programs recommended in the Action Programs section. Initially, the administrator would be responsible for developing inter-departmental support linkages, assigning job responsibilities, collecting information and monitoring on going grant programs for recreation development as well as overall planning and programming. Major decisions would be passed for referral to the Executive Council of the Bay Mills Indian Community and to the General Tribal Council. The administrator would be responsible for assignment of duties for operations and maintenance to appropriate personnel.

The Bay Mills Community has expressed concern that the proposed Youth Center be adequately supervised. It is recommended that a Youth Advisory Committee be established, comprised of young and adult members of the community. The YAC could function to: advise the supervisor; develop programs for youth; determine policy issues relating to programs, operation and maintenance and rules and regulations. The YAC would pass recommendations to the recreation administrator and the Tribal Council for approval. It is also recommended that a Junior Achievement Committee be established, comprised of young members of the community to maintain the center as directed by the supervisor under policies established by the YAC.



# PARK AND RECREATION MANAGERIAL STRUCTURE



Department

Responsibilities

## **Programs**

There is a tendency for park and recreation plans to be predominantly facility oriented. This constitutes only part of the leisure service equation. While it is obvious that Bay Mills has serious facility deficiencies, there is an equal necessity to address the problem of program deficiency. Facility provision, without parallel program development, is likely to be ineffective in dealing with the expressed recreation needs of the community.

### **On Reservation Programs**

An immediate need of the Bay Mills Indian Community is for recreation programs for youth. The Youth Advisory Committee as proposed would have primary responsibility for youth programming. While initially concerned with development of indoor programs associated with the youth center, the YAC could also organize outdoor programs utilizing proposed facilities of the Bay Mills Recreation Area and Spectacle Lake Park as well as regional attractions. As future demand warrants, the community may wish to expand its own programs for adults and senior citizens. Programs for young and old alike should be innovative and provide for personal development and creative expression. Examples of diverse types of program developments which the Bay Mills Indian Community could consider include:

- Bike tours — organized tours which travel along secondary and scenic roads within the county.
- Campfire programs — organized with assistance of community members knowledgeable in folklore and local flora and fauna. Could provide movies and slide presentations. Spectacle Lake would provide an ideal setting.
- Children's theater — developed as an activity for children. Children's workshops could be incorporated which would provide exposure to music, voice, Ojibway language, culture and dances.
- Clubs — organized groups oriented around common interests such as:
  - bicycling                      equestrian                      gardening
  - hiking                              nature study                      excursions & trips
  - bird watching
- Craft workshops — designed for young and adults who wish to participate in a cultural or recreational activity such as:
  - painting                      leathercraft                      ceramics
  - canning                      needlework                      pottery

### **Off Reservation Programs**

Off reservation, a wide variety of recreation programs for all ages are sponsored by the Brimley School System and Consolidated Community Schools in the area. While a number of Bay Mills Community members do participate in these programs, others are excluded by problems of inadequate transportation. To improve and coordinate transportation facilities between Brimley and Sault Ste. Marie car pools could be organized and bus schedules arranged through Eastern Upper Peninsula Transportation Authority. Another barrier to participation in the community

school program is program costs which adversely affect low income residents. Costs to these individuals could be offset by a special fund established by revenues from raffles and bingo. Inter-Tribal Council might assist in this area.

Successful programs might also be arranged in cooperation with other regional program agents such as 4-H and Cooperative Extension Service. Assistance in the form of instruction, leadership and moderate funding is available.

#### **Additional Programming Considerations**

- Publish schedule of area youth oriented activities for distribution to community youth which would illustrate year round activities, times, and places for swimming, hockey, baseball, basketball, billiards and other leagues and information on community school programs.
- Establish fund for equipment items such as baseballs, bats, gloves, basketballs, etc. which could be loaned to youth under supervision to enhance sports participation. Inter-Tribal Council could provide funding advice and assistance.
- Establish education program which would involve key members of the Recreation Committee and Youth Advisory Committee in field trips to local, regional and down state recreation systems for the purpose of broadening exposure to different types of park systems and operations which might be applicable to the development of programs and facilities at Bay Mills.
- Develop linkage with EUPEDD recreation resource planners for technical assistance in programming and planning.

Action on the recommended facilities and areas, over the coming five years, plus formal organization of a park and recreation resource administration structure will establish a recreation delivery system which is geographically and demographically comprehensive. It is designed to meet the short term (five years) park and recreation needs of the Bay Mills Indian Community. The action plan is intended to be flexible. Since priorities, funding sources, management and community objectives are subject to change, it is mandatory that planning be considered an ongoing process. Physical and human resources should be inventoried every two to three years and a needs assessment undertaken to determine adjustments in suggested goals and objectives. As the recreation system becomes institutionalized, long term goals can be formulated on the basis of what has already been established and what is needed.

#### **Problems and Issues**

In order to accomplish the goals and objectives of the park and recreation development component of the Comprehensive Plan, certain problems must be dealt with. Many of these problems are common to a majority of small rural communities attempting to meet the recreation needs of its citizens. Many are problems unique to Indian culture and indigenous to the Bay Mills Indian Community.

A persistent and underlying problem will be financing and capital outlay for major recreation developments. Until the Bay Mills Community becomes economically self sufficient, (an unlikely

reality within the next five years) it will continue to be dependent upon federal and state support for primary and match monies for categorical grants. Operation and maintenance monies will have to be generated from within the community possibly through a combination of ball tournament concession sales, raffles, bingo tournaments and other community charities, coupled with a strong volunteer commitment. To organize this volunteer commitment, it will be necessary to overcome the current apathy concerning community improvements. Also, there is a difficulty at Bay Mills in finding individuals who are willing to take responsibility for organizing community affairs and to accept management responsibility for nonremunerative positions. The connecting link between efforts/energies expended on the part of the individual and direct improvement in the quality of life for one's immediate family and the larger community must be recognized. Maximum feasible participation by individuals in the operation of community affairs and in the decision making process should be encouraged. A well run park and recreation system, like other community functions, will not be created in a vacuum nor with the support of a few individuals. It will require the dedication and cooperation of a majority of Bay Mills residents working toward a common purpose.

Another problem that conflicts with planning for park and recreation resource improvements and for many community improvements in general is the issue of land occupancy. Bay Mills land is held in trust by the federal government for tribal use and title claims are not held by individuals. Individuals have great latitude in issues of land occupancy. Decisions regarding land use are currently not made on the basis of their long term consequences. There is no formal zoning framework and the prevailing community attitude is nonsupportive of a zoning policy. The tribal government has, until the present time, adopted a laissez-faire land use policy. Resulting conflicts in land use will likely continue unless a strict land use policy buttressed by legal sanctions is adopted. Development controls should be adopted which recognize recreation and natural resource preservation as a vital community function. There are alternatives to zoning to accomplish this objective, but regardless of the method used, land use decisions must be based on a concern for the welfare of the total community ecosystem — not merely on the rights of individuals to use the land as they see fit.

#### **Funding Sources For Park And Recreation Improvements**

Financing for park and recreation improvements at the Bay Mills Indian Community is tenuous at best. As has been discussed in earlier sections of this plan, local sources of funding are severely limited. There is no tax base to drive local revenue, and the low income level of the residents deny the possibility of donations or bonding for major development. The Bay Mills Community does have wealth in human resources, albeit largely unorganized and untapped. Volunteer labor is a largely unutilized potential resource. Neighborhood Youth Corps (NYC) kids could provide maintenance and operation functions. Indian Action Team (IAT) could provide construction and carpentry skills. Heavy equipment is available on a donation basis from the Sault Area Army Reserve unit. Some operational monies can be and are being provided by concession sales at summer slo-pitch tournaments. Hard money for major recreation developments will most assuredly need to come from outside the community at the state or federal level.



## LONG TERM DEVELOPMENT CONSIDERATIONS

- Establish senior citizen recreation committee which would plan and program activities for elder members of the community.
- Acquire land off reservation for intensive recreation development.
- Develop interior trails system to open unique hinterland areas to residents for nature study, fishing and hiking.
- Examine feasibility of additional complementary uses for area known as Big Abe's Bingo Field. e.g. sports/athletic field, archery range, playground, slo-pitch baseball, volleyball court, etc.
- Identify historical/cultural resources on the reservation. Provide routed sign or interpretive displays in suitable locations. e.g. sign in front of Old Indian Cemetery could explain origin traditions, respect for ancestors and request that visitors remain outside of fence.

## METHODS OF FINANCING PARK AND RECREATION RESOURCE IMPROVEMENTS

PROGRAM TITLE	PERCENTAGE OF FUNDS AVAILABLE	INFORMATION CONTACT
<p>LAND AND WATER CONSERVATION FUND:</p> <p>Financial assistance is available for planning, acquisition and development of outdoor recreation areas and facilities.</p>	<p>50 - 50 MATCHING BASIS</p>	<p>Bureau of Outdoor Recreation U.S. Department of Interior</p>
<p>OUTDOOR RECREATION TECHNICAL ASSISTANCE:</p> <p>Provides technical assistance and advice to states, their political subdivisions and private interests in a wide variety of outdoor recreation matters. The aid covers recreation planning program financing, facility development.</p>	<p>% Varies</p>	<p>Bureau of Outdoor Recreation U.S. Dept. of Interior</p>

(Methods of financing park and recreation resource improvements con'd.)

PROGRAM TITLE	PERCENTAGES OF FUNDS AVAILABLE	INFORMATION CONTACT
<p>RESOURCE CONSERVATION AND DEVELOPMENT:</p> <p>Provides monies to assist local communities in improving their economy by working with the natural resource base.</p>	<p>50 - 50 MATCHING BASIS</p>	<p>Soil Conservation Service U.S. Dept. of Agriculture.</p>
<p>THE INDIAN SELF-DETERMINATION AND EDUCATION ASSISTANCE ACT (P.L. 93-638)</p> <p>Provides self determination grants which can be awarded for such purposes as: Providing matching share for other federal and non-federal grants.</p> <p>Can be used for:</p> <ol style="list-style-type: none"> <li>1. Strengthening Tribal Government.</li> <li>2. Facilitating contracting</li> <li>3. Acquisition of land</li> <li>4. Matching share provision—development and operation of tribal facilities or resources.</li> </ol>	<p>% Varies</p>	<p>Bureau of Indian Affairs U.S. Dept. of Interior</p>
<p>INDIAN BUSINESS ENTERPRISE</p> <p>Development — to create both jobs &amp; income for Indians; to train Indians for more responsible positions; and to involve Indians more deeply in management and ownership of business.</p>	<p>% Varies</p>	<p>Bureau of Indian Affairs U.S. Dept. of Interior</p>
<p>INDIAN LANDS — SOIL AND MOISTURE CONSERVATION</p> <p>Assists owners and users of Indian lands in conserving the soil and water and to increase production on Indian land. Assistance includes sale, exchange or donation of property or goods. Terraces, dikes, diversions, soil inventories contouring, brush removal are all allowable uses.</p>	<p>% Varies</p>	<p>Bureau of Indian Affairs, U.S. Dept. of Interior</p>

(Methods of financing park and recreation resource improvements con'd.)

PROGRAM TITLE	PERCENTAGE OF FUNDS AVAILABLE	INFORMATION CONTACT
PUBLIC LAND FOR RECREATION, PUBLIC PURPOSES AND HISTORIC DOCUMENTS – Permits qualified applicants to lease or acquire available public land for historical monuments, recreation and public purposes.	% Varies	Bureau of Land Management, U.S. Dept. of Interior
UPPER GREAT LAKES REGIONAL COMMISSION (UGLRC)  Provides grant & technical assistance for regional development including park and recreation improvements to local units of government within the UGLRC area.	% Varies	Upper Great Lakes Regional Commission % Michigan Dept. of Commerce, Fourth Floor Law Bldg., Lansing, MI 48913
ECONOMIC DEVELOPMENT ADMINISTRATION – (EDA) Grants and technical assistance for such public facilities as public tourism development.	Up to 100%	Economic Development Administration, U.S. Department of Commerce
ECONOMIC DEVELOPMENT –  Public works impact projects- provides project grants to construct public facilities to provide immediate jobs to the unemployed and underemployed in the project area.	Up to 100%	Economic Development Administration, U.S. Dept. of Commerce
PRIVATE FOUNDATIONS AND CHARITIES	% Varies	Various
MINORITY BUSINESS LOANS –  Project grants to promote community-based economic development to develop entrepreneurial skills in rural areas of high outmigration. Emphasis on minority – owned businesses.	% Varies	Office of Minority Business Enterprise U.S. Dept. of Commerce
INDIAN TOURISM ENTERPRISES –  Assistance to Indian tribes and other groups on all aspects of tourism development – planning, financing, management, marketing and promotion.	% Varies	Bureau of Indian Affairs– U.S. Dept. of Interior

TOURISM AND RECREATION -

Related Business & Industry Loans and Grants for establishment and operation of business and industries related to tourism and recreation. Funds may be used for land, buildings, equipment and supplies.

% Varies

Farmer's Home Administration - U.S. Dept. of Agriculture.

MANAGEMENT OF SPORT FISH -

Provision of technical assistance to state conservation agencies and Indian tribe in management of waters for sport fishing. Assistance in the form of biological examinations of water involved and specific recommendations based on the conditions found to exist. Stocking Program.

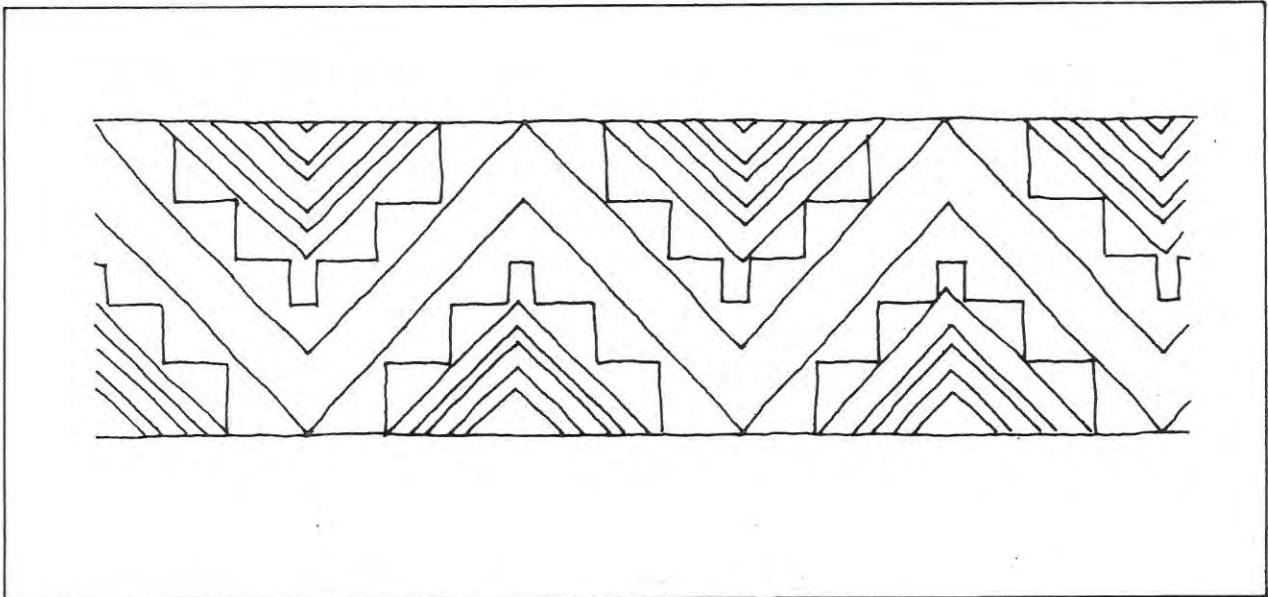
% Varies

Bureau of Sport Fisheries & Wildlife. U.S. Dept. of Interior.

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2. **Chippewa County Recreation Plan** prepared by Eastern Upper Peninsula Economic Development District, Sault Ste. Marie, Michigan - Director, John Campbell. March, 1976.





EDUCATION

## Introduction

Education is of vital importance to any community and is of primary concern to the Bay Mills Community in which 42% of the population is of public school age (including Head Start). 90.2% of the reservation households have children up to 18 years old and are or will be in contact with public educational facilities and programs available to this sector of the population in the immediate future.

The overall view of education at Bay Mills is much brighter than it has been in the past with increased community participation in educational programs and better school-community relationships. Bay Mills has had a vast decrease in the number and percent of students dropping out of high school. In addition, many residents of Bay Mills who had not completed high school are participating in adult education programs which further increases the educational level of the community. Students attending Brimley Public Schools from Bay Mills have achieved much success both in academics and extra curricular activities which is evident by the many honor students and high percentage of Indian students involved in athletics. The value and concern of education to the community is apparent in their personal involvement and assistance in education committees, tutoring programs, the community library and Head Start activities.

The future of the Bay Mills Community is dependent on many factors, one of which is education. The value of education lies in its ability to be of the quality and type which will be most beneficial in meeting community needs. To insure an education which will meet community needs and desires, continual in depth examination and evaluation of educational goals, programs, opportunities and facilities is needed. This section provides general education data of Bay Mills as a basis for identifying problems which may exist and developing solutions and opportunities to continue the improvement of education at Bay Mills. Educational problems of any group or individual often involve many inter-related components ranging from parental attitudes to educational facilities and programs available. The situation is no less complex at Bay Mills and demands much examination. Additional research will be required to answer many of the issues and questions raised in this section.

## Educational Attainment

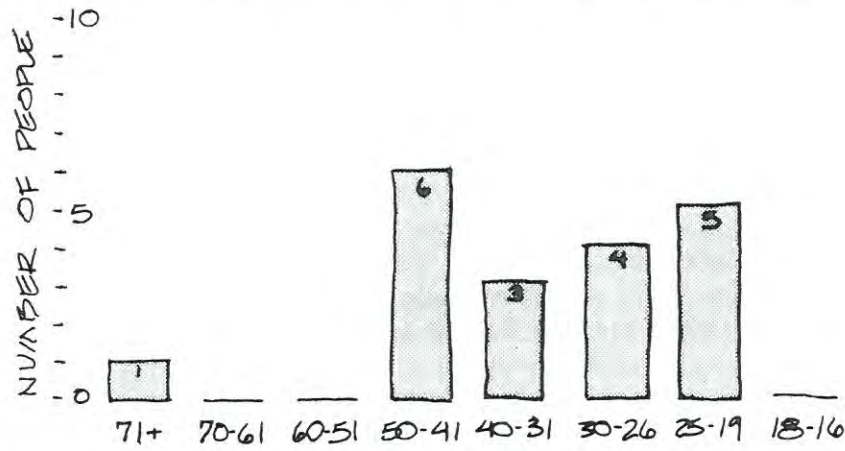
Educational Level — The median educational level of the Bay Mills Community (25 years +) is 10.82 years, approximately 1.5 years lower than the 1974 national median educational level of 12.3 years and approximately equivalent to the 1960 national level. This level is also higher than the Michigan Indian educational level of 1973 (10.0 years).<sup>1</sup>

### MEDIAN EDUCATIONAL ATTAINMENT

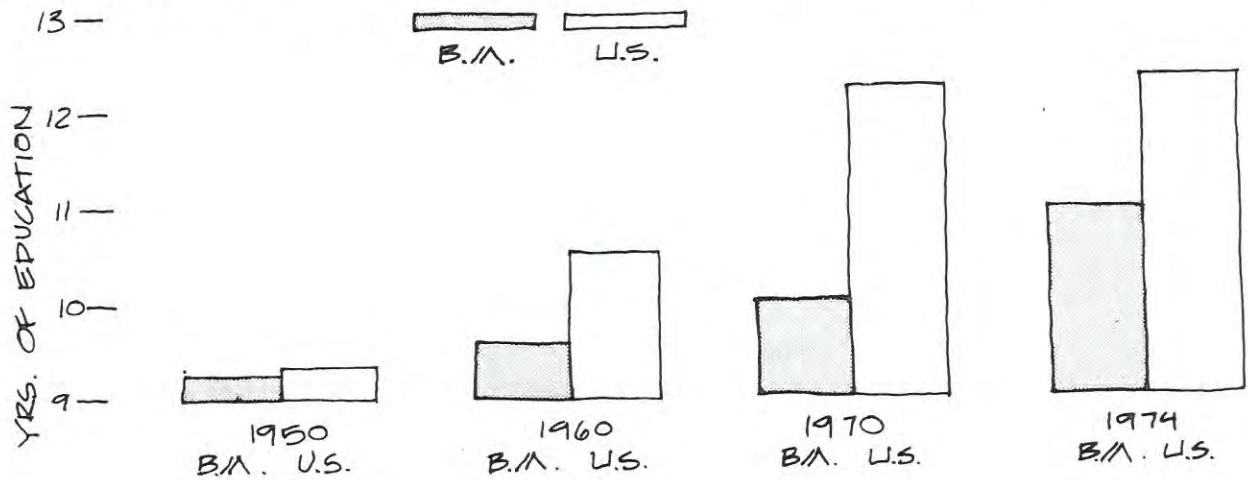
( 25 yrs. and older )

YEAR	UNITED STATES	BAY MILLS
1950	9.3 yrs.	9.27 yrs.
1960	10.5 yrs.	9.59 yrs.
1970	12.2 yrs.	10.0 yrs.
1974	12.3 yrs.	10.94 yrs.
1975		10.82 yrs.

NUMBER OF PERSONS ATTAINING A HIGHER EDUCATION AFTER HIGH SCHOOL



MEDIAN EDUCATION ATTAINMENT 25 YRS & OLDER



### High School Graduation and Dropout

The continuing rise of the educational level at Bay Mills is largely attributed to the impressive decrease in those who have dropped out of high school and the resulting increase in high school graduates. Although no systematic dropout records have been compiled for Bay Mills in the past, a look at the percent of dropouts from age groups at Bay Mills indicates decline.

AGE	TOTAL WITHIN AGE GROUP	# WITH EDUCATION DATA AVAILABLE	HIGH SCHOOL GRADUATE		DROPOUT		G.E.D.		PARTICIPATION IN HIGHER EDUCATION	
			#	%	#	%	#	%	#	%
16-18 yrs.	25	23	In School 18	72%	5	20%				
19-25 yrs.	41	39	31	76%	8	21%	0	0	5	13%
26-30 yrs.	23	23	15	65%	8	35%	0	0	4	17%
31-40 yrs.	22	22	10	45%	8	36%	4	18%	3	14%
41-50 yrs.	21	21	10	48%	10	48%	1	5%	6	29%
51-60 yrs.	19	19	3	16%	16	84%	0	0	0	0
61-70 yrs.	6	6	0	0	6	100%	0	0	0	0
71 years +	6	6	1	17%	5	83%	0	0	1	17%
<b>TOTAL</b>	163									

In addition, a look at the grade level completed by Bay Mills members shows that only 47% of those 25 years and older have completed at least high school while 84% of the 18-24 age group have at least a high school education or are in their senior year of high school.

The distribution of school years completed shows high dropout levels in 8th, 10th, and 11th grades. In recent years, dropouts are more frequent in the last two years of high school.

The percent of Bay Mills students who graduate from high school though on the increase is below state and national averages. Of those community members aged 16-18 years, 20% have dropped out of school. (This percent represents five individuals out of the total of 25 in this age group).

Since 1968, the dropout rate of the Brimley Public Schools, where Bay Mills students attend, has fluctuated between 2.61% and 10.07% with an average rate of 5.65%, which is approximately 1% lower than the Michigan Public School dropout rate of 6.61%. Related to Chippewa County schools which are comparatively rural, Brimley's dropout rate tends to be higher. Dropout rates for Indian students at Brimley have not been systematically compiled, making comparison of Bay Mills dropout rate to the school near impossible. In the past 10 years, however, Brimley's dropout rate has declined, while proportionately, a much greater decrease in Indian dropouts has occurred.



**Adult Education**

Of the total high school graduates on the reservation, five have a General Equivalency Diploma (G.E.D.), the equivalent of a high school diploma. These people, ages 32-46 years, dropped out of school and later completed their schooling requirements through night school or while in the service. A number of people of various ages from Bay Mills are currently attending adult education classes to obtain high school certification.

**Higher Education**

13.57% of the community (18 years +) have continued their education beyond high school. This schooling includes both college and vocational or special training.

**Educational Facilities**

Bay Mills Head Start — Since 1966, A Head Start program has been provided by the Community Action Agency located in Sault Ste. Marie for children primarily three and four years old. Formerly, this pre-school operated in a community and church building on the reservation's north end, opposite the ball diamond. Starting in the Fall of 1976, the headstart school is scheduled to operate in the new community building. Outside of the educational objectives (self confidence building, interaction with other children and preparation for entering public schools) this school also provides transportation, health services and breakfast and lunch programs during the school year (September to June). Parents of Head Start students at Bay Mills feel very positive about the results of this school and have been actively involved in its operation. Although the Head Start teacher is not from Bay Mills, the teacher aids, cook, bus rider and bus driver are.

No day care facility is available for parents with young children. Presently parents hire babysitters when possible, but this is not a completely reliable situation. The lack of a day care facility and problems encountered with babysitters hinders parents ability to work, continue their education, or perform other necessary activities out of the household.

The most severe problem arises in households with children who are not in public school. 38% of the households have children 5 years and younger. Although some of these children participate in Head Start, this is only a morning school and child care remains necessary in the afternoon.

**Brimley Public Schools**

Elementary and secondary education is provided to Bay Mills by the Brimley Public School System located about five miles from the reservation. The 1975-76 school enrollment at the Brimley Schools was 543. 130 or 24% of enrollment is Indian students, 106 of whom live on the reservation. Approximately 20% of the high school and 26% of the elementary students are Indian. Adult education courses to obtain G.E.D. certification are also provided at the Brimley Schools and utilized by members of Bay Mills. There are no Bay Mills members on the Brimley School Board.

**Lake Superior State College**

Lake Superior State College, located in Sault Ste. Marie, Michigan, approximately 22 miles from Bay Mills offers a variety of college and adult education courses. Bay Mills residents have and are enrolled at the college but no account of the number or years attended is kept on Bay Mills as a group. An Upward Bound Program is also available through LSSC for low income and/or underachievers, primarily high school juniors and seniors, to expand interest in continuing their

education through and beyond high school. No residents of the Bay Mills Community have participated in the Upward Bound Program for four years. Need for a more income producing job, transportation problems and recreational desires are a few reasons for deciding not to participate in Upward Bound Programs.

### **Educational Programs**

Two federal agencies; the Bureau of Indian Affairs and the U.S. Office of Education provide financial resources for education needs of Indian students. These funds are channeled through the tribe and through the public school system. The Bay Mills Community is eligible for Johnson O'Malley educational funds and funding through Title IV Part B of the Indian Education Act (1972). The Brimley School receives funding through Title IV Part A of the Elementary and Secondary Education Act due to their Indian student population. Funds are specifically for Indian students. Brimley Schools also receive 874 and Title I monies due to their low income students and students from federally owned lands but these monies aren't exclusively for Indian students and go into the general school funds.

The Bay Mills Community has two education committees, the Johnson O'Malley Committee and Title IV Committee to deal with the educational needs of the community. Johnson O'Malley funds have been received by Bay Mills since 1971 and have been used for:

- |                        |                           |
|------------------------|---------------------------|
| a. Education Counselor | d. Parental costs         |
| b. Two Teacher aids    | e. Special Transportation |
| c. Tutoring            | f. Indian Culture Classes |

Due to the lack of expanded funding through Johnson O'Malley the tutoring program was funded through Title IV, Part B in 1975. However, due to cutbacks in JOM funding and failure to meet Title IV application deadlines, funding of educational programs for Bay Mills is in jeopardy for the 1976-77 school year. This is an unfortunate situation since these educational programs have been very successful in meeting the needs of the Bay Mills students as well as providing involvement and income for community members.

Higher education grants and loans to cover college tuition, subsistence, required fees and textbooks are available through the Bureau of Indian Affairs for Indians of one quarter Indian blood. In addition, the State of Michigan now provides free college tuition for Indian students.

### **Program Evaluation**

Decisions related to education such as whether to finish high school, dropout of school, go back to school or go on to college are based on a complex of factors. These factors may include the individuals interest in school, parental support, teacher attitudes, educational programs available, ability of school to meet individual needs, financial factors, past school experience and self image to name a few. These factors as related to Bay Mills are beyond the scope of this education section. In an attempt to identify and evaluate educational problems and programs at Bay Mills, one major obstacle was confronted; the lack of quantitative educational data of the Bay Mills Community. The value of this data is that it provides a basis for identifying problems, needs and goals for educational improvement of the community.

Brimley schools keep no separate records outside of lists of Indian students enrollments in the

public school. Evaluations of the existing educational programs related to Bay Mills are performed to meet grant application requirements but generally contain only short narrative evaluations with no quantified data basis indicated.

Compiling and maintaining an educational data base on Bay Mills members as a group may aid in identifying educational problems which may be unique to the community or which may otherwise remain undetected. This data base will also help the community channel their efforts where most needed in identifying and meeting educational needs.

### **Target Populations**

As related to education, three sectors of the population need to be addressed. To those members of Bay Mills who are having problems within the existing educational opportunities, additional help and attention (such as the tutoring program) must be continued. For those who have done well within the existing educational facilities, further opportunities must be made available. Training programs or continued education in areas to meet overall needs of the community may be provided which would meet both individual and community needs. In addition for those working with educational programs at Bay Mills, such as education committee members and the home-school coordinator, additional training may be made available to further expand their ability to address educational needs.

### **GOALS:**

- Develop a quantitative basis to improve educational decision making of the Bay Mills Community.
- Provide educational programs and opportunities to meet overall priorities, especially for job development for Bay Mills program management.
- Insure that those working with Bay Mills educational programs are able to meet the educational needs of the community.
- Insure that the public school supplies an education responsive to the needs of Bay Mills students.
- Expand community control and involvement in the educational opportunities of the community.

### **OBJECTIVES:**

- **Construct and maintain educational data on the Bay Mills Community.**  
This data such as education levels, dropout rates, reasons for dropouts, achievement scores and higher education involvement will provide a substantial basis for evaluation and identification of educational problems and allow Bay Mills to develop effective programs to meet their educational needs.

- **Conduct a yearly update and evaluation of educational data in addition to providing comprehensive monitoring and accountability of educational programs.**  
 This will allow the community to look at educational achievements, results of educational programs with quantitative data and enable those responsible for educational programs to determine their effectiveness and change these programs as needed.
- **Coordinate with outside institutions such as public schools, colleges, Head Start, vocational schools etc. to develop educational training programs for Bay Mills members.**  
 These programs will provide training for members of Bay Mills for positions needed in managing activities and functions of the community and will meet both individual and community needs.
- **Secure funding to insure job placement at Bay Mills after training programs.**  
 An insurance of job placement at Bay Mills upon completion of training programs will encourage participation in these programs as well as maintaining qualified members to remain in and working for the community.
- **Establish comprehensive educational goals and needs of the Bay Mills Community as well as education committee policies in accordance with overall educational goals and needs.**  
 Development of these goals and policies will provide direction for educational program development to insure that the established educational needs of the community are addressed.
- **Establish specific job descriptions of education personnel.**  
 Job descriptions provided for educational personnel at Bay Mills will enable these people to direct their abilities and activities so they may be of most benefit to the community. Specific requirements to be fulfilled within educational positions will insure that needed functions are performed for maintaining educational programs.
- **Provide training for education counselor, committee members and those involved in educational programs.**  
 Training of educational personnel will enable these people to expand their abilities in meeting educational needs of the community in such areas as data collection and evaluation, program development and writing grant applications.
- **Provide a child day care facility.**  
 A day care facility available for parents with young children will allow these parents to be more flexible in obtaining work, continuing their education and performing other necessary activities.
- **Maintain regular education committee meetings to include monthly budget and program progress reports.**  
 Regular education meetings and particularly program reporting will provide information to enable those responsible for these programs to revise programs as needed in meeting their stated purposes.



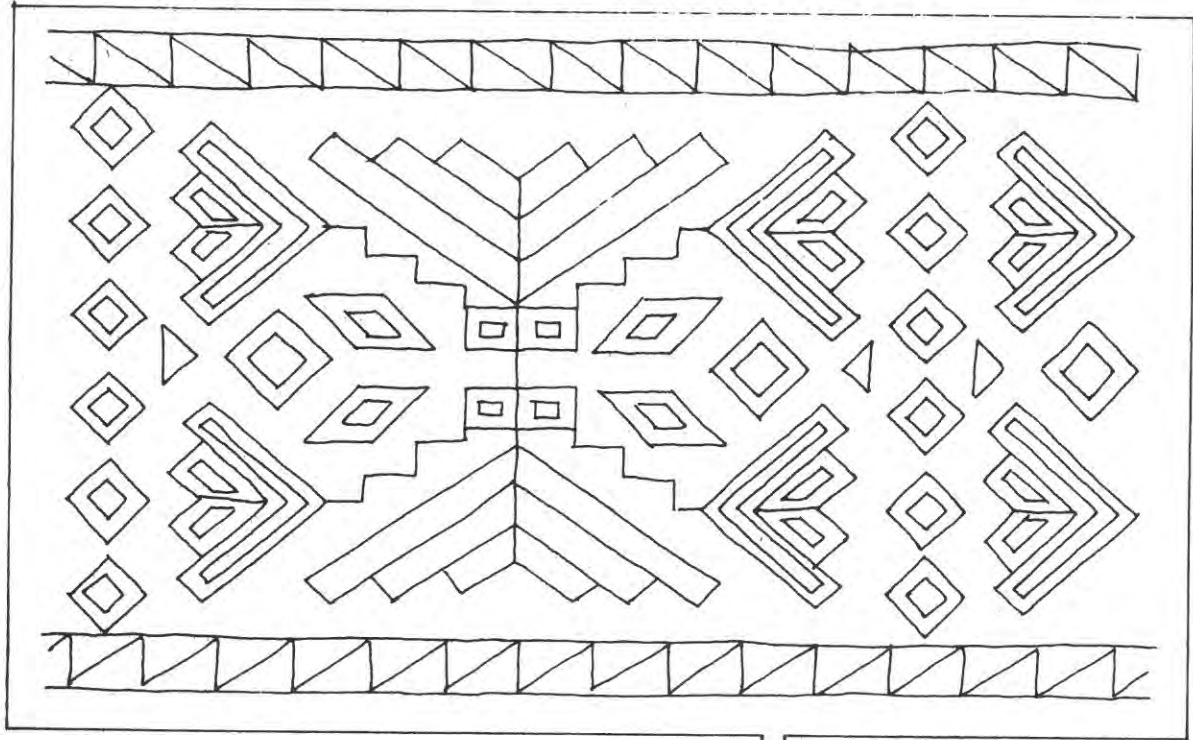
- **Establish close communication between the school and Bay Mills Community.**  
This communication between the community and school will provide compatibility and coordination of educational activities and programs and prevent duplication of activities and services.
- **Increase Bay Mills Community input into school policy development, planning and program development.**  
Involvement of Bay Mills members in school planning will help insure that the school is meeting the educational needs of Bay Mills. This may be accomplished by increasing Bay Mills members in school boards, PTA and other school operations.
- **Insure that personnel of Indian programs are able to attend exclusively to these programs.**  
In attending exclusively to Indian programs, the personnel of these programs will best benefit the Indian students and insure continuation of these programs.

#### **Education - References**

1. Source: (Michigan Indian Educational Level) "Michigan Minorities at the Mid-Seventies; Indians, Blacks, Chicanos", Community Outline Form B, Michigan Civil Rights Commission.
2. Source: (U.S. Median Educational Attainment) "The Condition of Education", HEW, 1976.

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Statistical Bulletin 4007 (1968-69, -1974-75)  
Michigan Department of Education
2. **"The Condition of Education"**  
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3. **"Michigan Minorities at the Mid-Seventies: Indians, Blacks, Chicanos."**  
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HEALTH

## **Introduction**

Bay Mills acquires its health care from a variety of sources, both public and private. A large part of the inadequacies in delivery of health care service to Bay Mills results from the failure to coordinate these various providers. In some areas, duplicate services overlap. In other areas, no one has clear responsibility. A review of the various services and providers shows this in detail. The inventory covers all the health care providers, including facilities and personnel. A problem statement covers some vital statistics for the Bay Mills Community. Follow-up sections provide an in-depth look at several problem areas. Recommendations for specific action include policy, personnel and administrative areas.

## **Providers of Health Care**

### **Indian Health Division-Public Health Service**

Public Health Services provided include environmental health, sanitary water supply and waste disposal systems, health and safety education, and assumption of costs, when qualified for treatment of certain eligible medical, dental and mental health problems. In addition, Indian Health trains and funds 2 Community Health Representatives. While the services covered are comprehensive, funding levels are either inadequate or sporadic. In addition, expenditures of funds are heavily relied upon for meeting the individual crisis rather than overall community health priorities. All treatment is on a contract basis with local health care providers.

**State and Local Government and Agencies-**Residents of the Bay Mills reservation are also residents of the State of Michigan, Chippewa county and the townships of Bay Mills and Superior. As citizens and residents, they participate in the health care systems operated by the state, county, township and school district.

County-Services include on-site clinics, primarily for testing, screening and shots, the county mental health service, now part of an Eastern U.P. regional mental health system, the Women, Infants, and Childrens nutrition program and a well-baby nurse. A nutrition aide is also funded by the county co-op extension service for the reservation. Additional service is provided by a visiting nurse who serves all of Bay Mills township, including the reservation.

Township-Bay Mills township provides a volunteer ambulance service which the reservation participates in and utilizes.

State of Michigan-A contract arrangement with the state is being worked out to provide for confinement and treatment in state mental hospitals.

### **Department of Social Services (DSS)**

While DSS provides the usual services to Bay Mills, Medicare, Medicaid and emergency health care costs, it also funds a special representative to Bay Mills to deal with the Bay Mills population health costs.

### **School**

The Brimley school system provides routine medical screening, some counseling and regular health and safety education.

### **Location of Facilities and Personnel**

Indian Health Service has 2 Community Health Representatives on site and has recently opened an office in the Sault. The closest hospitals, doctors and dentists are in the Sault, 20 miles from Bay Mills, as are the Department of Social Services office. The ambulance service is approximately five miles from Bay Mills, as is the school. Clinics and nurses visits are usually held on the reservation.

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### **Problem Statement**

While existing facilities and services for health care may be remote and less than desired, the facilities and services that do exist are not well used, particularly for preventative health care. The tendency is to allow a health problem to reach the crisis stage before seeking attention. At that point the situation requires costly and extensive attention, when it could have been averted by inexpensive preventative care.

#### **At Bay Mills:**

- 75% of children have never had diabetic urinalysis;
- 87% of total population have not had TB test;
- 52% of the women have not had a pap test; and
- 47% of adult population has not had a yearly physical.

Another example of the failure of preventive measures is the high death rate due to "accidental" causes. Over 35% of all deaths over the last ten years has been for other than natural causes. The victims are primarily the young members of the community. Though accidents are, at Bay Mills, as for Indians nationwide, the number one cause of deaths, among the whole population of the United States, accidents are only number four.

All this contributes to the low life expectancy of the average Bay Mills resident. Average age at death is 45 years for women and 47 years for men. This compares to about 67 years for males, 74 years for females nationally. However, a close examination of the mortality statistics tells us something about life at Bay Mills. Though no one situation can be said to be typical, young males tend to die violently; people die in their late 40's because of hard living. People over 60 years tend to die from illness and old age. Combining the first two categories, males die before females at a rate of almost three to one. The most significant cause revealed by surveys, interviews and examination of death records, is alcohol.

#### **Alcohol and Drugs**

The most frequently cited problem of all problems on the reservation was alcohol and drugs. Whether viewed from a medical, social, economic, law enforcement or psychological perspective or from the point of view of a relative, parent or friend, the problem of substance abuse is of paramount concern.

There has, in modern history, been a problem with alcohol among many, but not all Indian communities. Used in the past as a tool to help fleece the Indian of land and culture, alcohol still serves to rob the Indian and many others, of their most basic rights to health and well being. Alcohol is a major factor in many areas of concern.

Heart, liver and kidney stress, aggravation of pre-diabetic conditions, of dental problems and of



obesity can all be attributed to alcohol abuse. Alcohol is also involved in the majority of accidental deaths in the last ten years. Those costs must be figured into losses to the community and the families of the individuals involved. The loss to the community is multiple. As workers and as citizens, the productive abilities of too many people are lost or impaired by the use of alcohol. Early death, lost time or poor work attendance, and diminished job capacity are all effects of alcohol abuse.

The combination of alcohol and driving poses a danger not just to the individual who drinks but to anyone around them. Family costs are even higher. Loss of family income, domestic strife and the passing on of drinking habits from one generation to the next all serve to perpetuate the cycle.

Though there have been many efforts to deal with alcohol at Bay Mills, none have shown a very high success rate. Counseling, church programs, alcoholics Anonymous, half-way houses, all have had only limited success. There is in most approaches to alcohol, a strong note of moral judgment about the substance abuser, rather than looking at alcohol/drug problems the same way one would approach any other medical problem.

### **Diabetes**

There is a strong demonstrated correlation between alcohol and another chronic problem at Bay Mills, diabetes. Though there is much speculation as to the exact causes of diabetes, the relationship between diabetes, alcohol and obesity is well established. This diabetes syndrome is in the genetic background of over 70% of Bay Mills Community members. With careful attention to diet and nutritional intake, especially sugars and alcohol, diabetes can be averted, or its negative effects curtailed.

### **Emergency Care**

Over 50% of Bay Mills households have had occasion in the last year to use emergency room services. A community whose health situation is "crises oriented" must depend on emergency medical care. Yet, knowledge of emergency first aid is limited and despite the availability of ambulance service, it is a 20 minute trip to the emergency room in Sault Ste. Marie, assuming prompt arrival of the ambulance.

### **Dental**

The dental situation is also critical. Over 40% of households have had teeth extracted in the last year. The very high number of extractions and dental emergencies relate to the lack of adequate preventative care. Yet Indian Health does not routinely cover preventative dental care. It is likely that the problem has causes related to both dental hygiene and diet.

### **Emotional and Mental Problems**

In the area of counseling, Bay Mills shares in the general paucity of the Eastern Upper Peninsula. Counseling for personal, emotional or family stresses is not widely sought out, due in no small part to the lack of easy access. Though some forms of counseling would be difficult to carry out in such a small community, other methods for conflict resolution and value clarification could be well adapted to the Bay Mills situation. Indian Health, however, does not pay for routine counseling.

A serious problem exists for the Bay Mills Community regarding treatment of those individuals with emotional or mental disorders who must be involuntarily committed to a mental institution. Due to jurisdictional disputes between the state and tribal courts, difficulty is encountered in the utilization of state treatment facilities. No other means exists for such treatment that is readily available to the community. While there is some question as to the effectiveness of such facilities, consideration of appropriate treatment is beyond the scope of these planning efforts. In those instances where treatment does not succeed, or is not available, the individuals are returned to the community. While the community is probably the most supportive environment, lack of treatment leaves the affected individuals without a therapeutic means of resolving their difficulties. It is tragic that these community members should be denied their right to full enjoyment of their capabilities, due to the inaccessibility of existing facilities.

### **Nutrition**

Nutrition is an important aspect of preventive health maintenance. Almost 50% of households report someone with weight problems and nutrition is a major factor in prevention and treatment of many of Bay Mills health problems, such as diabetes, dental and alcoholism. Due to the Women Infants Children (WIC) Program (nutrition for women with infants or children) and the efforts of the nutrition aide through the county cooperative extension program, many of the traditional gaps in nutritional education are being filled. Those positive efforts run head on into the high cost of food. Over 80% of the households surveyed report reduction in food expenditures due to high costs.

### **Insurance**

Although the Indian Health Division provides for many of the health and safety programs at Bay Mills, there seems to be a demand for additional health insurance. Currently, less than 25% of community households are covered by some form of private or group health insurance. This is due to low income and few jobs that offer insurance. Though not anticipating a replacement of Indian Health Services, the overwhelming favorable response implies the existence of a perceived need for health insurance.

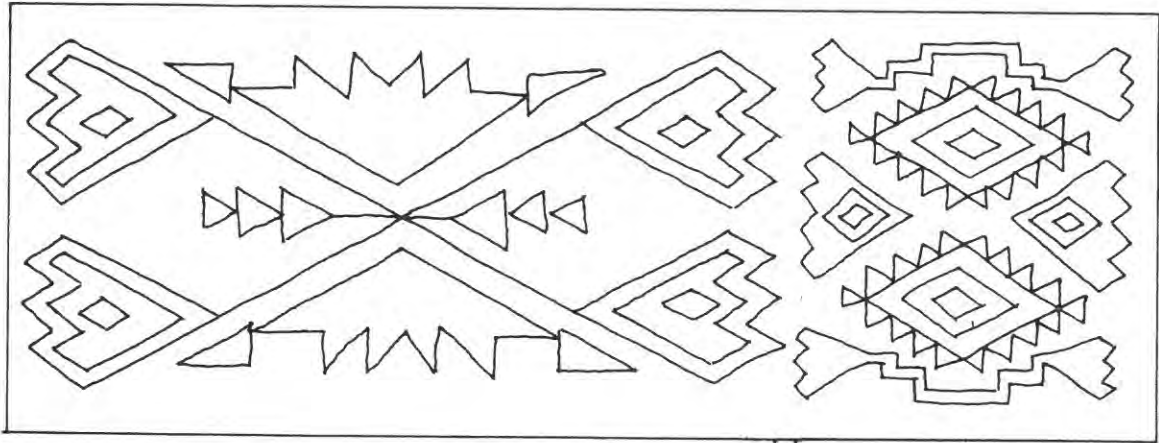
### **GOALS**

- Appropriate preventative actions to meet needs of priority health care concerns.
- Enhance capacity of Bay Mills health care personnel.
- Coordinate activities of off reservation health care providers to meet reservation health care priorities.

### **OBJECTIVES**

- **Increased health and safety education.**  
This education is for both adults and children to acquaint them with fundamental preventative measures for alcohol and drug problems, "accidental" death, high blood pressure, diabetes, obesity, family planning and emotional stress.

- **Identification and follow-up for care of existing or incipient conditions.**  
Screening of total population should serve to locate those with major potential, to be accomplished through a flexible program of clinics, home visits or in conjunction with school or place of employment. Follow-up includes participation in health education, self-monitoring, health maintenance programs, both individual and group, and regular professional evaluation.
  
- **Establishment of permanent medical files.**  
Should include base line profile, results of all health exams, tribal medical expenditures, participation in educational activities, health maintenance programs and monitoring and follow-up schedule.
  
- **Increase opportunities for upgrading of skills of health care personnel.**  
As part of job description and using tribal educational resources for support, provide options whereby tribal health personnel can obtain additional training related to job.
  
- **Provide some emergency medical equipment and training for immediate first aid.**  
While primary responsibility for emergency health care remains with the ambulance crew, provision of oxygen and CPR training could allow more immediate relief to be administered by health care personnel on the scene.
  
- **Work with Indian Health Service to affect policy changes covering problem areas in dental and emotional/mental areas.**  
Comprehensive health care for Bay Mills under IHS does not include routine procedures for preventative measures regarding dental or emotional/mental areas, or custodial treatment for emotional/mental disturbance. Neglect in these areas has caused them to become health care priorities. IHS services should cover these tribal priorities, especially as they are shared by many other Indian Communities.
  
- **Investigate feasibility of group health insurance.**  
The expressed desire to participate in such a program indicates a need. Whether or not such a program is feasible would have to be related to specific needs of Bay Mills.
  
- **Increase participation in larger health care planning efforts.**  
Such participation could serve several purposes, including continuing technical assistance for Bay Mills health care, providing better knowledge of existing facilities, input on development of new facilities or programs, and affecting priorities as to where increased efforts might be directed.



LEGAL SYSTEM



## **Introduction**

Because Bay Mills is a relatively sovereign community, it has the freedom and the responsibility to work according to rules it sets for itself. While the community must share jurisdiction on some serious felonies, the responsibility for the day to day upholding of community policy falls upon the law enforcement and judicial systems of the community.

Responsibility for adjudication of disputed matters is currently fragmented. Though Tribal Court has broad authority, responsibility is fragmented for such serious issues as violation of conservation code, land use conflicts and many other areas involving disputed distribution of tribal resources. Because there is no clear remedy for these disputes, they get worse and disrupt the orderly operation of tribal affairs. Continuing to allow any individual or group to flaunt the authority of the community lessens the respect and ability of the community to administer its resources for the good of all.

The recently adopted tribal code is designed to achieve the goals of self government by handling provisions for a tribal court system, a police department and a set of rules of conduct. The following activities derive from a review of the workings of the tribal code. Tribal Court is outlined and operations reviewed, as well as a look at the feasibility of an Indian Judge. Several problem areas are covered in detail, and the enforcement arm of the community is detailed. Recommendations include personnel and policy action as well as several administrative suggestions. Other related material is in the land use and housing sections.

## **Tribal Court**

The existing Tribal Court System was established in 1976 to provide the community with a self-sufficient, convenient and fair means of handling legal disputes (both civil and criminal) that occur on the reservation. The actual need for the Tribal Court stems from the fact that the Michigan State Courts have no jurisdiction on the reservation and the federal courts are neither available to, nor effective with the community. Jurisdiction for the present Tribal Court system is derived from the Tribal Code of March 8, 1976. This code replaces federal regulation code CFR 25.

Except for the fact that the Tribal Court is operated in a relatively informal manner, there are few differences between the Tribal Court and the State Courts.

Although the Tribal Court system (and activities related to it) has operated quite smoothly to this point, there are rough spots in the system. As with any organization of such importance and complexity, its first year has been plagued with obstacles that must be overcome if the Tribal Court is to develop into an efficient social service. A serious problem exists regarding the recognition of Tribal Court orders, especially in the area of involuntary commitment for mental disorders. Although Tribal Court has jurisdiction for the commitment of reservation residents for acts committed on the reservation, the state hospitals responsible for the care of such individuals are reluctant to honor commitment orders for such individuals. Because of this reluctance, and because there is no Indian institution for custodial treatment of disturbed individuals, the community sees no easy resolve of this problem.

Additional conflicts exist with support personnel for the court. A prosecutor who is familiar with court procedures should be available to prevent the conflict of interest encountered by the

existing Tribal Attorney. Because there is no formal courtroom available for use by the Tribal Court, an office in the Tribal Center is used, temporarily evicting its regular occupant.

Even though the number of cases is relatively small, the disadvantages of this situation are apparent. Inconvenience to the judge, court personnel, the public and the Tribal Center personnel hinders the efficient operation of the Tribal Court. The Court also lacks standard office equipment such as filing cabinets, bookcases, a tape recorder and other items necessary for the arrangement of court case material.

### **Indian Judge**

Although the attitude of the general public toward an Indian Tribal Judge is not known, a survey of people now employed in the Tribal Court indicated a preference for an Indian judge.

The most beneficial effect of an Indian tribal judge would be that an Indian (particularly a community member) would be more familiar with the individual situations of the community members and would therefore have the insight to make fair and prudent judgments. The most significant disadvantage to having an Indian Tribal Judge from the community is that family bias (or at least the accusation of bias) might become an issue because of small size of the Bay Mills Indian Community.

William James, a non Indian, was elected to the position of Tribal Judge in the fall of 1975 and is funded under Law Enforcement Assistance Administration. Mr. James, who is a practicing attorney, is also the director of Upper Peninsula Legal Service in Sault Ste. Marie, Michigan.

Quick access to a judge is also necessary for such duties as signing of warrants. This is rendered difficult by his inaccessibility and busy schedule. Such options as a three judge panel have been explored to insure ready access to judicial review.

### **Probation System**

At present the Tribal Court System has no provision for a probation program. The two main courses of action for the Tribal Court are either a complete dismissal or incarceration. There is a need for some type of intermediate action. This holds particularly true for juvenile offenders because imprisonment is usually too harsh a punishment. Rehabilitation programs are also lacking in the current court system. The community preference for dealing with juvenile offenders is to tie in with the efforts of the parents. The community currently lacks the resources to carry through on its preference. Also desirable is some form of model juvenile code to add direction to efforts at handling juvenile offenders.

### **Divorce**

The jurisdiction of the Tribal Court extends to granting judgments in divorce cases for community residents. This function of the Tribal Court is subject to abuse. Divorce cases are sometimes filed and dropped within a matter of days. The same people repeatedly file and drop divorce actions creating a large amount of paper work.

Another problem associated with this activity is that occasionally a couple will file for divorce, reach a reconciliation and neglect to inform the court that they wish to stop proceedings.

### **Counsel for Indigents**

As previously mentioned, the Tribal Court operates in a relatively informal manner. Because of this, legal counsel is not always necessary for civil court cases. There is, however, a definite need for legal representation in criminal cases. Because the Bay Mills Tribal Court does not provide a defense attorney, the accused must secure council. This entails quite a financial burden for anyone and imposes a real obstacle to the right of an indigent person to receive fair representation. At present there are no Tribal resources for representation of individuals in criminal cases. An indigent person can obtain an attorney from U.P. Legal Service for representation in civil cases. If this action is taken the only fees that Upper Peninsula Legal Services would require the indigent defendant to pay is filing costs, court costs, etc. This does not present a major problem, because according to the Tribal code, these fees can be waived or suspended for indigent persons. The one fee that would be in question is the \$10 admission fee for an attorney to practice on the reservation.

The major obstacle to using Upper Peninsula Legal Services currently is that William James who is Tribal Judge is also the Director of Upper Peninsula Legal Services and therefore would be disqualified from judging the case.

### **Tribal Police**

The Tribal Police Force is composed of four officers, a sufficient number for the maintenance of public peace and order, enforcement of laws, and prevention and detection of crime on the reservation. The Police Force receives extensive training in law enforcement procedures and techniques at a Bureau of Indian Affairs Training School. Unfortunately, the State of Michigan does not recognize that training as valid.

A lack of professional equipment and facilities hampers the organization's efficiency. The present Police Headquarters is located in one room of the Tribal Center and has no secure storage room or holding cell. A secure storage room is necessary for storage of evidence to be brought before the court and storage of firearms, ammunition and other police equipment. When the need for a holding cell occurs one is rented at the Chippewa County Jail in Sault Ste. Marie. Regretably, using the county's facilities requires a 20 mile trip (one way), which monopolizes the use of the only available police cruiser.

In spite of the fact that having a holding cell on the reservation would be convenient and might give the police more flexibility (particularly with the occasional drunk or vagrant), its expense in terms of initial construction costs and additional staffing for guarding it could prove to be prohibitive.

The most common offenses committed on the reservation are alcohol related or driving violations. The Tribal Police have neither a breath analyzer nor a radar gun. This equipment could be borrowed from the State Police in Sault Ste. Marie, but the 20 mile ride is a considerable inconvenience.

Some current responsibilities related to police work require upgrading. Such routine maintenance functions as vehicle upkeep and police insurance have fallen into confusion. The routinization of such functions is desirable.

Another problem that will occur soon is the cutback of funding for the police program as the existing grant expires. It is desirable for the community to secure permanent funding for police positions.

## **GOALS**

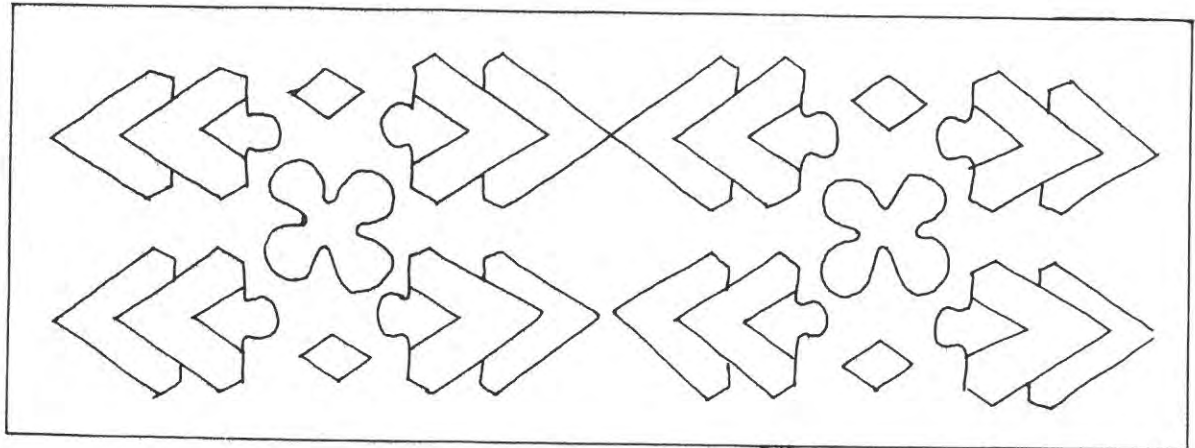
- Resolve jurisdiction of Tribal Court.
- Insure appropriate personnel for judicial and enforcement activities.
- Develop more options in dealing with offenders.
- Provide adequate facilities for judicial and enforcement activities.

## **OBJECTIVES**

- **Secure and equip a court room.**  
A room in Tribal Headquarters should be designated permanently as a court room, with necessary equipment such as chairs and tables, files, and recording equipment for accurate records.
- **Seek final resolution of jurisdiction of Tribal Court.**  
Legal decisions must be clarified regarding the jurisdictions of Tribal Court so as to provide a comprehensive means for expressing the community will regarding self regulation of the reservation and its members. Decision must be reached in such a fashion as to interlock with local, state and federal systems for adjudication, enforcement, rehabilitation and treatment.
- **Investigate possibilities of having an Indian Judge.**  
Such investigation should include investigation of community attitudes, survey of the success of other reservations with Indian judges and clarification of legal aspects of such a course of action.
- **Explore options regarding ready access to a Tribal Judge.**  
Such options could include elevation of role of magistrate, use of more than one judge or selection of a judge from the immediate area.
- **Develop a permanent position for prosecutor.**  
While not necessarily a full time position, someone with appropriate training in law and Tribal Court procedures should be appointed to handle prosecution duties for the community.
- **Make arrangements to provide counsel for indigents in criminal matters.**  
Such arrangements could include volunteer counsel, payment by the community or an alteration in the arrangement with U.P. Legal Services.



- **Secure permanent funding for police.**  
To insure the maintenance of the community's police personnel, approach BIA to permanently fund police costs, including personnel, equipment and upkeep.
- **Arrange for services of a probation officer.**  
Services should be primarily for young offenders, to include recreation and rehabilitation activities. It is not expected that this person should work full time on the reservation. This person should be professionally trained, although counterpart training for a community member might be arranged.
- **Adopt a model juvenile code.**  
Such a code should assist the count in developing a flexible but consistent range of options in dealing with juvenile offenders.
- **Make more deliberate activities necessary for divorce.**  
Such activities are not designed to make divorce more difficult but to insure serious intent. Activities recommended include a mandatory waiting period, a more expensive filing fee and requiring people to fill out their own paper work related to the initial filing for divorce.
- **Provide appropriate equipment for police.**  
Since alcohol related and traffic offenses are dominant offenses dealt with by police, purchase and get training in use of appropriate equipment for detection of such offenses.
- **Provide adequate security and protection of police resources.**  
Two major categories of security are required: personnel and property. Personnel should be protected with appropriate insurance, such as work related injury, false arrest etc. Property protection includes police equipment (guns, forms, emergency gear) and property held as evidence for court. This property should be protected in a secure storage room, exclusively accessible to police and appropriate court personnel.
- **Secure recognition of Bay Mills Police by State of Michigan.**  
Investigate what is necessary to secure recognition by State of Michigan for Bay Mills Police, as part of an interlocking law enforcement system.



SUGAR ISLAND

## **Introduction**

The Sugar Island property, while a part of the Bay Mills Reservation, has not sustained a level of development comparable to the rest of the reservation. It is the intent of Bay Mills to assist in the remedy of that situation. There are difficulties associated with maintaining a close working relation with a portion of the community physically distant from the main reservation, but if Sugar Island is to receive its rightful share of services, Bay Mills must and will make that effort.

The recent positive responses by Sugar Island people to the overtures by Bay Mills simply reaffirms the historical unity of the Eastern Upper Peninsula Indian Community. As the native peoples of the area continue the long task of development, Bay Mills, historical center of that struggle, will work to insure that all those rightfully entitled to benefits will receive them.

The inclusion of Sugar Island in the Bay Mills plan is another positive step in the process of bringing Sugar Island into full participation as part of the larger Bay Mills Community. This profile and plan for Sugar Island includes property description and history, a brief demographic section and a general land use statement. A review is also made of the situation for housing, economic development, transportation, recreation, health, education, protective services and relationship to tribal government. As the data collected is modest in its coverage, so too are the recommendations that follow. They are not detailed, instead indicating a general direction for further deliberations between potential populations.

### **Property Description and History**

Part of the Bay Mills Reservation is a segment of land in the southwest portion of Sugar Island. The land is directly on the channel of the St. Mary's River, across from the southern portion of Sault Ste. Marie, Michigan. The island itself is accessible only by ferry boat.

As a matter of convenience, from this point on, the phrase "The Island" will be used for Sugar Island in its entirety and the phrase "The Reserve" will be used to mean the property belonging to Bay Mills.

The Sugar Island Reserve was purchased by the United States under the Bay Mills Expandable Land Acquisition Program of 1937 for the Indians living on the Island at that time. It embraces a total of 607.75 acres located in Sections 5, 6, 7 and 8. Township 46 North, Range 2 East, Chippewa County, Michigan.

The land held by Bay Mills is a portion of the 28,000 acres set aside by the Treaty of 1836. It was originally selected by the Garden River Band of Pia-be-daw-sung in 1858 but by 1860 was one of two sites selected for use by all the Sault Bands. At that time many people displaced by the treaties moved there, where they farmed and fished. The purchase of this particular parcel of land seems to have been made as a matter of convenience rather than because of any unique quality of the land.

Between 1900 and 1920 the Island supported a relatively large population. It is estimated that at one time as many as 5000 Indians inhabited Sugar Island. Most were farming in the northern and central portions of the Island. The population has declined steadily, particularly between 1950 and 1960 when the population dropped over 30%. There does not appear to be any single factor to

account for this drop. One reason for the decline is a lack of job opportunities. This is particularly true for dredgemen, who made up a large portion of the Indian skilled labor force.

Other factors that should be mentioned include the drop in profitability realized by the small scale farmer, the cost and inconvenience of the ferry, and the severe lack of adequate housing available on the island.

### **Demographics**

At present, the entire permanent population of the island is estimated at approximately 350 people of which about 250 are registered voters. The summer population has remained stable over the years at about 3,000 people. The seasonal residents come from as close as Sault Ste. Marie and as far away as Chicago.

There are three people living on the Reserve year round and approximately 20 summer residents who live in Sault Ste. Marie the rest of the year. To a large extent, the reasons for the low population on the Reserve parallel those of the rest of the island; mainly, lack of adequate housing, limited job opportunities and the expense and inconvenience of using the ferry on a daily basis.

The three year round residents are senior citizens or are disabled and live on social security and/or pension. This is also true of most of the seasonal residents on the Reserve.

Although some of the residents are affiliated with the Bay Mills Indian Community by the 1937 Tribal Roll, most are not. Those not part of Bay Mills now, indicated that they would be willing to become members if they could be adopted.

### **Land Use**

The topography of the Reserve is generally level and regular with less than 30 feet difference in elevation in one mile. Soil is generally a sandy loam which tends to be rocky. This area also has a very high water table which causes some surface water in the spring. Although much of the land could provide adequate foundation for conventional housing, this high water table would present problems in some areas of the Reserve. An important aspect of the topography that could help alleviate the high water table problem is on-site fill which is readily available.

The principal land use is 577 acres of second growth, mostly aspen, mixed hardwoods, balsam and spruce. Approximately ten acres is taken up with residential use, exclusively along the road. Approximately 20 acres are on the shoreline but undeveloped. The lack of development is in large part due to the low and marshy nature of the terrain.

Other land uses are the site of the former community building (now destroyed), and a road.

### **Housing**

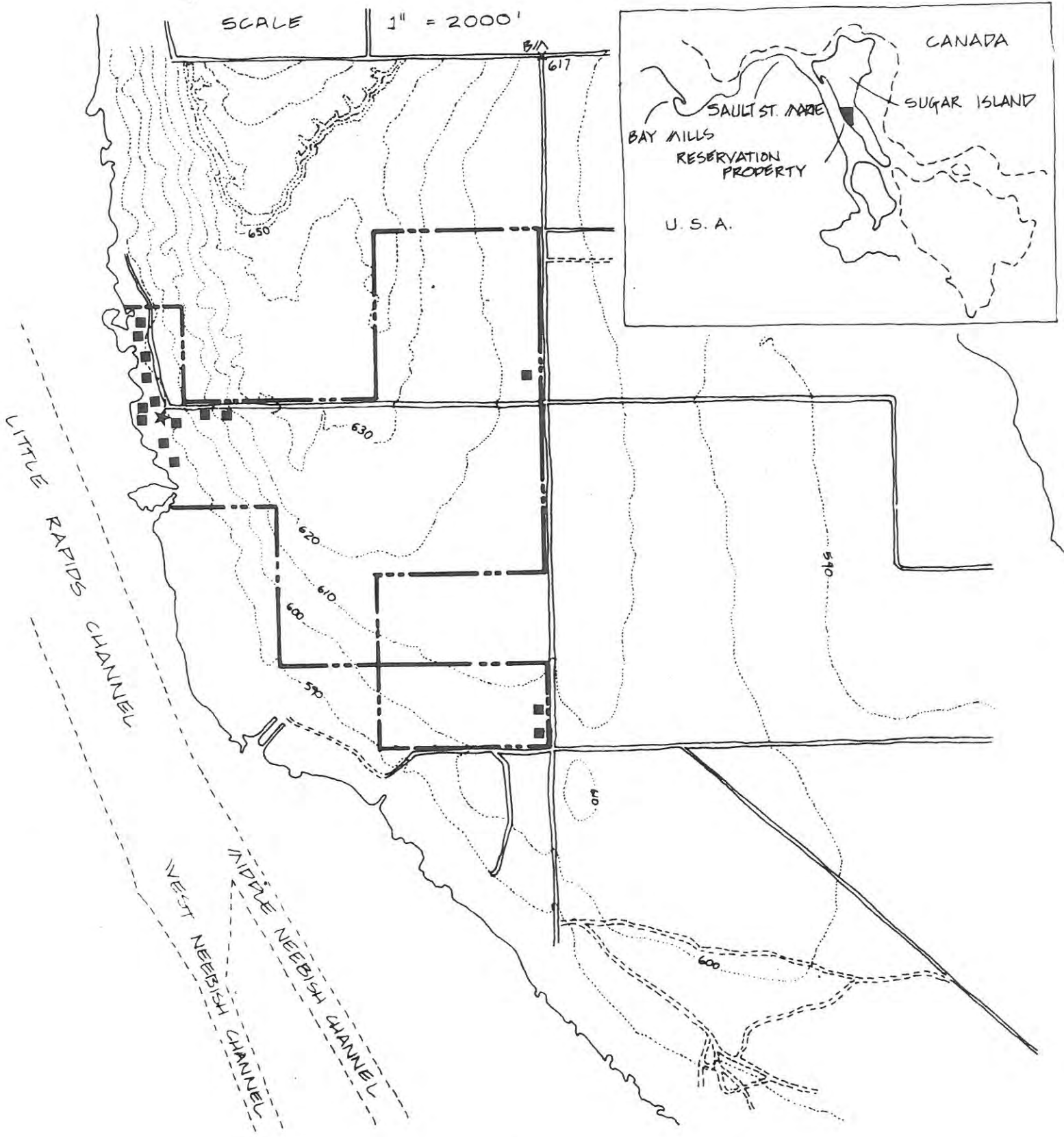
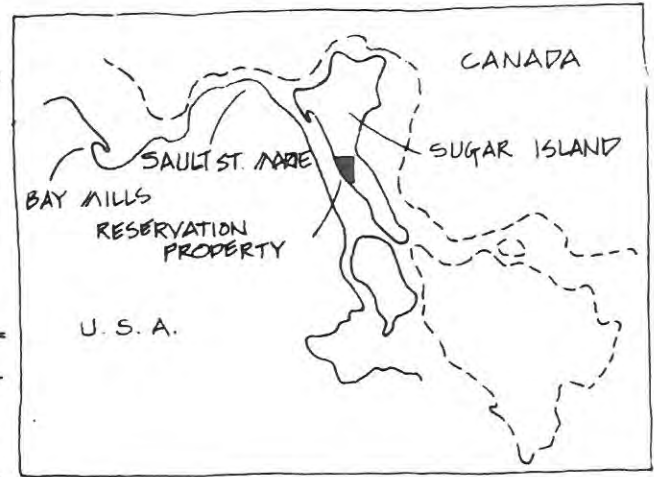
Housing is probably the key element in any consideration regarding Sugar Island. The existing housing is in no way adequate for the need, in terms of either number or condition.

There are fifteen residential units on the Reserve, three of which are trailers. All but three units are seasonal. The quality of both permanent and summer housing is rather primitive. All the units are



# SUGAR ISLAND RESERVATION LAND

SCALE 1" = 2000'

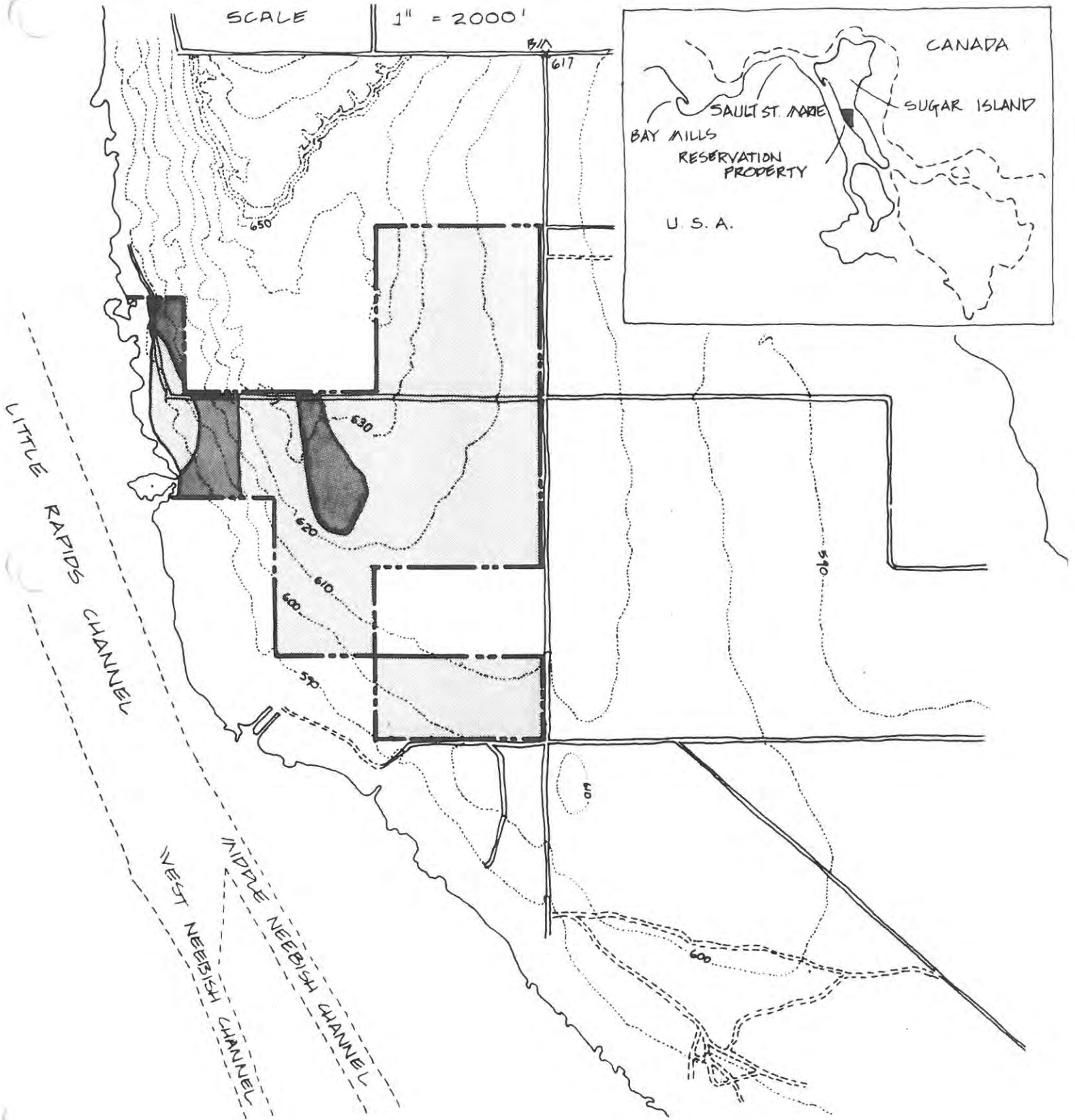
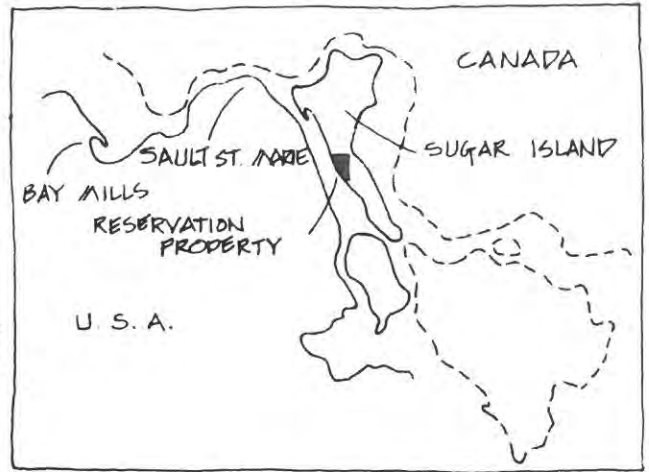


## EXISTING LAND USE

- RESIDENTIAL
- ★ HISTORICAL  
(SITE OF CAMP BAIE DE VASAI)

# SUGAR ISLAND RESERVATION LAND

SCALE 1" = 2000'

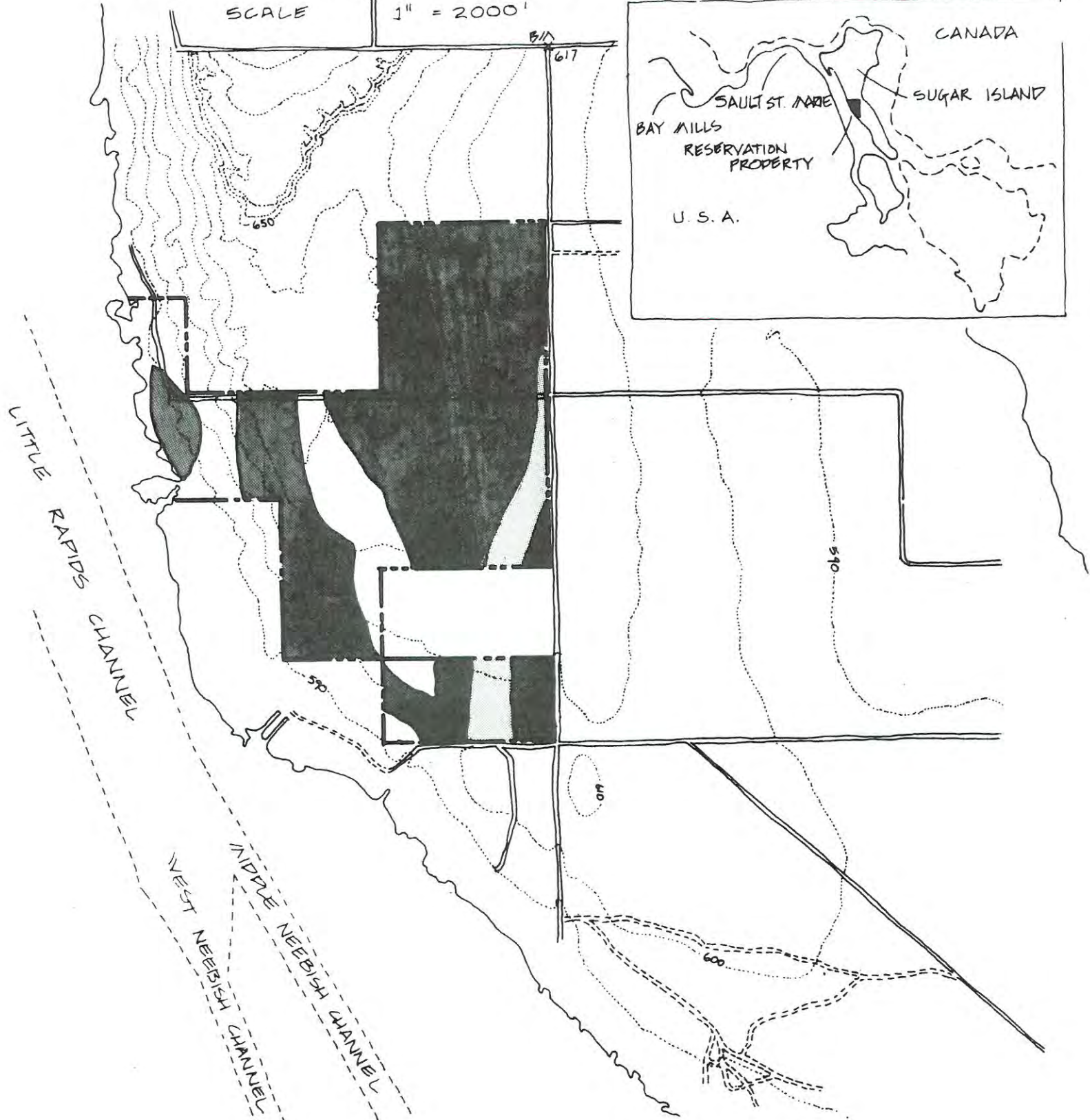
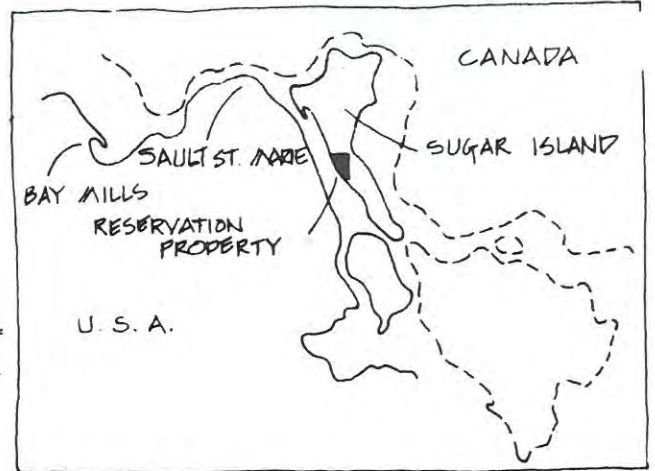


**SOIL SUITABILITY**  
FOR SEPTICS, DWELLINGS, SMALL BUILDINGS  
AND ROADS  
LIMITATIONS:




- SLIGHT
- SEVERE

# SUGAR ISLAND RESERVATION LAND

SCALE 1" = 2000'

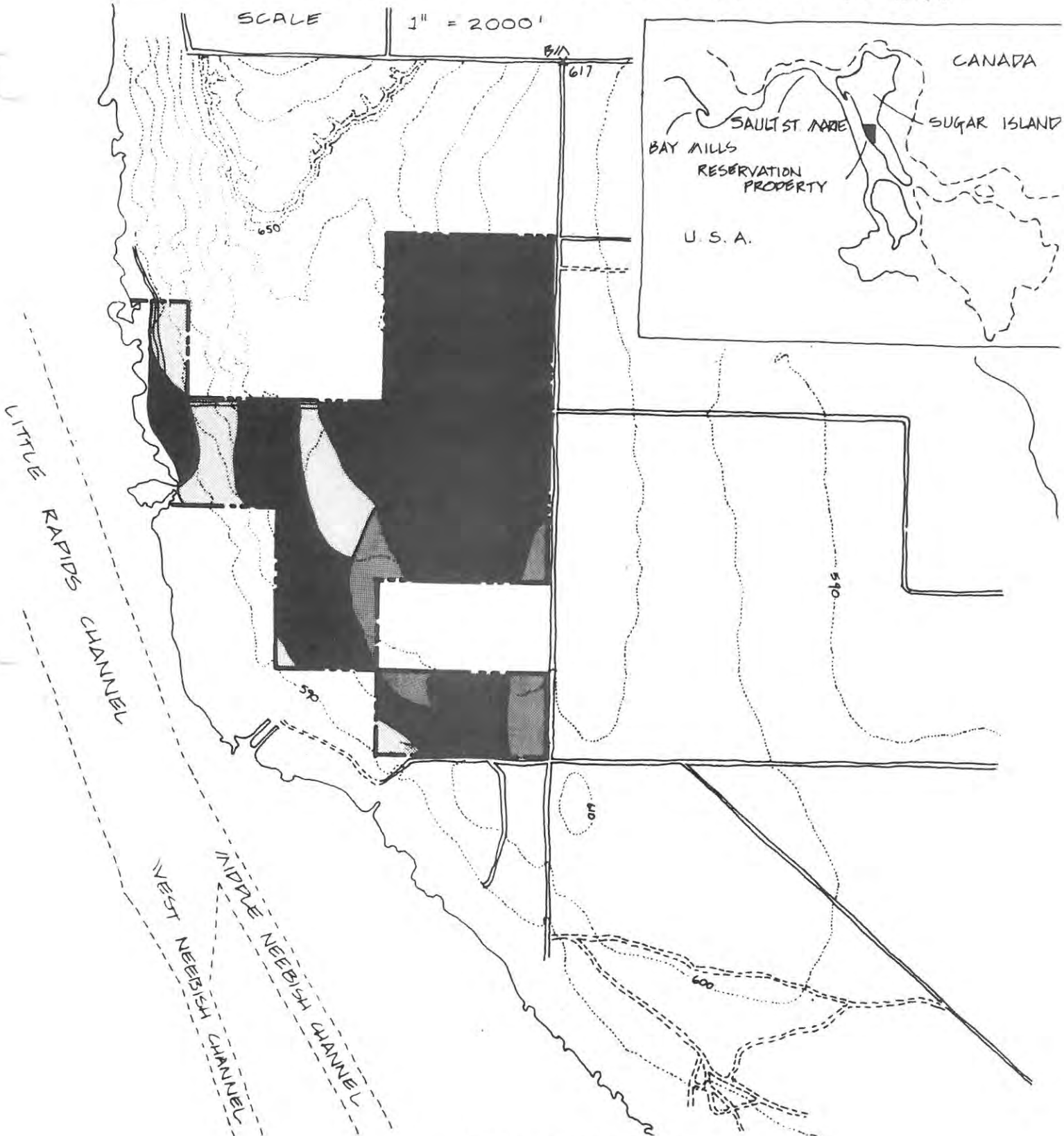
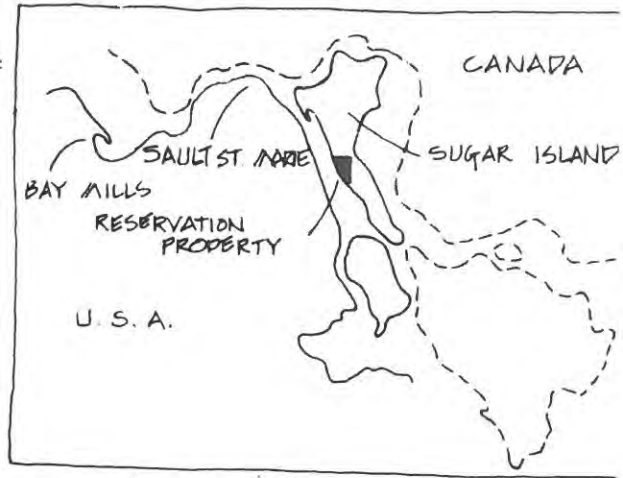


## FLOODING FREQUENCY

	OFTEN	NOV - MAY
	BRIEF	DEC - MAY
	RARE	RARE

# SUGAR ISLAND RESERVATION LAND

SCALE 1" = 2000'



## WATER TABLE

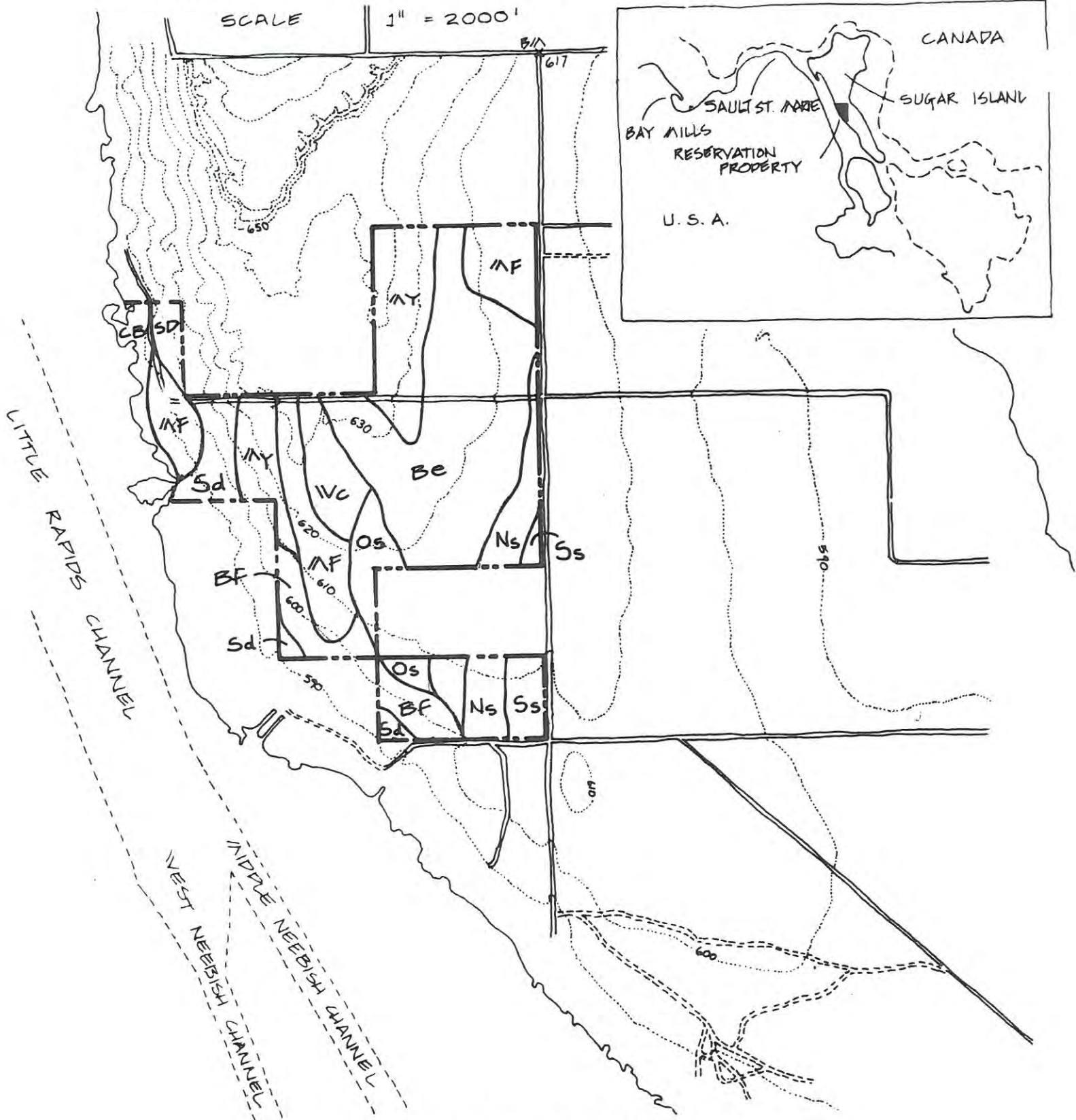
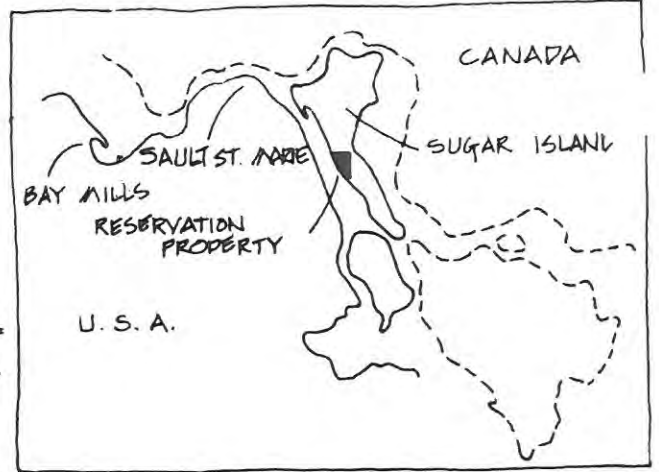
FEET	APPARENT
0' to -1.0'	6 - 8 MONTHS
0' to -2.0'	6 - 8 MONTHS
-6.0'	8 - 12 MONTHS



# SUGAR ISLAND RESERVATION LAND

SCALE

1" = 2000'



## EXISTING SOILS

MF MUNUSCONG  
 BE BERGLAND  
 MY MUNUSCONG  
 NS NEWTON  
 SS SAUGUTUCK  
 OS OGEINAW

Sd SHELLDRAKE  
 CB COASTAL BEACH  
 BF BRUCE

quite small and in relatively poor condition overall. Most are heated with wood stoves, though some use bottle gas or fuel oil.

Public utilities, except natural gas, are available throughout the island. These include electricity, telephone, bottle gas and fuel oil. Approximately half of the homes on the Reserve have electricity but only one home has a telephone at this time.

No community water or sewer system is available on the island. Most of the Reserve residents must travel six miles to the Catholic Church for drinking water. Often, water is simply taken straight from the river and the flavor disguised with coffee, tea or kool aid.

None of the homes on the Reserve have indoor plumbing, though some of the area has soil suitable for septic. There would appear to be little difficulty involved in obtaining water from wells.

Many people have indicated an interest in living full time on Sugar Island if adequate housing were available. An initial feeler by Bay Mills regarding possible development of homes on the Reserve drew a very favorable response from both seasonal and permanent residents. Much interest was also shown by non reservation Indians, some of whom live on the island now and others who had lived on the island but have moved to Sault Ste. Marie. Much of the enthusiasm for this project came from younger working couples although the majority responding were older or disabled.

Although site specifications would be necessary, a review of general soil condition and accessibility reveals adequate sites for up to 15 new homes.

### **Economic Development**

The job market on Sugar Island is bleak. None of the permanent residents work, being either retired or disabled. Seasonal people work in Sault Ste. Marie. There is no major source of employment on the island. It is primarily an isolated area with a few summer homes. Though lacking in most development features, the limited access of the island and natural beauty of the area make a tourist campground a possibility. (See tourism in the economic development section). Rather than proposing economic development on the reservation land, beyond recreational development, future job opportunities would be expected to be found in Sault Ste. Marie.

### **Transportation**

The transportation situation on the island is adequate. The roads that run for 5.2 miles between the ferry dock and the Reserve consist of both hard surfaced roads and gravel roads. Although in many areas these roads are in need of repair, they are easily passable throughout the year. The 1.76 lineal miles of gravel roads on the Reserve are equally passable. The 1.25 lineal miles of hard surfaced road on the Reserve are in excellent condition.

The Chippewa County Road Commission handles the snow removal and maintenance of the Reserve roads.

Existing transportation for school age children to and from school in Sault Ste. Marie is now provided throughout the island and could be arranged for children on the Reserve.

The only way to reach the island is by ferry boat. The ferry has been in existence in one form or another since about 1900. Prior to that a wooden footbridge existed between the island and the mainland. In the winter, ice on the channel made the mainland easily accessible by horse and sleigh. Around 1900 the Corps of Engineers made the cut presently used for shipping and the footbridge was removed. Because of the residents of the island did not pay a tax that was assessed against them for the bridge, they lost any rights to block its removal for construction of the shipping channel.

The present ferry has been in operation for approximately 30 years.

Though the absence of easy access to the island hampers its development, the tranquility resulting from the Reserve's isolation is very much enjoyed by its current inhabitants.

Because the people on the Reserve conduct most of their business on the mainland (i.e. work, shop, school, etc.) the ferry is rather inconvenient. It leaves the island hourly in the winter and every half hour in the summer. It is fairly dependable, running all but two days last winter. The main drawback is the expense involved. The current fare is \$1.25 for auto and driver and \$.50 for each passenger. Slightly reduced rates can be obtained by purchasing tickets in quantity.

The future dependability of the ferry is in question because of navigational problems which may be caused by the extended shipping season. When the shipping is continued through the winter ice jams result in the river where the ferry crosses. It has been predicted that this problem will reach its peak in 1977-1978. No proposal has yet been developed to alleviate this forthcoming situation.

#### **Recreation**

Recreation opportunities on the Reserve are primarily unstructured and natural resource oriented, such as hunting, fishing, and social visiting. Younger seasonal residents may swim, though no provision or facilities exist beyond the simple presence of the river. While the current situation is not altogether unacceptable to the existing population, any future development will want to take into account recreational needs as an integrated part of development efforts.

#### **Health and Education**

Currently any health or education needs of Reserve residents are being met by facilities in the Soo. Participation is limited. In looking at future needs, several problems can be anticipated.

Education in the Soo will expose users to the range of services available in Sault Ste. Marie. Some problems can be expected to arise regarding distribution of tribal education resources. While per capita funds will be expected to follow the students, provision of counseling and tutoring services will present some difficulties due to the distances and limited populations involved.

Similar problems are expected to arise regarding distribution of health resources. Some health funds will follow users such as well and septic services and Indian Health payment for physician services. Other services will tend to cluster at Bay Mills, such as clinics, emergency services, trash collection and preventative programs.



Use of any vehicles or facilities will be limited by the distances involved. Sugar Island children can ride the school bus from the island to Sault Ste. Marie but any special transportation for tutoring, clinics or recreation would be difficult to justify for the size of projected population.

Access to the Soo is a redeeming feature of the Sugar Island Reserve. Because of services and facilities available in the Soo, contract arrangements would be more easily arranged, thereby reducing a major drain on Bay Mills resources. Future population growth will determine whether or not on-site health and education facilities are warranted.

#### **Protective Services-Police-Fire-Courts**

Jurisdiction over the Sugar Island Reserve area is the responsibility of the Bay Mills Community. Because of the distance and cost involved, services currently being utilized are those used by other Sugar Island residents. The reserve area is now occasionally patrolled by the constable from the Island or the State Police. There is a fire truck and an ambulance on the island. However, the staffing for each is voluntary, a situation compounded by lack of reliable communication between the Reserve and emergency personnel. An ambulance from Sault Ste. Marie is often used but the ferry, the distance, and faulty communications discourage speedy service.

With the possible complicating factor of jurisdiction, arrangements for this size population might be expected to follow the provision outlined in health and education. The legal arrangements are certain to be an area of great complexity and beyond the scope of this plan.

#### **Tribal Government**

The inclusion of Sugar Island as a part of the body politic of Bay Mills will be plagued by the same problems as are encountered with other services centered at Bay Mills proper. Lack of input and difficulty in acquiring feedback between the residents of Sugar Island Reserve and Tribal government are complicated by factors of kinship as well as distance.

If the residents of Sugar Island Reserve can organize themselves and make a unified presentation, they can likely succeed in the competition for the resources of the community. Active participation at Tribal meetings will keep Sugar Island Reserve residents abreast of the flow of community affairs. Special efforts by Tribal government to inform Sugar Island residents and inclusion of Sugar Island residents on all committees will help to integrate the residents of the Reserve into the daily life and decisions of the community.

### **SUGAR ISLAND**

#### **GOALS**

- Increase resident population on Sugar Island Reserve
- Increase participation of Sugar Island Reserve
- Raise level of development on Reserve



## OBJECTIVES

- **Housing.**

Identify sites suitable for residential use.

Plat, register and assign all existing and future home sites.

Secure funding for ten homes in next two years.

Secure funding for upgrading of existing homes, especially regarding heating, water supply and septic and inside plumbing.
- **Economic Development.**

Secure one full time position to serve as development director for activities on Sugar Island.

Explore feasibility of commercial recreational development on Reserve.
- **Transportation.**

Explore options on arrangements to lessen cost of ferry to full time residents of Reserve.
- **Recreation.**

Develop a small recreation facility for children in conjunction with housing development.

Explore options in Sault Ste. Marie regarding recreation opportunities for Reserve residents.

Explore options on Island regarding recreation opportunities.
- **Health, Education.**

Include Sugar Island representative on each committee which sets policy for distribution of health and education benefits.

Secure increased funding on per capita and overall basis to increase resources available for distribution for Sugar Island Reserve residents.

Informational program for Sugar Island Reserve residents regarding health and education programs.
- **Protective Services.**

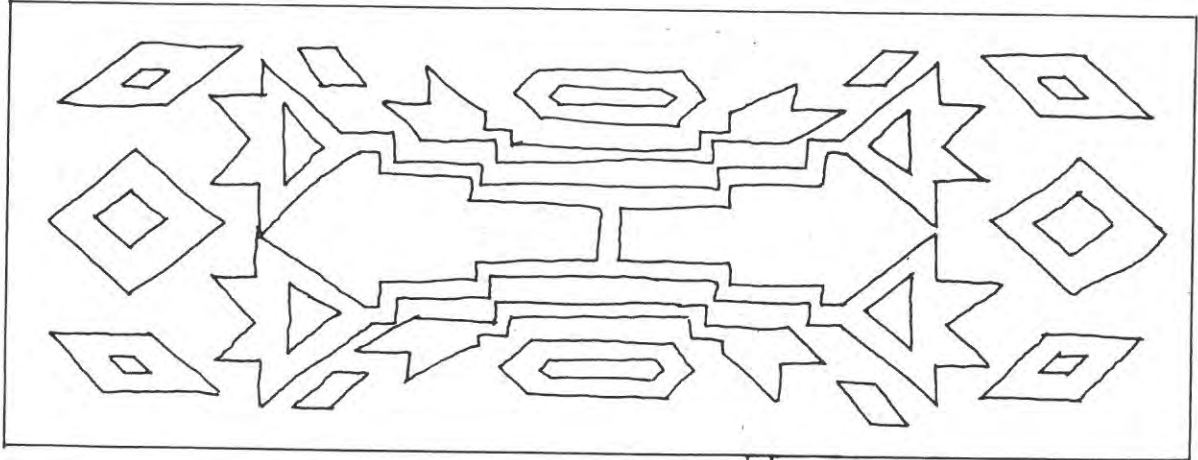
Explore contract options regarding provision of protective services to Sugar Island Reserve residents.

Get legal opinion on responsibilities and rights at Bay Mills and Sugar Island Reserve regarding jurisdictions.
- **Tribal Government.**

Include one representative from Sugar Island Reserve on each appropriate committee.

Extend distribution of newsletter to current and potential residents of Sugar Island Reserve.

Educational program for all Sugar Island Reserve current and potential residents regarding operations of Bay Mills Indian Community Tribal Government and programs.



TRIBAL GOVERNMENT.

## **Introduction**

In some ways, the tribal government of Bay Mills is like the government of any other small community. But in other ways it is a very different type of government with very different responsibilities. Bay Mills tribal government is like other small units of government in that it is the unit of government closest to the people of the community. Its actions are the most obvious. It is the first to hear complaints and it has the capacity to respond most quickly. It is the level of government most accessible to the people, which is good and bad. Good because it knows first hand of local problems. Bad because it is subject to intense personal politicking. These are factors common to all small units of government, in non-Indian as well as Indian communities. But Bay Mills tribal government is very different from non-Indian local governments in the level of responsibility it must carry.

The government of Bay Mills, with only limited financial and technical capabilities must carry a load that would ordinarily fall on the broader shoulders of a county or even state government. These heavy duties are subject to all the weaknesses of a small local unit of government, without the advantages enjoyed by larger administrative units. The consistency of this can be seen by comparison of Bay Mills, to other units of government that carry similar responsibilities with the same limited resources.

It is particularly important then, that residents of Bay Mills take a careful look at what they demand from their tribal government. A critical review must be tempered by the knowledge of the serious limitations inherent to this situation. Only through hard, realistic appraisal of the situation and tough judicious decisions can any administrative system be expected to perform to the high standards the community seems to demand.

This section will review the duties of tribal government and the financial resources with which the government has to meet those duties. Many of the administrative functions of a government are then examined in greater detail, such as planning, evaluation, record keeping, personnel, internal communication, personnel training and affirmative action. There is no discussion of the appropriateness of such an administrative load being legislatively placed on Bay Mills without full resources to support such activity. It is taken for granted that tribal government is seriously overburdened and that any suggestions as to low-level performance is not a reflection on the community or tribal government personnel, given the heavy load they must carry. The recommendations that follow are to ease the burden on the community and tribal government personnel, and aid them in doing a very difficult job.

## **PROBLEM STATEMENT**

### **Duties**

Bay Mills Tribal Government has total or partial responsibility for a broad range of services and facilities. Those areas include the management of all lands and natural resources, job development, protective services, including fire and police, utility services of water, sewage and

trash pickup, physical facilities including tribal headquarters, the new community building, the Head Start Building, the new fish processing plant, recreational facilities at Spectacle Lake and ball field, the farms, Raco and a transportation network.

Accountability is divided many ways. Responsibility is shared with Chippewa County, the Housing Authority, Inter-Tribal Council, Indian Health, Bay Mills and Superior Township, Brimley School District, many private contractors, Economic Development Administration, U.S. Department of Commerce, The Bureau of Indian Affairs and others. This scattered group of providers is made necessary by delegation of responsibility for many functions to a tribal government which is not provided the means to carry out those functions. Therefore, much of the service is provided by contract or further delegation of authority. Though most of the services are handled well, the fundamental principles of self-determination and accountability are sometimes lost in the flurry of decisions and forms that accompany all such contracts. Where a service is not provided as the community has decided, it is difficult to find where the real fault lies. It is easy enough to find someone to blame but sometimes difficult to truly assess responsibility.

Management and administrative responsibilities for many of the various programs also fall to tribal government. Exactly which responsibilities and exactly which programs is sometimes in dispute, leading to a muddle of uncertain authority. The first step in good administration is a determination of who is responsible for what. And if the person responsible is not available, then who is next. Clear delegation of authority help in determining accountability. Such delegation of authority also helps to keep all the work from piling up on one or two individuals while other capable individuals are underutilized, without sufficient work to do.

Rewards and sanctions within an administrative system could be based upon job performance. That is, those who do their jobs well could be promoted, paid more or given interesting work. Those who do their jobs poorly can be demoted, paid less or fired. As the system currently runs, many jobs in tribal government are awarded on the basis of need for income rather than ability to perform. It would seem that a distinction could be made between those jobs which are necessary to effective administration, where ability to do the job is important, and those jobs where the program provides for someone to be able to learn on the job. Not that many jobs are crucial jobs are not handled by the most capable individuals, two things happen. Existing programs run poorly and the ability of the community to generate future jobs is reduced.

### **Funding**

Only very recently has Bay Mills had any resources to support a full time government. Unfortunately, the tribal government positions are funded in such a fashion as to inhibit continuity and orderliness in tribal government operations. There is a very limited tax base from which to derive even operating revenues. Income taxes are restricted by low income, as are property taxes. There is no industry to tax and no retail sales. Tribal revenues derive primarily from grants and some very limited fees, such as trash pickup or fishing licenses. Such fees as there are, do not even cover expenses. Grant programs then, form the economic base of tribal government operation.

There are three basic ways grants come to the community. Pass through grants, new program grants and support of existing services grants. These different types of grants vary in their



demands upon the resources of tribal government. A pass through grant places very little demand upon tribal government. For such programs as Indian Health, Title IV, or Johnson O'Malley, the program is funded and carried out by agencies outside of tribal government. The sole demand on the community is a policy decision, or priority setting and some routine though often extensive paperwork. New program grants place the greatest administrative load on the government. Though new personnel must be hired, trained and acquainted with the program, the funding for many of these programs assumes the tribe has the capability of absorbing and supporting these programs after initial funding expires. While this is often the wish of the community, as with the police program, steady long term funding is not available to respond to tribal priorities. This brings us to the third category of grants, support of existing services.

This money comes from a hodge-podge of sources patched together to support key positions and services. It must often be diverted from the original purpose for which it is granted, to meet more pressing priorities. Plainly stated, the tribe is not free to respond to their own sense of priorities in any sort of systematic fashion. The bulk of money is available for specific programs. This would serve as ample supplement if there were ongoing services to supplement. Ongoing services are not consistently or adequately funded. Because there is no stable administrative direction possible under such a funding set-up, many of the supplemental programs flounder. No consistent management procedures or direction is available for new programs to plug into.

With the extraordinary demands placed on the scant resources of the community, it is imperative that more support be provided to enable tribal administrators to meet the formidable tasks at hand. This support must include the areas of funding, management training, and program operation.

### **Planning**

For the community to most effectively use or seek resources, the use or seeking of those resources must proceed in a carefully thought out manner. The planning approach to community development insures orderly activities that are in keeping with tribal priorities.

The community has recognized that fact and secured funding for planning positions. To insure the effectiveness of those efforts, several actions must be taken by the community. Up to date information must be available to assess present and future needs and to provide a historical benchmark against which progress can be measured. Permanent funding should insure the continuity of planning efforts. Those doing planning for the community must be kept up to date on information going in and out of the community building, especially regarding potential funding sources and proposals. Finally, those doing planning must continue, as other tribal employees, to upgrade their job skills through appropriate training.

In addition, the community must develop a review capacity, to assess likely impact of projects and development in the area. Such programs as the scenic highway conversion of Lakeshore road demonstrate the need for the inclusion of Bay Mills in the review process. If Bay Mills is eligible as an A-95 body, it would provide the opportunity to comment on, or even alter proposed developments, affecting the community. Such a process could allow Bay Mills a broader regional perspective and presence without a sacrifice of sovereignty.

### **Evaluation**

For the most efficient use of funds and personnel, those resources must be carefully matched to the need. If that need is not carefully defined, it becomes very difficult to accurately match resources. How then to tell if a need has really been met? If a program succeeds, how do we know? If it does not succeed, do we know why?

Evaluation, to be most successful, must be anticipated. Realistic goals and objectives must be stated in a fashion that allows progress or lack of same to be accurately assessed. Many of the proposals the community submits require evaluation yet there is currently no capacity in tribal government to set up evaluation procedures, or to assist program personnel in evaluation.

Development of such a capability would aid the community in many ways. Funding would be more carefully directed to existing need and more expressive of community priorities. Program personnel would find it easier to do their job, as that job would be more clearly defined. Administration of programs would be easier to supervise since program goals would be more clearly expressed. And finally, funding sources could be more easily solicited with strong records to indicate past performance.

The major deficiency in current community evaluation procedures is the lack of quantitative measures. The use of numerically defined activities promotes the elimination of personal or subjective bias in program operation and administration, by providing a yardstick against which the work can be measured. This evaluation system must, however, be accompanied by accurate and consistent record keeping.

### **Record Keeping**

With the degree of correspondence going in and out of the community building and with the number of proposals and reports that are required, the problem of record keeping and information recovery becomes crucial. Lack of such a capability guarantees excessive duplication of efforts, disrupts continuity, makes systematic evaluation, monitoring and review of programs impossible and sometimes results in loss of funding and other opportunities.

Some programs are much less organized than others but the lack of standard reporting and filing systems makes it very difficult to maintain any check on the degree of difficulty any program may be experiencing.

Planning efforts and proposal development are also hampered by difficulties encountered in recovery of information. Much of the same sort of information is developed again and again. A proposal or a set of facts may have been done but is often not available because it cannot be found. For planning purposes, accurate information on past and present efforts must be available to assess future needs. This information when it exists, takes so long to find that the need for it is often past.

Particularly disturbing is the knowledge that someone probably knows the particular piece of information but how to find that someone?

### **Personnel Policies**

The job of all personnel is made more difficult by the confusion regarding personnel policies.

Confusion particularly exists in the areas of job descriptions and work responsibility, reporting, procedures, attendance and vacations. This situation is compounded by the situation previously stated in evaluation, where it is unclear to all involved exactly what are the job responsibilities of tribal personnel.

Such a job description could still encompass the variety of tasks that all tribal personnel must carry out. That description and other personnel policies need not be strict but to be fair, they must be applied equally to all.

The roots of this problem run deeply into the kinship and personal patterns of the reservation. Still the community has the right to expect a full degree of service from any employee and the employees have a right to expect a clear description of what they are expected to do while at work.

### **Sex Discrimination**

Tribal government has a dual responsibility regarding discrimination based on sex. As the political expression of the community will, it has a responsibility towards all its members to help in the fair distribution of goods and services, including jobs. In addition, as the largest employer of reservation members, the hiring, firing and other personnel practices of tribal government serves as an example for all others who employ reservation members.

Not only does discrimination based on sex set a bad example, it denies tribal government the valuable skills tribal government needs to effectively deliver services. Many women now work for the community, but primarily in those areas called "women's work", care of children, health, etc. But in many other areas of work, or at levels of management requiring high responsibility and getting high pay, very few women can be found, especially young women.

With 40% of reservation households either wholly or partially dependent on the income of a working woman, it is clear that women are in the work force to stay. All that remains now is to assure, through thoughtful and fair personnel practices and job descriptions, that the women of the community have the opportunity to advance according to their merits like anyone else, and to be paid fairly for the contribution they make.

Recent steps by tribal government, hiring young women in skilled positions, are to be applauded. That initiative must not be lost. Certainly the work of Bay Mills is such that the most capable minds in the community must be put to the effort. The minds and skills of women as well as men, must be put to the difficult task ahead.

### **Communications**

The key to successful communications for the Bay Mills Tribal Government is for people to know what other people are doing, especially where it might involve them, or benefit from their input. This includes communications between tribal program employees, between employees and the committees, between employees and administrative personnel and most importantly, between tribal government and the community at large.

In recognition of this need, the community has established a newsletter, holds general tribal council meetings, posts relevant correspondence and takes minutes or tapes most meetings. The community also invites extensive participation in meetings with outside officials. It is along these directions that increased communication is most likely to occur.

Limitations include the overwhelming volume of correspondence the community must deal with, limited financial and technical means to distribute information outside the community building and the difficulty of conveniently scheduling meeting to accommodate the heavy demands on the time of some of the personnel involved. A careful examination of information flows might help to ease some of the volume of paper flowing and make it possible to focus more on the items of crucial importance.

### **Training**

The very strenuous demands of many positions in tribal government requires that the personnel in those positions operate to the fullest capacity. But often that capacity could be increased. Many means have been mentioned, such as clear job descriptions, improved communication and personnel policies. Another means is to offer more training opportunities.

There are numerous ways that training could be had. Courses are available at Lake Superior State College in many areas of concern. Special training programs are often available, as well as on site workshops. Counter-part training, where an individual learns from another individual on the job is best for some skilled positions.

The community can get maximum utility from its employees, the employees would be able to do their jobs best, and the long term capabilities of the individuals and the community would be improved by increased training related to the job. This need not be left to the individual employee but could be included as a part of the job description. This approach would put the support and resources of the community behind the efforts of employees to improve themselves and their ability to serve the community.

### **GOALS:**

- Secure permanent adequate funding for essential tribal government positions.
- Maintain orderly flow of relevant information.
- Insure that Tribal Programs are meeting community priorities.

### **OBJECTIVES:**

- **Seek adequate funding from the Bureau of Indian Affairs for operation of crucial tribal government programs.**  
This funding would include those positions that are necessary to administer tribal programs, for enforcement of tribal policies and to secure funding for additional programs.
- **Provide for administrative cost out of all grants administered.**  
All programs or grants requiring tribal resources should take administrative costs off the top for rent, phone, accounting, duplicating, utilities, building maintenance and other administrative costs. Standard percentages for administration range from 5-10%.
- **Develop written guidelines as to what aspects of what programs tribal government is responsible for.**



This could take the form of an operations manual to determine long term responsibilities and accountabilities, and to aid in determining the necessary scope of tribal government activities.

- **Develop standard personnel policies, in conjunction with community residents, employees and administration.**

These policies should include provision for a job description, outline responsibilities of employees and management and cover attendance, vacations, sick days, leave days and other time off, over-time guidelines, employee evaluation procedures and disciplinary procedures. These policies should be determined by all who will be affected by them, as well as general community input. Responsibility for enforcement should also be covered.

- **Prohibit discrimination based on sex in all employment practices of tribal government.**

Discrimination would be prohibited in types of jobs, rate of pay, levels of responsibility, promotions and fringe benefits.

- **Write comprehensive job descriptions for all tribal government positions.**

The job description should be developed jointly by employee and administration. It should include work responsibilities, reporting intervals, evaluation procedures, time and travel allowances, rate of pay, fringe benefits, qualifications or training necessary, how it is to be acquired and anticipated date of termination if there is one. Source of funds should also be included. The job description should become part of a permanent personnel file.

- **Develop a personnel rating system with regular evaluation of performance as defined by job description.**

This overall rating system should provide a standard measure for work performance, attendance and training initiative undertaken.

- **Develop or adopt a quantitative evaluation procedure for measuring success of all tribal government programs.**

Capability should be acquired to set up before undertaking a program, a means for quantitatively defining the activities of that program. Regular reports throughout the operation of the program can then assess how closely activities are to program goals.

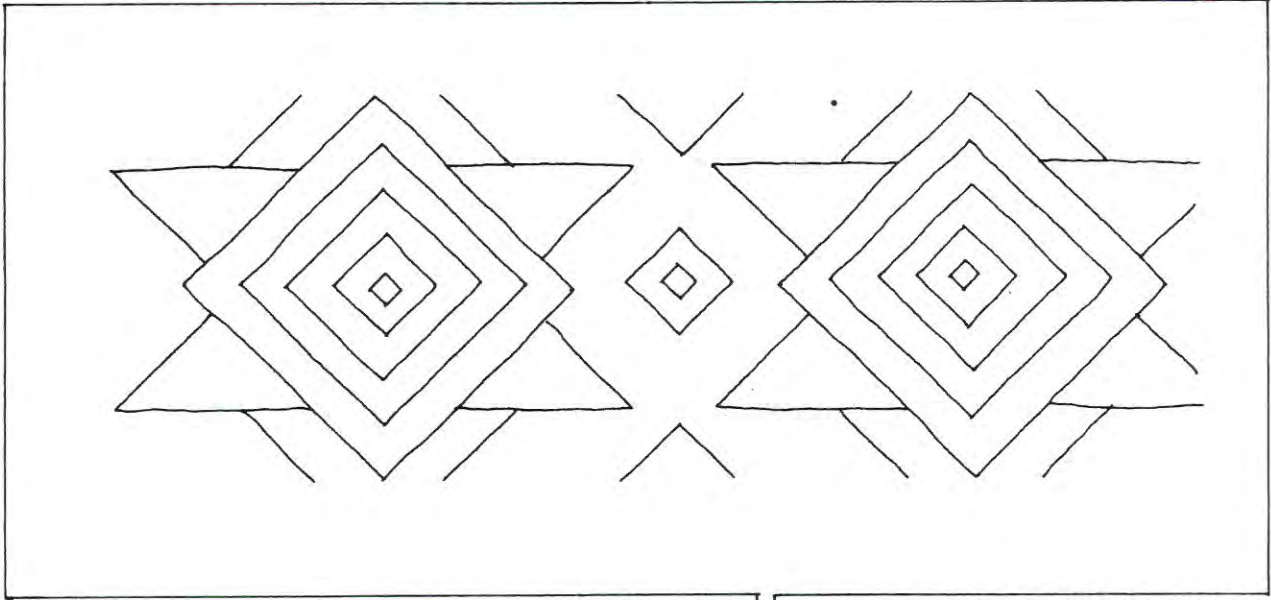
- **Develop or adopt a standard filing system for the correspondence and records of all tribal programs.**

A standard filing system should include a permanent chronological file for all relevant correspondence, incoming and outgoing as well as appropriate duplicate copies for program files. A permanent file should also be kept of all proposals submitted, as well as files relating to proposal. All this is in addition to regular personnel files.

- **Hold regular staff meetings for personnel of appropriate tribal programs.**

The purpose of these meetings is to get necessary information out to employees, receive feedback from employees and to help program personnel informed of the activities of other programs.

- **Improve technical capabilities for communication.**  
 Recommendations include a new copying machine of greater reliability, funds for distribution of newsletter off reservation to interested parties, and the posting of relevant correspondence, agendas and minutes in such a fashion as to encourage participation.
- **Hold regular tribal council meetings.**  
 Regular scheduling of meetings would encourage shorter agendas, less of a crisis orientation, and allow people time in advance to prepare for the meeting.
- **Provide for and encourage additional jobs related training for personnel of all tribal programs.**  
 Tying additional training to job descriptions and backing it up with commitment of tribal educational money would enhance the capabilities of the individual employee and strengthen the general capacities of tribal government as well as providing better services to the community.
- **Maintain up to date data base.**  
 Data base is to be used to provide reliable information for proposal writing and planning. Data should include basic up to date demographic information including population size and composition, member and composition of households, housing conditions, income levels, composition and size of work force, educational attainment levels, percent of population receiving transfer payments, vital health statistics, females working and/or head of household and numbers of persons using or desiring to use tribal resources such as housing or land, health or educational services.
- **Investigate options for participation in A-95 review.**  
 Such participation should, while insuring sovereignty of Bay Mills, provide for the notification and review of pending projects as to probable impact on Bay Mills and the desirability of that impact.



AGED

## **Introduction**

The percent of elderly at Bay Mills is 5%, only one half the national average. This is due to the staggeringly low life expectancy of 45 years of age at Bay Mills and, until recent times, heavy out-migration. However, if Bay Mills even roughly approximates national trends, we can expect to see the elderly become a larger percent of the population in the next fifteen years. Increased life expectancy of community residents will affect that somewhat but a more significant impact is likely to be felt because of the growing number of Bay Mills members who had migrated to the cities, returning to the community. Bay Mills represents a very attractive place to retire. For Bay Mills members, retiring to the reservation has many benefits: No rising property taxes or special assessments; much of the health care costs are assumed by Indian Public Health Service; and the comfort of traditional family ties.

While many families may consider their older citizens a problem, at Bay Mills the elderly are considered an active and vital part of the family. The extended family is the central social unit of the community and the older men and women are the origin of those families.

Respected as they are, the elderly have their problems too. In this section, the special needs of the elderly will be examined, to insure that these special people are living in conditions worthy of the contribution they have made to their families and their community. The net impact of these problem areas (housing, income, recreation, social activities and transportation) is an increase on the already strained resources of the Bay Mills elderly. While many factors, such as weather and physical isolation, are inevitable, many others would respond to planned coordination of ongoing reservation activities that took into account the special needs of senior citizens. There is no doubt of the Bay Mills Community's desire to provide these services to its respected elders. The question is how best to go about it.

## **Income**

The main problem of the elderly is not so much age related as it is income related. Income generally declines after retirement, at a time when expenses start going up. Above and beyond other expenses, inflation is a factor that hits hardest those on a fixed or limited income. Less than 40% of the elderly at Bay Mills have an income they perceive as adequate to their needs. 27% of the elderly are below Community Services Administration poverty guidelines and another 33% are less than \$500 above the bare minimum. Past employment has provided few pensions and most subsist on social security, or Supplemental Security Income. Some work to supplement income from these sources. The impact of this is felt in many ways. Almost 60% have had to reduce purchase of some foods. Over one half eat less than three meals a day; 18% eat only once daily.

## **Housing**

The problems elderly experience with housing are primarily those associated with income and limited physical capacity. Though almost all the elderly own their own homes, physical limitations often prevent maintaining them. A limited income often limits the elderly's ability to hire someone to do the maintenance. Although the community attempts, through use of Housing Improvement money and Indian Action Team, to shoulder the responsibility of home maintenance for the elderly, it is not a well organized effort. There is no program accountability or funding to insure continuous upkeep. The location of homes occupied by the elderly occasionally creates



problems. Where health or transportation is a problem, remote location poses certain difficulties. Lack of phone or regular visits by friends or health personnel can have tragic consequences for an older person. Delivery of services, such as extended care, nutrition or recreation activities is also made more complicated by scattered and remote housing locations.

Housing needs of the elderly are not easily defined. Singles, couples, older folks with grown children still in the home, and grandparents caring for grandchildren present a combination of conditions which defy a simple definition for older households. Hence, there is no easy solution for meeting housing needs of older residents. An expanded elderly population in the future will present its own challenges.

### **Transportation**

Transportation is a problem in many instances. 76% of elderly own a car. That leaves almost one fourth of the elderly lacking any form of regular transportation. Though over 70% do not like to shop at local stores, due to high prices and limited choices, most shop locally since they have no regular transportation to Sault Ste. Marie. This survey was taken before the bus service began operating between Bay Mills and Sault Ste. Marie, which may alleviate some of the problem. It is known that much support for the Eastern Upper Peninsula Transportation System comes from elderly groups. Bay Mills may be expected to use the system in much the same way, especially in the winter when owning a car does not mean you can get it out of the driveway.

Use of the existing bus system will not solve on-reservation winter transportation needs. Winter occurrences such as clearing a driveway or walking on a slippery road present special problems for elderly persons.

### **Recreation and Social Activities**

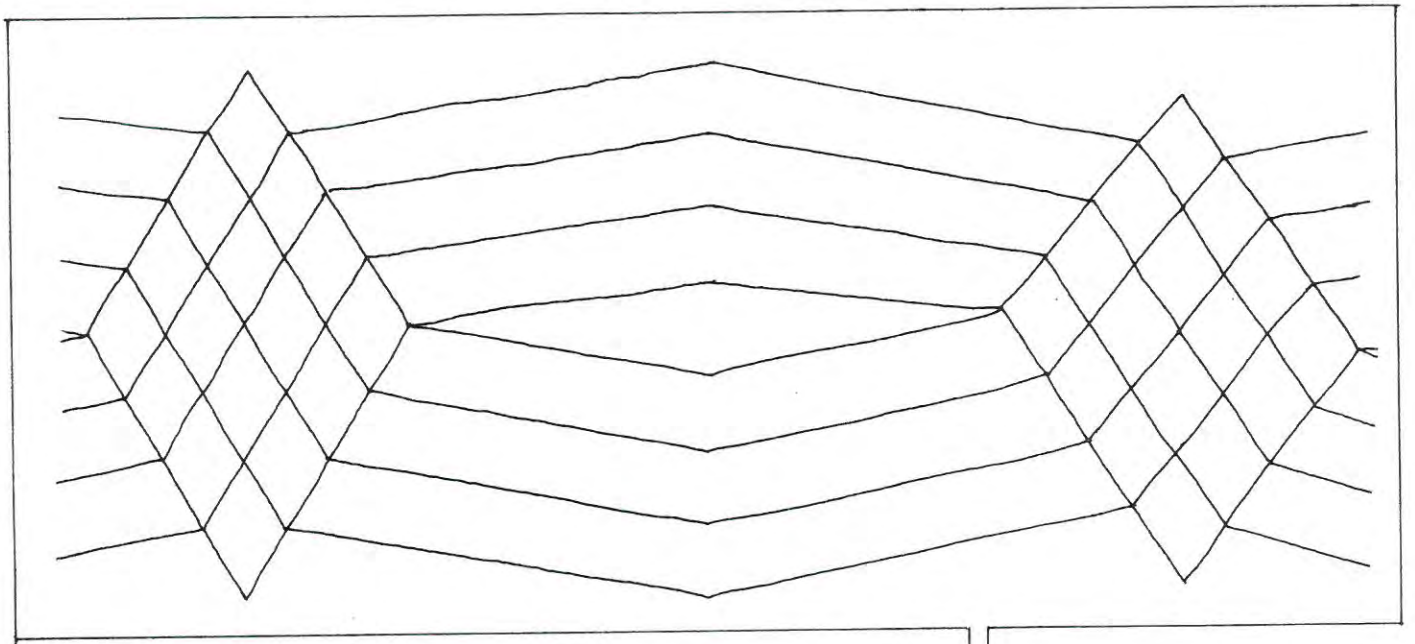
Lack of transportation and limited physical mobility also negatively affect the social and recreational interactions of the elderly. Over 30% can not afford to participate in activities outside the home; another 20% can afford only limited activities. Thus, less than 50% can afford to take advantage of what activities there are. 100% of the elderly enjoy some visits from friends and relatives but these visits are not sufficient to meet their social needs. Lack of a meeting place where they would be likely to encounter friends inhibits social interaction. Existing activities such as evening bingo are regularly attended by the older members of the community when transportation is available. Many expressed an interest in community government activities but felt they lacked knowledge about the operation of those programs. Although this is a concern the elderly share with many others, the limited mobility and some obstructions to communications (hearing or sight difficulties) make the problem more acute for the older people. 100% receive a daily paper which is evidence of strong interest in the outside world. Physical isolation of the elderly's homes with over 50% lacking phones has been a serious problem in the past when a disabling accident or medical emergency occurred. This would seem to correlate with a desire, expressed by the elderly to have a Community Health Representative or outreach worker visit regularly.

## GOALS:

- Increased social interaction between elderly and rest of the community.
- Increase availability of services.
- Interact with larger Eastern Upper Peninsula elderly community.

## OBJECTIVES:

- **Build fifteen units of rental housing especially designed for use by elderly.**  
Operating these units on a rental basis will place maintenance responsibilities on the Housing Authority which has the resources to deal with maintenance systematically. While no attempt should be made to force elderly to live here, the design and concentration should serve to make them attractive for their physical, social and economic benefits. This development would also make available more housing for younger families who are better able to maintain the home. Rental units might be two bedroom, to accommodate grandchildren, children or visitors.
- **Seek special funds for home maintenance for elderly.**  
Since the elderly require a larger percentage of available home maintenance monies than other sectors of the population, it places an undue drain on tribal housing maintenance resources. In effect, all home owners are subsidizing elderly home owners. Since special monies are available, it is recommended that the community seek special resources for the renewal of elderly people's homes.
- **Develop facilities for recreational and social activities in conjunction with new housing for elderly.**  
Such facilities should include passive recreation areas, meeting areas, library resources for poor-sighted and an area suitable for use by a nutrition program geared to the needs of elderly. Office space might also be provided for community worker for the elderly.
- **Secure funding for a full time elderly worker.**  
This worker could monitor simple health needs, provide information regarding such things as Supplemental Security Income or Eastern Upper Peninsula Transportation Authority, develop recreational programs, and assist in coordinating the activities of elderly with the community and other elderly groups in the Eastern Upper Peninsula.



YOUTH

## **Introduction**

The problems of the youth of Bay Mills appear in all of the major sections of this plan. However, since 60% of the Community's population is under 25 years of age, their problems and needs should be highlighted. Programming for special segments of a population is not a new concept. It is hoped that special programming for the youth of Bay Mills will alleviate their problems and, hence, many problems of Bay Mills. This section will review the areas of housing, education, recreation and employment opportunities. A brief inventory of the youth population supplements the initial data covered in the demographic section. The section on education is a summary of the education part of the plan. The housing, recreation and employment sections highlight and supplement those areas particularly applicable to youth. The recommendations on all these areas are primarily policy actions to assist the youth of Bay Mills in gaining full participation in community affairs.

## **General Problems**

The youth of Bay Mills present a challenge to those planning for employment, education, housing and recreation. Approximately 60 youth are between 13-18 years. Within the next five years, these youth will be needing homes and jobs. Currently, there are over 20 young men, over 18 years of age who are out of school, unemployed, and living with their parents.

The demographic data reveals a historical trend of migration from the reservation after leaving school. Those that leave the reservation do so because they can not find housing or jobs. Many often do not want to leave; nor does the community want them to leave. The community must work and plan to develop the resources, facilities and opportunities necessary to retain the young members of the community on the reservation. The opportunity to build a good life must be present if the young are to commit their lives to Bay Mills.

Though many of the youth related problems of Bay Mills are due to poor material conditions, low expectations of the future and negative attitudes toward self and community aggravate matters. While low expectations and negative attitudes are historically justified, solutions to the problems lie not in the past, but in the future. The young people of Bay Mills currently languish, without direction or inspiration. Their energy must be harnessed into programs and activities so that their example and enthusiasm can become a source of pride to the community. They must have a sense of their own self worth.

The primary areas of concern for special youth programming are employment, education, recreation and housing. Not much to do, and no place to do it seems to sum up the situation for youth at Bay Mills. Little excitement at school; lack of challenging recreation; dismal employment opportunities; no place to move into; limited expectations of higher education, all provide a scenario of despair for youth. If some of these problems are corrected, the future for Bay Mills and its youth can indeed be brighter.

## **Education**

Bay Mills has approximately 60 teenagers, ranging from 13-18 years of age, who are enrolled high school students. The dropout rate has been steadily declining and most of these students will graduate from high school. The majority will not seek further education. Records from Inter-Tribal



Council in Sault Ste. Marie show that during the last five years, only ten students from Bay Mills finished some sort of vocational training and only two completed college. Those receiving any education beyond high school represent barely 15% of the residents over 18 years of age with a high school diploma or equivalent.

Bay Mills has had an education program funded through the Johnson-O'Malley Act (JOM) since 1971. This program consists of one home-school coordinator and two teacher's aides located in classrooms at Brimley School. Parental costs (lunch money, field trip fees, school clothing, etc.), special transportation and other expenditures (travel, phone, employee fringe benefits) are also covered by JOM. These funds were based on per capita Indian School enrollment during 1975-76 but funding cut-backs this year indicate that some programs will be cut. Funding is also received under Title IV, Part B of the Indian Education Act (1972), but again, this program might be phased out during 1976-77 because the grant application was submitted late. Because of both the school and social environments, young Indian Students get discouraged early. (See also: Education)

### **Sex Education**

Bay Mills has a large number of unplanned births every year. Lack of organized recreation activities, and lack of sex education or birth control programs play major roles. A recent survey conducted by the Planning Staff showed an overwhelming interest in sex education/birth control classes and over 75% of the families responding stated they wanted or would approve of such classes if offered.

### **Recreation**

Lack of recreational facilities and programming is a major deficiency. The Bay Mills Community is located twenty miles from the largest town, Sault Ste. Marie, which offers many sources of recreation. Although Bay Mills is surrounded by smaller communities, they are very limited in recreational resources. The reservation has a high alcohol and drug abuse rate. Vandalism and petty crimes seem to often involve the young. This is a condition which may be due, in part, to the almost complete absence of organized park and recreation facilities and programs on the reservation. A reservation teenager with limited funds and transportation is limited to locally available activities which often involve drinking and drug abuse. Negative effects include irrational behavior, petty crimes and sometimes even violence. Recreational facilities and innovative community recreation programming can provide alternatives to drinking and taking drugs, as well as broadening the outlook and activities for young people. (See also: Recreation)

### **Housing**

Although housing was and still is a major problem for Bay Mills, new developments from the Department of Housing and Urban Development will result in twenty new homes to be constructed in 1977 with the possibility of more new homes after.

A major problem area concerns "young single people" eighteen or over. It is a common practice for single adults on the reservation to remain at home with parents, or live with other relatives. This is not usually the preference of either party, but there are few options available. These people are not able to apply for these new homes because, according to Housing Authority policy, only family units are eligible. HUD has somewhat limited programs for providing housing for singles, although some options for special cases are available.

New housing for young people would seem to be a priority, in light of the strain lack of such housing places on existing resources. While a difference of opinion exists on the relative priority of young singles versus family housing, they are really two different housing sectors, with different resources and options available.

Young singles, both men and women have resources which can be brought to bear on housing. The young have the time, the strength and often the skills necessary to build homes. Several single people on the reservation have built or reconstructed homes for themselves. If the community could support such efforts at self-improvement, many more singles can be expected to build. Support could include site development, technical assistance, or assistance in initial organizing efforts.

Other considerations must also be made in developing housing for young singles. Differences in life style may cause some difficulties. However, if young people and their housing are integrated as part of the community, the life style conflict need be no greater than it already is. It is not recommended that housing for young people be concentrated or isolated by itself. It should follow the same patterns and site regulations for all reservation housing. And finally, the design of housing for young people should keep in mind the possible use of the home as a family unit. A young person may decide to marry in which case more room would likely be necessary. The young person who built it, may decide to sell it, possibly to a family. Design need not be necessarily conventional but may wish to keep in mind possible expansion, such as the finishing off of a basement or attic. (See also: Housing)

### **Employment**

Critical to any program for community development is jobs. The employment situation for youth is particularly challenging and complex. Problem areas include lack of training for available jobs, limited job opportunities for women and limited educational achievement. Within a regional context of a declining economy and physical isolation, the situation is particularly serious.

The typical youth of Bay Mills is a high school graduate with limited work experience. In the past, there were jobs available, such as logging and lumber mills, tanneries, or the factories in the Sault, that could utilize unskilled labor. There was also, in the past, a possibility of an unskilled youth picking up a trade such as dredging. Those opportunities are now very limited, and show no signs of coming back.

Jobs today require different skills. The job structure at Bay Mills roughly parallels the region in that most of the work available is government or service related. The skills that people have coming out of high school are not the skills that equip a person to handle these jobs.

Many of the jobs currently held by youth at Bay Mills involve training of one sort or another. The Indian Action Team (IAT) and Neighborhood Youth Corp (NYC) serve to develop skills and work attitudes. These training programs are not tied to permanent work upon completion of training. Also, they are not tied to the priority skills the tribe needs for reservation development, or to job categories that show much promise for the future. Reservation youth in particular go from high school to a job training program but not to a job.

While the situation for employment of young men is grim, the opportunities for women are even more limited. The population statistics for the community show that clearly. Between the ages of 15-24, the number of women on the reservation drops by one half. Currently, there are 24 young single men living at home after leaving school while there are fewer than six women, (most of those with children) in similar circumstances. The profile of women's employment in the demographic section shows that job opportunities for women, particularly young women, are limited to the low paying jobs in fields held to be "Women's Work". Over 40% of reservation households have women as either the primary wage earner or making a significant contribution to the family's income. (See also: Ec. Dev. and Demographics)

The tribe has taken a bold step toward equalizing job opportunities for women. A recent job training program from the State of Michigan, Department of Labor, was made available to the community. The community chose six young women for the six job slots allocated to them. The program involved training in community development skills, including planning, needs assessment, program evaluation and proposal writing. Not only was the community's action important in terms of income opportunities, but the skills developed were in those areas where the community and the region has expanding job opportunities. The use the community has made of these trainees is encouraging.

The possibilities of higher educational attainment levels, while holding much promise for job development for the young, has got to become a more significant reality. Many of the jobs of the present and future will require higher education. Those jobs include administrative and management positions for tribal government and tribal enterprise, as well as positions in agencies dealing with Indian people, or those activities affecting the lives of Bay Mills people, such as the fish hatchery at Pendill's Creek.

While the community has available to it resources for higher education, those resources are not distributed according to development priorities of the community. Fortunately, many of the community members who have achieved higher education do work in some capacity for the community or the larger groups of Indian people. To carry out future community development objectives the reservation must offer to its young people and other community workers maximum opportunity for higher education. Reservation programs and jobs in general are going to get more, not less complex. For Bay Mills to effectively compete for, and deliver services, and to insure job opportunities for young people who want to remain in the community, skill levels must be raised.

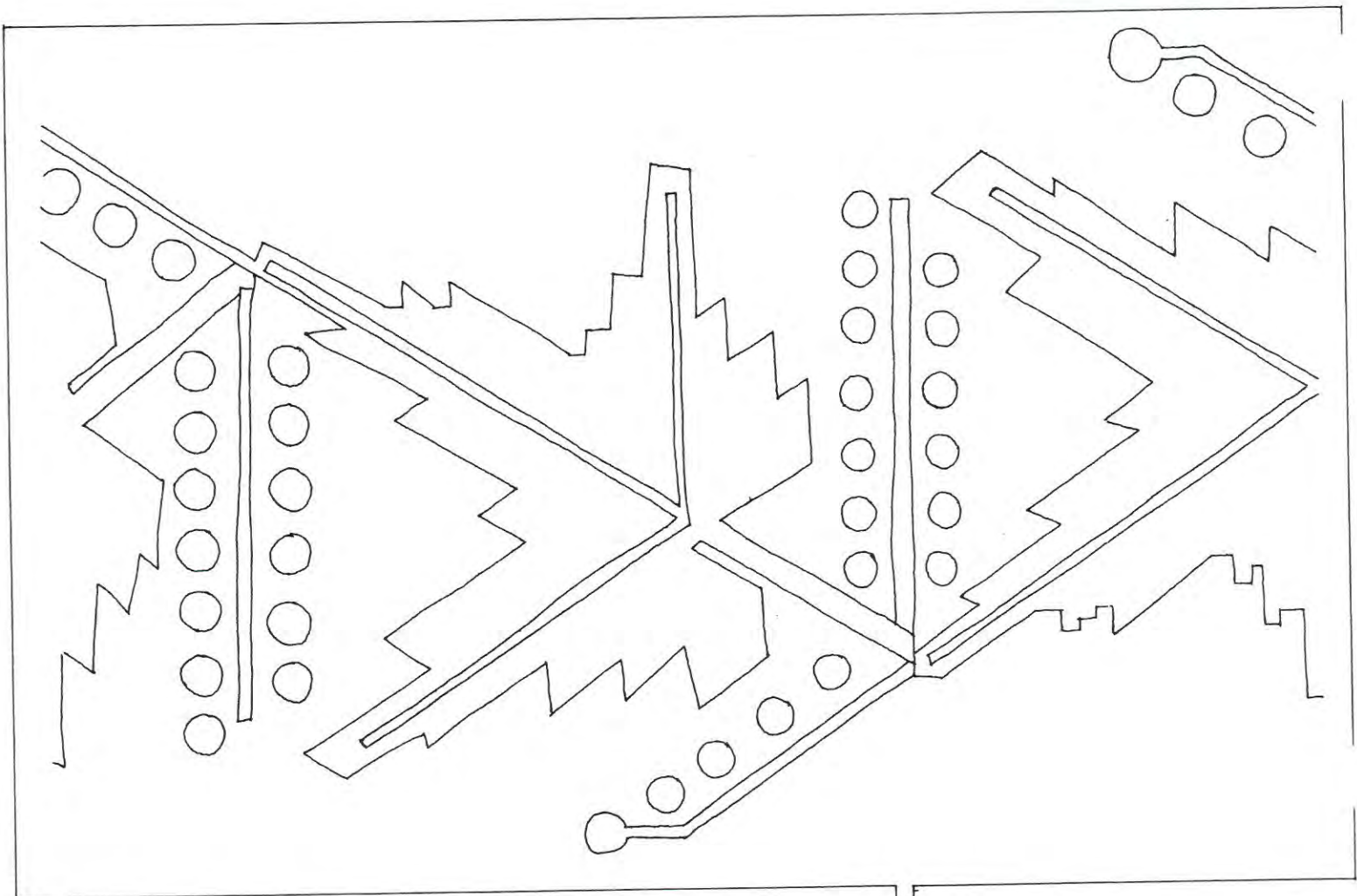
#### **GOALS:**

- Coordinate educational activities and resources with job opportunities and other social needs
- Supplement recreational programs for young men and women
- Increase housing available to youth
- Provide more employment opportunities for young women

## OBJECTIVES:

- **Give top priority for homesites on tribally owned expansion lands to youth.**  
Two purposes would be served by this proposal. It would avoid a conflict between existing household units and young people for existing homesites or homes, and would create a political constituency to push for expanded lands.
- **Prohibit discrimination against young singles regarding distribution of tribal housing resources.**  
The condition of the overall housing stock is weakened if fix-up money is not available to those homes owned or occupied by young singles. Additionally, discrimination discourages self-improvement efforts by young people and is a reverse incentive for remaining in the community, on the reservation.
- **Prohibit employment discrimination against young women.**  
Expanding employment opportunities in tribal government provides incentive for young women to remain on the reservation and seek more job related training.
- **Provide school work to develop skills needed by employers.**  
Explore with Brimley High School, Neighborhood Youth Corps, and others, the possibility of developing skills needed by tribal government. Options could include co-op study, course work, skill clubs, etc. Skills could include management practices, accounting, data analysis, technical reading or writing classes, small motor repair, hatchery work, refrigeration and appliance repair.
- **Seek permanent funding for recreation program.**  
Either through grants or user fees, establish regular funding to support a program developer/supervisor for the recreation center.
- **Establish sex education for young men and women.**  
Put community support behind regular information programs for sex education either through the schools or Bay Mills Health Personnel. Information should include not just technical information on reproduction but discussions on sex roles, sexuality and value clarification regarding adult relationships.





WHITEFISH BAY

Whitefish Bay, the linkage between Lake Superior and the St. Mary's River and Lake Huron, may be considered as the most important natural resource to the Bay Mills Community. Since the first occupation of people in this area, the Bay has provided subsistence to those utilizing its rich fish resources. For the Bay Mills Community, Whitefish Bay has provided and continues to provide both food and employment to many of its members. Regulation and management of Bay Mills fishermen in Whitefish Bay is maintained by the Bay Mills Conservation Code and Fishing Rules and Regulations. Of great concern is an issue confronting the State of Michigan Supreme Court regarding Bay Mills Indian Treaty fishing rights. Bay Mills is arguing that it has treaty rights guaranteeing it the authority to regulate its own fishing activities in waters designated by the treaty. The State of Michigan argues that Bay Mills fishing should be regulated by State commercial fishing laws. Regardless of the supreme court decision, careful management of Whitefish Bay must be continued by Bay Mills to insure and enhance survival of fish populations, especially to maintain commercial fishing capabilities of the Bay.

Bay Mills fishermen and community members recognize the importance and need to regulate use of Whitefish Bay, as evident in their conservation code, fishing rules and regulations and other conservation practices. Good biological and technical information on the Bay and the effect of man's activities on the Bay is crucial in making management and control decisions. The following general information is provided to assist Bay Mills in this effort.

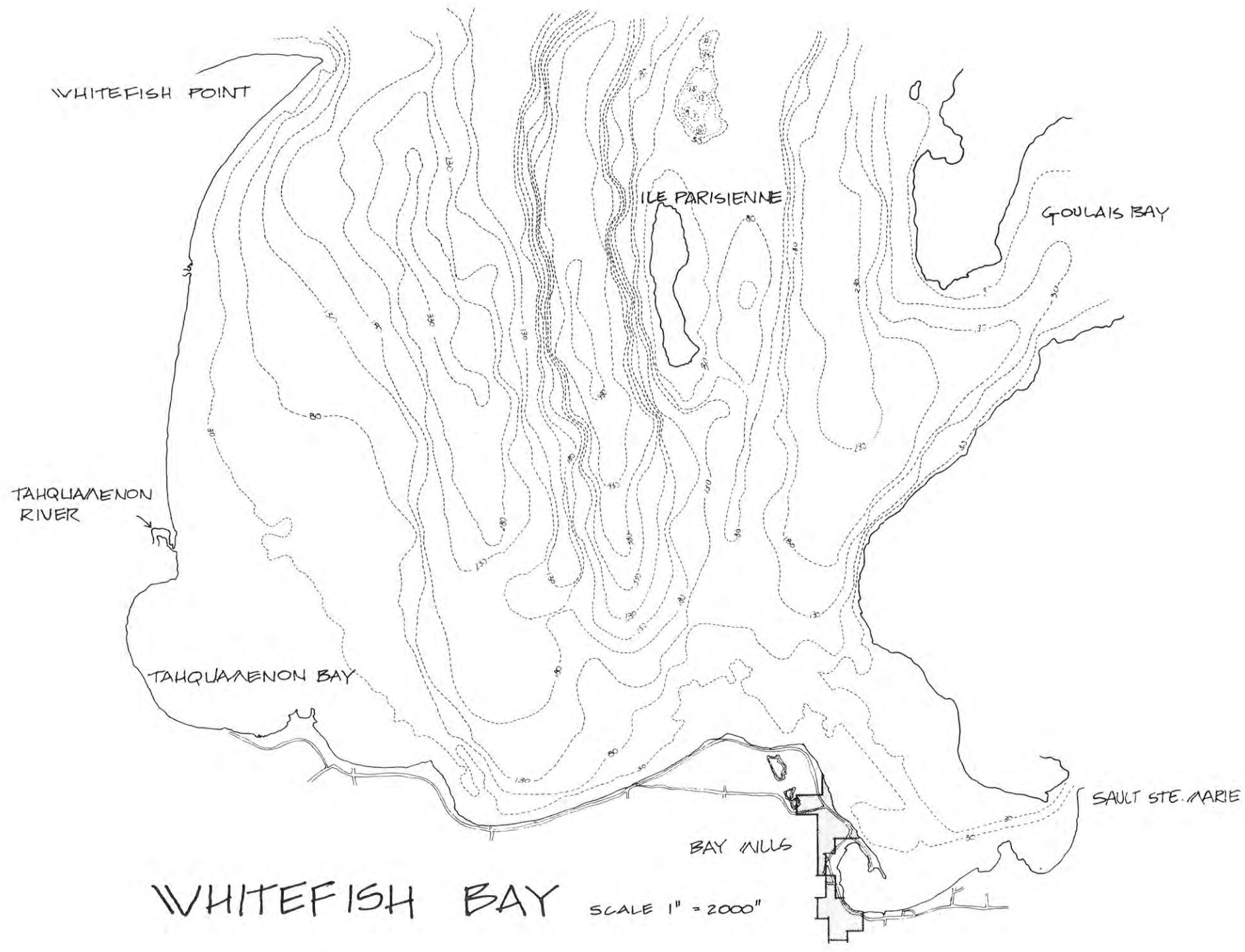
#### **Physical Description — Location and General Description**

Located in the eastern end of Lake Superior, the largest and deepest fresh water lake in the world, Whitefish Bay contains many of the same physical characteristics as the lake. Lying at the head of the Great Lakes System and containing a relatively small drainage basin compared to its size, the lake and bay have remained very pure, clear and cold. In addition, two complete overturns, due to the warming and cooling of the surface waters occur in the spring and fall, resulting in a more complete mixing of the waters than in the other great lakes. The lake and bay are basically oligotrophic or biologically young, and as a result contain an abundance of oxygen.

#### **Water Depths and Lake Levels**

Water depths in Whitefish Bay range to 495 feet. Several stretches of shallow areas or shoals, with a depth of 23 feet or less extending into the Bay as far as four miles, occur along the shores of Whitefish Bay, particularly in the area of Iroquois Point, Tahquamenon Bay and Waiska Bay. (Map Reference: Whitefish Bay)

Water levels vary in the bay and lake from year to year with a consistent seasonal rise and fall. At the close of winter, lake levels are in their lowest stage and reach their highest state during late summer. The greatest annual fluctuation of water levels has been 2.14 feet, while the least annual fluctuation has been 0.41 feet. Winds may cause day to day fluctuations in water levels amounting to changes of several inches and occasionally a foot or more. Oscillations of irregular amount and duration also occur due to storms and variations of barometric pressure. Fog and squall winds are common in the summer months while foggy, stormy and dangerous conditions are frequent in the spring and fall on Whitefish Bay.



WHITEFISH POINT

ILE PARISIENNE

GOULAIS BAY

TAHQUAMENON RIVER

TAHQUAMENON BAY

SAULT STE. MARIE

BAY MILLS

WHITEFISH BAY

SCALE 1" = 2000"

In addition to natural conditions that cause changes in water levels, the levels are maintained generally between 600.5 feet and 602.0 feet above sea level by compensating works located at the Soo Locks. This consists of dikes and sluice gates operated to vary the volume of discharge from Lake Superior to benefit navigation and protect property and interests (public and private).

### **Water Temperatures**

Water temperatures north of Iroquois Point average around 30°F. This temperature may drop to near zero in the winter and generally rises to 45°—55°F. in the summer. Higher temperatures may occur in shallow regions or protected bays, while colder temperatures are found in the deeper, exposed areas.

### **Winds and Waves**

Prevailing north-northwest winds occur in Whitefish Bay. These winds are very unpredictable and may completely change direction in 20—30 minutes. Wind speeds average around 15—20 knots.

Waves on Whitefish Bay are also very unpredictable, resulting primarily from winds but are also affected by the irregular bottom and shores.

### **Ice**

During approximately five months of the year an ice cover of about 30 inches thick forms in Whitefish Bay. Ice starts forming in November in the St. Mary's River, extending to the mouth of the river by December. In January the ice cover continues to form to Iroquois Point and as far as Isle Parrisiene in February. By March an ice cover usually is formed as far as Whitefish Point. Depending on the length and severity of the winter, the ice disappears around April or May.

Ice in shipping lanes have been broken to allow continuation of shipping throughout the winter months.

### **Water Currents**

Due to the prevailing north-northwest winds, surface currents in Whitefish Bay are in a counterclockwise direction. Circulating currents result from differing water density caused by changing temperatures. From Point Iroquois and Gros Cap into the St. Mary's River, the water flows in a general southeast direction.

### **Water Quality**

Lake Superior waters are very pure and contain the lowest concentration (60 PPM) of dissolved solids of all the Great Lakes. This concentration is very close to that of rain water (30—50 PPM). The pH of Lake Superior waters is between 7.1 and 7.4 at 700—900 feet as compared to 7.0 of pure water. The fact that Lake Superior lies at the head of the Great Lakes System and has a relatively small drainage basin compared to its size aids in maintaining this high water quality. The chemical characteristics of Lake Superior are relatively homogenous in respect to area and depth and have changed very little throughout history.



### **Existing Uses of Whitefish Bay**

Throughout history Whitefish Bay has experienced continual utilization of its fish resources by subsistence, commercial and sport fishermen. In addition a wide range of transportation needs have been met by explorers, trappers, traders and lumberjacks. Today fishing and transportation remain as primary uses of the bay in addition to recreational, residential and industrial uses.

Major changes in fish species composition and populations have occurred in Lake Superior and Whitefish Bay. Primary activities believed to have affected fish populations are the invasion of the sea lamprey and overharvesting of fish species. Whitefish and trout populations were severely affected in the 1950's by the entrance of the sea lamprey. Control measures have brought the lamprey population from one fifth to one tenth of its former population, although they are still responsible for a serious depletion in trout and whitefish populations.

Changes of species composition and abundance have occurred in Whitefish Bay and Lake Superior also as a result of overharvesting of particular species by commercial and/or sport fishermen.

Through the Bay Mills Conservation Code and Fishing Rules and Regulations, in addition to participation in various conservation activities, it is evident that Bay Mills is actively involved in protecting, maintaining and increasing the fish populations in Whitefish Bay. It is recognized by the fishermen and the community that overfishing and/or harvesting immature fish will result in fewer fish in future years and will not serve the long term economic interests of the community. The existing Conservation Code and Fishing Rules and Regulations are a good start towards management of fishing in Whitefish Bay. Expansion and strict enforcement of these regulations will further insure the protection of this valuable resource.

In addition to development of management programs by Bay Mills, coordination with other users and agencies involved with Whitefish Bay (Canada, other fishermen, DNR and the Bureau of Sport Fisheries to name a few) is important in developing coordinated and compatible overall management goals, policies and programs of the bay.

### **Industrial**

Industrial uses of Whitefish Bay consist primarily of a steel mill and pulp and paper mill both located in Sault Ste. Marie Canada. The U.S. Coast Guard in Sault Ste. Marie, Michigan works with Canadian officials in monitoring wastes dumped into the Bay by industries.

### **Recreational**

In addition to sports fishing, Whitefish Bay is utilized for other recreational uses including boating, water skiing and swimming. Campgrounds and commercial recreational establishments are located along the shores of Whitefish Bay in addition to several seasonal residential units.

### **Residential**

Residential developments along Whitefish Bay are concentrated primarily in the localities of Sault Ste. Marie, Brimely, Paradise and Shell Drake in addition to scattered permanent and seasonal units.

### **Environmental Considerations**

Insuring protection of the quality environment of Whitefish Bay and Lake Superior is of prime importance. In the case of Bay Mills, this quality is one crucial factor in maintaining the Bay's fish populations. Knowledge on the type and intensity of use of Whitefish Bay and the effects of each of these uses on the waters and its resources is needed in making management decisions to insure maintenance of the Bay's quality and resources.

Throughout the life of Lake Superior, very little change has occurred in the water quality. Due to the fact that Lake Superior lies at the head of the Great Lakes System and the surrounding area is not heavily developed, there has been little effect from industrial, agricultural or residential use on the overall quality of the lake. However, within local areas, the water quality may be jeopardized by various uses. These uses and their consequences must be monitored and controlled to prevent local and outreaching detrimental effects of the water quality. Detrimental effects may occur as a result of industrial and navigational uses of the Bay. Among these, protection from pollutants is important. Heavy metals and pesticides in particular, are among pollutants which are believed to be more available for concentration in fish of oligotrophic lakes, and therefore, require careful monitoring in Lake Superior and Whitefish Bay. According to the 1975 report from the Great Lakes Pesticide Monitoring Program conducted by the U.S. Fish and Wildlife Service, fish samples from Whitefish Bay are all under present acceptable levels (PCB, organic chlorine residues, % lipid) established by the Food and Drug Administration. Filling, dredging and lake level manipulation for navigational purposes are not believed to cause environmental degradation or pose serious problems for fish populations in Whitefish Bay.

The protection of water quality in Lake Superior and Whitefish Bay is of prime importance in terms of fishery resources. High water quality is essential in meeting the needs of fish populations, especially as relates to feeding, growth, reproduction and survival requirements. Fish are one of the first life forms to respond to changes in water quality.

With a relatively simple complex of fish species, such as in Whitefish Bay and Lake Superior, the abundance of one species can have a dramatic effect on survival and abundance of another species. In a similar way, introduction of a non-indigenous species such as in the case of the sea lamprey may have an equally dramatic effect on species composition.

### Fishing

The most continuous use of Whitefish Bay, and that which makes the bay of extreme value to Bay Mills is commercial fishing. In addition to commercial fishermen from Bay Mills, an estimated eleven additional commercial fishermen utilize Whitefish Bay with an estimated total catch of 178,335 pounds (1975 data).

1975  
**United States Commercial Fishing  
Whitefish Bay**

SPECIES	CATCH IN POUNDS (Fishermen's Report)
Burbot	315
Carp	40
Chub	9,239
Lake Herring	4,430
Lean Lake Trout	1,020
Smelt	86
Suckers	8,965
Whitefish	154,165
Menominee Whitefish	70
Yellow Perch	5
<hr/>	
TOTAL COMMERCIAL CATCH (1975)	178,335

**Source:** Michigan D.N.R., Fisheries Division

In addition to commercial fishermen, approximately 4,000 fishermen utilized waters within Chippewa County in 1975 for sport fishing. Fish caught by sport fishermen in Chippewa County include: Lake trout, rainbow trout, brook trout, coho, bass, northern pike, perch, bluegill and panfish and whitefish.

### Navigation

Today Whitefish Bay remains heavily traveled by large ships and ore freighters traveling between Lake Superior ports and the Soo Locks. To meet these navigational needs, marked shipping lanes are maintained in the bay and the St. Mary's River for at least eight months of the year. The length of the navigational season depends primarily upon the demand for the transported products which may justify the additional expense involved in breaking the ice during winter months to enable an extended season. Prior to 1974 the navigational season generally continued from April through December. However, during the following two years the shipping season was extended throughout the year.

The amount of tonnage which passed through the Soo Locks in the 1975-76 season was:

<b>MONTH</b>	<b>NET WT. (TONS)</b>
April 1975	6,094,117
May 1975	12,222,612
June 1975	11,794,469
July 1975	11,146,884
August 1975	9,823,051
September 1975	11,126,489
October 1975	10,396,071
November 1975	8,473,012
December 1975	7,752,370
January 1976	1,649,257
February 1976	692,290
March 1976	348,782
<hr/>	
<b>TOTAL NET TONNAGE</b>	<b>91,519,404</b>

**Source:** U.S. Coast Guard, Sault Ste. Marie, Michigan

For effective management and control decisions, good biological and technical information on the needs of fish species and the effect of man's activities on fish stocks is necessary. Fish populations are dependent upon many inter-related factors which must be considered in determining fish management procedures. Basically, to insure a continual fish supply, no more fish may be removed from the populations by commercial and sport fishing, natural predation or natural mortality than is added to the population by reproduction or growth.

In maintaining and improving fish population it is necessary to control the total catch of fish species dependent upon the determined allowable harvest. Measures to enforce allowable harvests include: Setting quotas on total fish catches by species, limitations on gear, limitations on number of commercial fishing licenses issued and limitations on fishing seasons. Measures to stop fishing when this allowable harvest is reached must also be established.

A variety of data is needed to determine the "allowable harvest" or the maximum amount of removal a stock of fish can withstand. Information which will aid necessary management and control decisions to maintain and increase fish populations of Whitefish Bay may include:

1. Estimated population, age composition and distribution of fish stocks.
2. Natural reproductive, growth and mortality rates of fish species.
3. Size and age of mature or harvestable fish (by species).
4. Habitat and survival requirements of fish species.
5. Success of natural reproduction.



6. Balance between prey and predator populations.
7. Competition between fish species.
8. Effect of exotic fish species (sea lamprey, alewife, smelt).
9. Incidence of sea lamprey wounding.
10. Factors which influence changes in survival and abundance of fish stocks.
11. Sources of fish mortality.
12. Incidence of pollution in water and evidence on fish populations.
13. Quality of Whitefish Bay waters.
14. Potential maximum fish populations.
15. Fish harvesting rates.
16. Success of efforts to increase fish populations (fingerlings and fertilized eggs).

This data will be most valuable in determining fish management activities for Bay Mills if collected and analyzed primarily by Bay Mills fishermen with technical assistance from fishery biologists. Through this information management programs may be expanded by Bay Mills to protect fish populations.

## GOALS

- Develop a system to obtain knowledge of the ecology of Whitefish Bay and how it is affected by man's activities.
- Develop management programs to insure a continual fish supply within Whitefish Bay.
- Work with other agencies involved with Whitefish Bay to insure well coordinated overall management programs for protection of the bay and its resources.

## OBJECTIVES

- **Through fish samples, biological studies and other means, develop a data base on fish resources of Whitefish Bay and effects of uses of Whitefish Bay.**

Information such as fish populations, reproductive, growth and mortality rates, fish species requirements, fish harvesting rates, balance between prey and predator species, incidence of sea lamprey wounding, sources of fish mortality, incidence and effects of water degradation and spawning sites and periods, may be included in this data base. The value of this data is that it will enable Bay Mills to expand their existing codes and regulations related to Whitefish Bay based on biological and technical data to further protect the quality of Whitefish Bay and enhance the fishery resources of the Bay.

- **Develop management programs based on biological data available to the community to protect as well as increase fish stocks in Whitefish Bay which include measures to control total species catch.**

To insure survival of fish populations the total catch of various species must be controlled. This may be done by such measures as setting quotas, size limitations, closed seasons and limits on equipment and number of fishermen. A means to control total catch and stop fishing when the determined allowable harvest is reached must be established by Bay Mills. In addition to control of fishing, attempts to improve fish habitat, restore balance between predator and prey species (control of sea lamprey) and stocking of fish may increase fish resources of the bay.

- **Coordinate with agencies such as the Coast Guard, Canadian interests, other fishermen, Department of Natural Resources [DNR], U.S. Bureau of Sport Fisheries, U.S. Fish and Wildlife Service and Great Lakes Fisheries Commission, in studies and management programs involved with Whitefish Bay.**

Coordination with other agencies involved in activities within Whitefish Bay will help insure that study and management programs are coordinated and compatible.

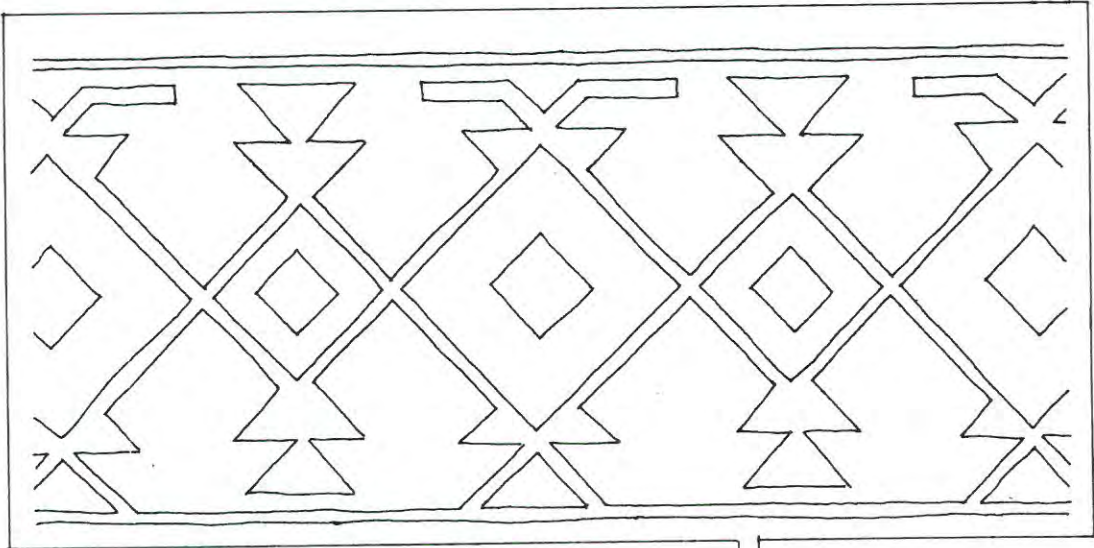
#### **FOOTNOTE**

##### **Reference:**

Data on commercial fishing in Whitefish Bay is from Department of Natural Resources statistical district #6 which includes some areas beyond Whitefish Point.

#### **BIBLIOGRAPHY**

1. **U.S. Great Lakes Pilot** April 1976, U.S. Department of Commerce. NOAA.
2. **Lake Superior, A Case History of the Lake and it's Fisheries**  
Technical Report No. 19, by A.H. Lawrie and Jerold F. Rahrer. Great Lakes Fishery Commission, January 1973.
3. **Great Lakes Basin Framework Study**, Appendix No. 8, FISH Draft No. 2
4. Personal conversation with U.S. Coast Guard, Sault Ste. Marie, MI  
D.N.R., Fisheries Division  
Corps of Engineers, Sault Ste. Marie, MI



PRIORITY GOALS

## SHORT TERM AND LONG TERM PRIORITY GOALS FOR SPECIFIC SUBJECT AREAS

### **Housing**

Short term-New Housing on appropriate sites

Long term-Expand land

### **Transportation**

Short term-Control speed and hazardous areas on reservation

Long term-Get housing and recreation away from highway

### **Health**

Short term-Dental care

Long term-Health and Safety Education, Alcohol Programs

### **Legal System**

Short term-Permanent funding for police, access to judge

Long term-Rehabilitation options for offenders

### **Sugar Island**

Short term-Housing

Long term-Full participation in community

### **Tribal Government**

Short term-Secure adequate funding under Public Law 93-638

Long term-Long term training to improve abilities to handle work

### **Elderly**

Short term-Full-time elderly worker

Long term-Housing

### **Recreation**

Short term-Recreational opportunities for youth; develop programs and facilities for youth

Long term-Develop comprehensive recreation programs and facilities for all residents

### **Land Use**

Short term-Plat and register land

Long term-Appropriate siting, sound management of land and water resources

### **Economic Development**

Short term-Fish plant

Long term-Job opportunities for expanded population, especially women and youth

### **Education**

Short term-Lower dropout rate

Long term-Education related to tribal needs

### **Youth**

Short term-Recreation

Long term-Housing

## **ECONOMIC GOALS**

- **Develop and integrated reservation economy.**

An integrated economy means Bay Mills is able to supply itself many of the services the community consumes. Development of an integrated economy would include strengthening of supply of health, recreation and educational services, home and auto repair, providing



supplies and service to the fishing industry and provision of commercial services such as groceries, laundry and gasoline.

- **Provide a variety of job opportunities, especially for women and youth, including full participation in local economy.**

A variety of jobs will be available as the community develops an integrated economy. In this fashion, the decision by a young person to stay on the reservation does not necessarily entail a commitment to one or two occupations, which may not be appealing. In addition, participation in the local economy will provide job options to include those not found in the reservation economy. More employment for women will come about, partially as a result of more jobs opening up but primarily as a result of tribal decisions to open more job classifications to qualified women.

- **Secure a consistent economic base for tribal government.**

Although any sizeable tax base seems unlikely at this time, some provision must be made to insure a consistent level of tribal government operations. Given the high levels of responsibility and service the government must maintain, it must continually be insured. This is particularly important in keeping track of proposals, performance monitoring and evaluation of programs, and consistency and accountability in enforcement of tribal policies.

## **PHYSICAL GOALS**

- **Expand land base.**

If the reservation is to be able to accommodate existing and increased populations, more land is necessary especially for homesites. Much of the existing land is unsuited for development. Existing land suitable for homesites is heavily in demand for competing uses, especially recreation, transportation and commercial uses.

- **Conserve and carefully manage reservation resources.**

Particularly in mind here are the fish and land resources. The careful management and conservation of these resources will increase the utility of these resources over the long term whereas careless use can destroy or seriously deplete them in a short time. The responsibility for that conservation must be understood and enforced by all members of the community, as all stand to either benefit or lose according to the care with which the resources are used.

- **Provide service to Sugar Island as a functioning part of Bay Mills Community.**

For the Sugar Island people to identify themselves as part of the Bay Mills Community, they must begin to enjoy the same level of services and facilities Bay Mills offers to other reservation residents. It is the desire of the Bay Mills Community to begin the process of re-unification by providing housing and services in some priority areas. With this beginning, the Sugar Island people must then respond by participating in the process of making decisions regarding distribution of Bay Mills resources on a regular basis.

## SOCIAL GOALS

- **Insure sufficient services and facilities to encourage young people to remain, and migrants to return.**

To insure the continued orderly growth of Bay Mills, it must be able to provide adequate homes, jobs, recreation, health and educational opportunities. Though it is not imagined that Bay Mills could successfully compete with urban areas in the range of opportunities available to retain and attract residents a certain minimum of facilities and services must be available.

- **Insure that community members, especially young, have the skills and information to deal with outside world on favorable terms.**

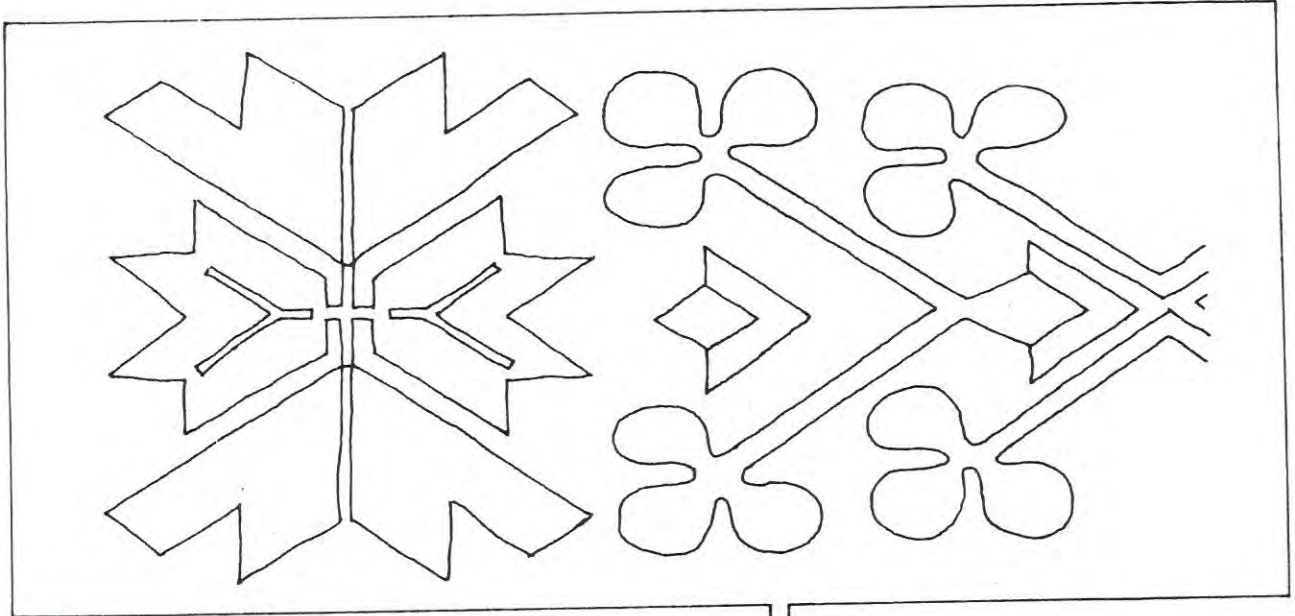
Such skills and information should include mobility in the job market, familiarity with the range of educational options, experience in dealing on a social level with those of different backgrounds and the self-confidence to assess opportunities in terms of the long term needs of the individual and the community.

- **Strengthen capacity and capabilities at tribal government.**

Through training and experience, increase the ability of tribal government to assess and respond to community needs. Through increased communication and orderly performance increase the participation of the community in the giving of policy direction to tribal government.

- **Resist further erosion of cultural heritage.**

Bay Mills culture is not just old arrowheads and a cemetery. A culture is the unique way a community has of dealing with the situation of everyday living. Culture is a process, an outlook. Bay Mills as a unique community has much to be proud of. Resisting cultural erosion means strengthening and protecting those special factors by which a person can identify themselves as a proud inheritor of the Bay Mills tradition.



PROJECT FUNDING

Because of the limited economic base of the Bay Mills Indian Community, funding of the projects described in this plan and of most future projects will have to come from off-reservation agencies, both governmental and private. Currently, the bulk of the funds are received from the Bureau of Indian Affairs (for education and tribal government), Indian Health Service, Economic Development Administration (Fish Processing Plant), Department of Housing and Urban Development, Revenue Sharing and Law Enforcement Assistance Administration (LEAA). All agencies, excluding LEAA should continue to provide funds to Bay Mills in the future. Revenue Sharing funds will be disbursed to Bay Mills automatically, but all other funds must be applied for.

The Resource Developer should coordinate a "Grants Resource Center" within the Tribal Center. He should make available to the Tribal Council and the various tribal departments information on what funds are available, how to apply for them and where to search for outside technical assistance.

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### **Funding Sources**

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Such a wide variety of grant programs exist, both public and private, that listing all may not be the most productive approach to take. Rather, this section should serve as a key to gaining access to information on grant-getting. How does one discover which agencies and organizations support community projects? And how does one keep up to date on new grants?

Several general sources that cover both governmental and or private sources that are particularly useful are listed below:

1. **Catalog of Federal Domestic Assistance.** Annual. Washington, D.C: Government Printing Office, \$17/year (G.P.O. Bookstore, McNamara Federal Bldg., 447 Michigan Avenue, #160 Detroit 48226). It is issued once per year in a looseleaf notebook, updated six months after publication. Gives full information (how to apply, deadlines, etc.) on over 1,000 federal programs. Very easy to use with indexes by subject, agency and function.
2. **Foundation Directory.** 5th edition. New York: Foundation Center, 1975. \$30.00 (Distributed by Columbia University Press, New York, N.Y.)

The major directory of U.S. non-profit, non-governmental organizations with assets exceeding \$1,000,000. It is arranged by state, then by the foundation name and provides information on the number of grants awarded each year and who to contact regarding grant applications.

3. **Grantsmanship Center News.** Los Angeles: Grantsmanship Center. Published 8 times per year. \$15/year. (Grantsmanship Center, 1015 West Olympic Blvd., Los Angeles, CA 90015).

One of the most up to date and accurate sources of current information for individuals and grant resource centers. Besides publishing articles on all aspects of grants (governmental and private), it also includes descriptions of federal programs and annotated lists of new publications relevant to applying for grants.



4. **Human Resources Network: User's Guide to Funding Resources**  
Chilton, 1975. \$35.95. (Chilton Publishing Co., 2010 Chancellor St. Philadelphia, PA 19103).

A very useful, all around source on public and private grant-makers. Brief data is provided on each grant and the general qualifications each applicant must meet. Information is also provided on writing proposals.

5. **Eastern Upper Peninsula Planning & Development Commission (EUPPAD)**  
Lake Superior State College, Sault Ste. Marie, Michigan.

The EUPPAD can provide technical assistance for grant applications and is a good source for regional social and economic data.

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### **Grant Preparation**

A key factor in receiving grants is the quality and effectiveness of the proposal. Many excellent sources on proposal preparation are available. A selective list is provided below. It is recommended that the Resource Developer purchase these for the Grants Resource Center.

1. Dermer, Joseph. **How to Get Your Fair Share of Foundation Grants.**  
New York: Public Service Materials Center, 1973. \$12.00 (Public Service Materials Center, 355 Lexington Ave., New York, N.Y. 10017).

What types of proposal foundations expect, how to research them, and proposal writing.

2. Dermer, Joseph. **How to Write Successful Foundation Presentations.**  
New York: Public Service Materials Center, 1970. \$8.95.

A step-by-step guide to writing appointment letters and to preparing presentations for general operating funds.

3. Dermer, Joseph. **The New How to Raise Funds From Foundations.**  
New York: Public Service Materials Center, 1975. \$8.95.

Sources of foundation information, methods of getting foundation appointments, how to improve your chances while your proposal is being considered, the impact of federal legislation.

4. **Grantsmanship: Money and How to Get It.** Chicago: Marquis' Who's Who, 1973. \$5.00.  
(Marquis' Who's Who, 200 East Ohio St., Chicago IL 60611).

Foundation and government grant writing. Includes samples and references to other sources.

5. Marais, Philip Des. **How to Get Government Grants.** New York: Public Service Materials Center, 1975. \$13.50.

How to qualify for government funding, a system and process for identifying funds for which you are eligible, a plan for developing proposals and applications for grants and contracts, a basic management system for money received and a checklist of primary information sources.

6. U.S. Department of Labor. Women's Bureau. **Looking for a Grant: A Kit for Groups Seeking Financial Assistance.** Washington, D.C.

Includes sources of information on proposal writing, guidelines for grant making and grant getting, program planning and proposal writing. The Emphasis is on women's programs.

7. **Where the Money Is! Federal Funding Guide for Community Action Agencies and Non-Profit Organizations.** Washington, D.C.: National Center for Community Action, 1975. \$5.00. (NCCA, 1711 Connecticut Avenue N.W., Washington, D.C. 20009).

Lists and describes most federal programs that have potential benefits for low income people. Provides addresses of who to write to for further information.

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### **Grant Administration**

The Grants Resources Center should also include resources on grant administration. The likelihood of receiving additional grants is enhanced by the existence of well managed grants.

1. **Grants Administration Manual.** Looseleaf service. (HE 1.6/7) Washington, D.C.: Government Printing Office. \$13.50. (G.P.O. Bookstore, McNamara Federal Bldg., 477 Michigan Avenue #160, Detroit, Michigan 48226).

2. **Layman's Guide for Grants and Contact Management.** Los Angeles: Hamilton. \$3.95. (Hamilton Printers, 11906 Wilshire Blvd., Los Angeles, CA 90025).

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### **Technical Assistance**

Many private and public organizations and agencies can provide technical assistance to Bay Mills for both the application and implementation phases of grant-getting. Brief descriptions of several of the most useful are listed below. It is recommended that both the Resource Developer and the project supervisors maintain regular contact with these organizations.

AMERICAN INDIAN DEVELOPMENT CORPORATION EDUCATIONAL FOUNDATION  
182 Main St., P.O. Box 495  
Wenham, MA 01984

They have published the **Indian Industrial Development Manual.** \$1.00.

ASSOCIATION ON AMERICAN INDIAN AFFAIRS  
432 Park Avenue  
New York, N.Y. 10016.

The Association aids Indian tribes in mobilizing federal, state and private resources for a coordinated attack on the problems of poverty and injustice. The bulk of its technical assistance is geared towards strengthening Indian self government. The Indian Communities served to date (from California to Maine) develop productive programs in resource utilization, employment opportunities, housing, tourism, education, child welfare, law and order and vocational training. The Association will assist tribes with contract negotiations with the Bureau of Indian Affairs;



will provide legal counsel to Indian families to protect them from abusive child welfare practices; will provide technical assistance to Indian communities in the development of prevention and rehabilitation services for families in trouble; will provide technical assistance to tribes and inter-tribal organizations to encourage Indian economic and industrial development; will assist tribes with the development of comprehensive land use plans; and will make available to tribes, legal advice on Indian land rights.

**CENTER FOR COMMUNITY CHANGE**  
 1000 Wisconsin Avenue N.W.  
 Washington, D.C. 20007

The Center will assist local community organizations in finding resources and skills relevant to community development. The Center also publishes a monthly newsletter **Federal Programs Monitor** available at no charge. It discusses federally funded projects and new legislation of interest to local community action agencies and community development corporations.

**CENTER FOR COMMUNITY ECONOMIC DEVELOPMENT**  
 639 Massachusetts Avenue, Suite 316  
 Cambridge, MN 02139

The Center is a federally funded research group that focuses its attention on economic development. Technical assistance to communities is not provided but its **Newsletter** (which is free) does describe various community success stories and announces new useful publications.

Another means of keeping up to date on grant deadlines, new grants, new grant regulations and descriptions of projects already funded is to maintain regular contact with grant-giving agencies. Many publish free newsletters or news releases. Listed below are several such agencies. The Resource Developer should have Bay Mills added to their mailing lists and should make the information received available to all interested parties on the reservation.

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**Federal**

Economic Development Administration Office of Public Affairs Department of Commerce Washington, D.C. 20230	Department of Housing and Urban Development Publication Service Center, Room B - 258 451 Seventh St. SW Washington, D.C. 20410
Environmental Protection Agency Office of Public Affairs 401 M. Street SW Washington, D.C. 20460	Indian Health Service Health Services Administration 5600 Fishers Lane Rockville, MD 20852
Farmer's Home Administration Information Staff U.S. Department of Agriculture Washington, D.C. 20250	Law Enforcement Assistance Administration Office of Public Liaison, Room 1242 Dept. of Justice Washington, D.C. 20531

Office of Minority Business Enterprise  
Public and Congressional Affairs Division  
Dept. of Commerce  
Washington, D.C. 20230

Office of Revenue Sharing  
Dept. of the Treasury  
Fifteenth St. and Pennsylvania Ave. NW  
Washington, D.C. 20220

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**State**

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Bureau of Community Services  
Michigan Dept. of Labor  
7150 Harris Dr.  
Lansing, MI 48926

Michigan Office of Juvenile Justice Programs  
Stoddard Bldg.  
Lansing, MI 48933

Office of Minority Business Enterprise  
1200 Sixth St., 11th Floor, North Tower  
Detroit, MI 48226

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**Private**

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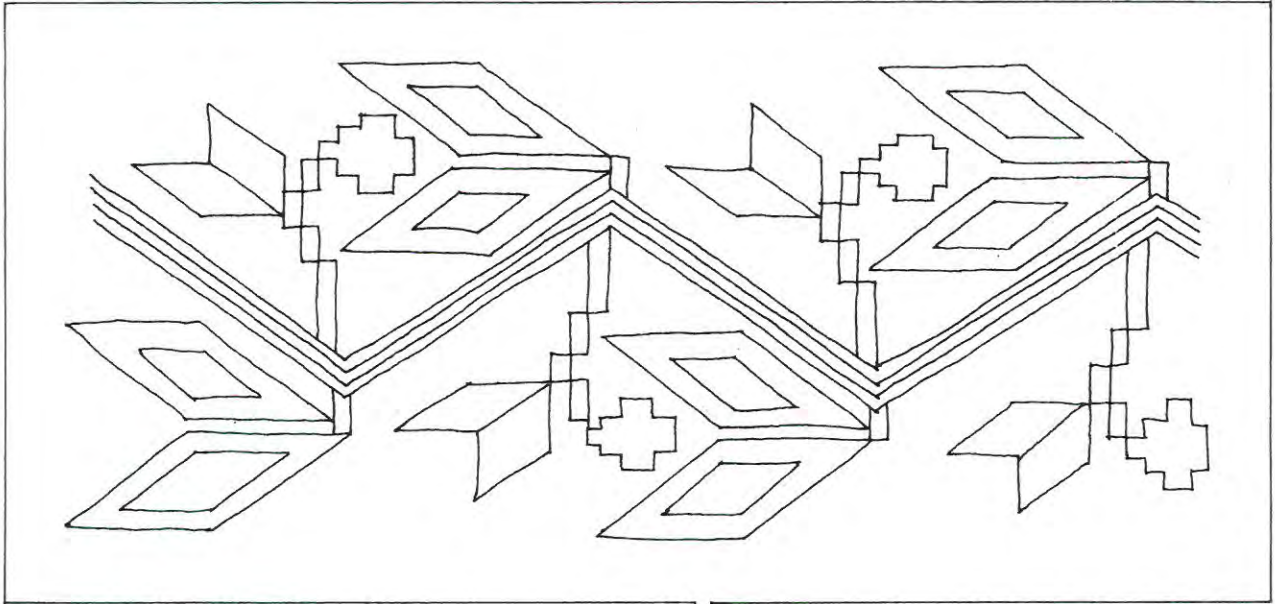
Ford Foundation  
320 E. 43rd. St.  
New York, NY 10017

U.S. Catholic Conference  
1312 Massachusetts Ave. NW  
Washington, D.C. 20005

HOUSING ASSISTANCE COUNCIL (HAC)  
1601 Connecticut Ave. NW  
Washington, D.C. 20009  
(202) 483-1426

The HAC provides technical housing assistance to rural communities. The **HAC News** which is published periodically is available at no charge. It announces new grants, available funds, federal reports and congressional action on rural housing. The HAC has also published several useful handbooks: **Indian Housing Roles: The BIA and the Indian Health Service** (\$3.50); **A Guide to Indian Use of FMHA Housing Programs** (\$3.50); **Rural Housing: A Review of Basic Farmers Home and HUD Programs** (\$2.50).





SCENARIO

The purpose of the following section is to describe a scenario as to how the Bay Mills Community **might** be affected given certain policy changes or actions taken in accordance with the plan. The scenario takes the form of a hypothesis which describes a series of events related to key planning areas which could be affected assuming:

1. No policy changes or continuation of existing actions.
2. Moderate policy changes or partial action taken by the community to achieve recommended goals and objectives
3. Maximum policy changes and total mobilization to effect fulfillment of recommended goals and objectives.

The scenario portrays certain aspects of the Bay Mills Indian Community if:

1. Stays as it is or might become with further inaction.
2. As it **might** be at an intermediate level of development.
3. As it **might** be with maximum realization of the recommended goals and objectives.

This portrait or scenario is hypothetical in that it is difficult to consistently predict an outcome when all of the key variables are not known or interact in such a way that the cumulative effects cannot be measured. The scenario is not a precise exercise. It is included in this plan primarily to give the reader an idea of the probable consequences if different actions are taken.

## **ENVIRONMENTAL PROTECTION**

### **No Policy Changes**

- Continued erosion of dunes and shoreline
- Pollution develops in standing and ground water
- Vegetation removed with associated loss of privacy, wind protection and associated wildlife
- Unwise land use results in loss of privacy and open space areas
- Lake resource becomes increasingly difficult to anticipate. Health and marketing problems because of quality of fish

### **Moderate Policy Changes**

- Dunes and swamps protected against further intrusion, some protective vegetation returns, shoreline stabilizes

- Existing vegetative cover retained with current wildlife population, wind protection and privacy
- Lake resource at current levels of production and cleanliness
- Ground water protected

#### **Maximum Policy Changes**

- All environmentally sensitive areas protected and expanded
- Rehabilitation and reclamation of dunes, shoreline and forest area as self-sustaining system
- Balanced ecosystem with minimum harm to natural communities of plants and animals
- Lake resource well managed allowing higher levels of production with maximum quality of fish

### **POPULATION**

#### **No Policy Changes**

- Population increases slightly due to slight decrease in out-migration
- Family size becomes slightly smaller
- Demographic profile shows predominance of very young and very old on reservation
- Off reservation population expands, especially in areas immediately adjacent to reservation
- Family structure strained as middle age group disappears
- Expanding number of single households
- Blood quantum continues to diminish
- Proportionately fewer women, especially young women, on reservation

#### **Moderate Policy Changes**

- Population begins to increase due to substantial decline of outmigration with increased job and housing options
- Increased number of young families
- Increased proportion of young and working women
- Family structure increasingly stable with increases on reservation job and housing options

- Blood quantum retained
- Median age rises with better representation of all age groups

#### **Maximum Policy Changes**

- Population increases with residents remaining and in-migration from area and state
- Blood quantum strengthened
- Family importance retained, but smaller families
- Proportion of women to men same as national population
- Age distribution reflects a balanced community with continuity

#### **HOUSING**

##### **No Policy Changes**

- Existing land base maintained
- Development on south end continues with resulting problems of sewer and water
- Incorrect siting of houses, trailers-resulting in lack of privacy, unsightliness, no protection from elements
- Little private development of new houses
- Most housing development will be government rental units and poorly designed
- More trailers will be sited with resulting problems
- Continued deterioration of existing trailers-more additions and repairs to existing structures
- Continued management problems with Indian Housing Authority
- Confusion over sites and leases continues due to absence of platting and zoning
- Inefficiency of housing designs resulting in continued high costs for heating, maintenance of sewers and water pumps and electricity
- Continued crowding of existing units
- Youth forced to live off reservation
- Conflicts develop due to new units placed between existing units
- Insufficient land for community improvements due to presence of trailers



- Increased number of home or trailer fires due to inadequate wiring and unsafe heating units

#### **Moderate Policy Changes**

- Current land base continues but good planning results in enhanced privacy protected through land registration, good siting and compatible uses
- Very limited construction on south end and only on recommended sites
- Some owner built homes appear but new houses are primarily government financed and mixed rental and owner occupied
- Some separate rental housing units established for youth and elderly
- Trailer units are added but on approved sites and primarily as a transition to permanent housing
- Housing Improvement Program monies distributed on priority basis
- Home maintenance improvements to include some foundations, rewiring, insulation
- Some housing code enforcement for code violations that present a safety or health danger
- Housing sites registered but not surveyed
- Housing construction only on approved sites
- Fire hazards in houses sharply reduced
- Housing development coordinates with other community improvement activities

#### **Maximum Policy Changes**

- Expanded land base
- Land use planning adopted with platting and zoning or use restrictions
- All lots surveyed and registered; all development in conformance with code on structure, utilities, siting
- Population on South end stable or diminishing, limited to current sites
- New homes are owner financed
- Mobile homes used only as transitional units to house and located in designated trailer park

## **ECONOMIC DEVELOPMENT**

### **No Policy Changes**

- Employment continues to be seasonal and marginal
- Low income off or on reservation
- Government jobs limited to special grants and employment programs
- Sporadic income derived from fishing
- Raco continues to be operated on an unprofitable basis, eventually folding
- Tribe continues to suffer from lagging national economy
- Women under represented in labor force
- Limited career options for young people

### **Moderate Policy Changes**

- Employment figures improve; jobs go to those with higher education
- Income levels rise for some, particularly young and small families
- Employment seasonal but available for several seasons
- Fishing industry expands producing supplemental income for some, solid income for a few
- Expanded job opportunities on reservation as tribal government positions are secured
- Beginning of small independently owned enterprises on reservation
- Management plan for Raco developed which will indicate future development decisions
- Increased participation in off reservation government jobs
- Increased independence from national economy

### **Maximum Policy Changes**

- Vocational education and college educations tied to job opportunities
- Jobs secured for tribal government operations on basis of appropriate training and successful performance
- Development of strong secondary economy of services (repair, bookkeeping retail and wholesale service) which provides year round jobs with adequate income and benefits

- Career advancement ladder develops
- Equal opportunity employment and increased job skills secures fair share of government jobs in area (U.S. Forest Service, U.S. Department of Agriculture, County Road Commission, etc.)
- Fish plant operations produce steady income for fishermen and processors as well as spin off opportunities such as equipment repair, restaurant operation, and services
- Raco operating under sound management plan with sufficient capital under Indian management or training program to turn over to Indian management
- Relatively independent from national economy

## **TRANSPORTATION**

### **No Policy Changes**

- Heavy, uncontrolled traffic through residential areas
- Snow removal on Iroquois Road and certain driveways only
- Frequent accidents caused by lack of snow removal, poor driving design, lack of street signs, bad road design and speed limits not enforced
- Road flooding due to poor design and no diversion system

### **Moderate Policy Changes**

- Traffic signs to control and warn motorists
- Guard rails at dangerous corners
- No parking zones established in hazardous areas
- Registration and safety inspection of all on-reservation vehicles
- Culverts installed for drainage control
- Increased use of bus system

### **Maximum Policy Changes**

- Separation of through traffic from areas of housing, recreation, special environments
- Protective buffers such as plantings installed along main roads and driveways
- Resurfacing and rerouting of Six Mile Road (Iroquois Road) from Sault Ste. Marie through reservation

- Foot traffic and bicycles encouraged to use paths constructed away from road
- Frequent use of Eastern Upper Peninsula Transportation Authority Transit System
- Frequent snow plowing and maintenance on residential roads off Iroquois Road
- Inter agency cooperation network between community, county, and Bureau of Indian Affairs to maintain Iroquois Road

## **PARK AND RECREATION RESOURCES**

### **No Policy Changes**

- Lack of park and recreation facilities encourage high incidence of alcoholism and drug abuse among youth
- Youth continue to use Iroquois Road as playground
- Existing ball diamond area continues to deteriorate and serves only teenage and young adult males
- Women continue to have no form of organized recreation

### **Moderate Policy Changes**

- Ball diamond improvement provides outdoor facility for wider group of reservation residents
- Youth center provides a supervised place for young to gather and recreate
- Spectacle Lake improvements provide water based outdoor recreation area for residents
- Reduction in youth vandalism, alcohol and drug abuse

### **Maximum Policy Changes**

- Balanced park and recreation system developed which includes facilities and programs for all segments of population accessible to all members of the community
- Community-school programs expanded; transportation system to Brimley School system improved
- Transportation system to Sault Ste. Marie improved which opens up facilities to older members of community
- Sound administrative structure developed which maintains facilities, develops programs, secures funding through grant proposals, fees and charges and volunteer services
- Creative and innovative programming developed which enhances cultural awareness, personal growth and development and good physical condition



- Integration of recreation as a community service into new housing areas and population centers
- Land use covenants designate recreation and open space areas for posterity

## **EDUCATION**

### **No Policy Changes**

- School dropout rate will fluctuate
- Limited utilization of college and vocational training
- No drug, health or sex education
- No records developed upon which to base evaluation of programs
- Head Start will continue
- No Indian teacher or administrators in the local public school system
- No Indian culture class
- Tutoring and transportation limited or non-existent

### **Moderate Policy Changes**

- Dropout rate can stabilize
- Many of those who drop out obtain GED's
- Larger number of students enrolled in college or vocational training
- Education committee functioning at higher level of efficiency; able to review operations due to complete records
- Tutoring programs for those who need them
- Transportation system to get students to school
- Basic records system adopted
- Increased Indian employees in school system primarily as counselors and tutors
- Increased recreation programs at the school

### **Maximum Policy Changes**

- Higher percentage of Bay Mills youth go on to higher education related to job opportunities
- Career and personal counseling instituted
- Parents active in policy level decisions concerning education of children
- Indian personnel represented at all levels in school system
- Tutoring programs expanded
- Transportation system improved so students can participate in extra curricular activities
- Records system and evaluation routinely kept

### **HEALTH**

#### **No Policy Changes**

- High incidence of diabetes, obesity, high blood pressure will continue
- Life expectancy will continue at present or lower level
- Alcoholism and drug abuse will continue to take lives-directly or indirectly
- Community will depend more on health facilities of county and Indian Public Health Service, less on trained reservation personnel. Continued crisis orientation
- Mental and emotional disorders will continue to be untreated
- Dental problems will continue to result in high rate of teeth loss
- Lack of sex education and family planning continues high incidence of unplanned births
- Lost time from work or school due to illness continues
- Health costs rising will place heavy drain on tribal health monies

#### **Moderate Policy Changes**

- Regular testing for diabetes instituted with reservation residents
- Advanced training for and increased utilization of health personnel
- A reduced rate of emergency medical problems and accidents occurs as general health level of reservation improves with preventative education and care
- Life expectancy rises but still below national average

- Medical treatment is made available for health problems including mental, alcoholism, dental, prenatal, etc.
- Less health-related time lost to work or school

#### **Maximum Policy Changes**

- Balanced diet and screening begins to alleviate diabetes, hypertension, obesity
- Routine health and dental treatment and checkups on reservation
- Further reduction in accidents and emergencies due to preventative measures
- Clinic with outreach staff established on reservation to handle most routine health problems
- Life expectancy of reservation residents rises 20 years to approximate national average
- Counseling for mental, and emotional problems is available whenever needed
- Alcoholism greatly reduced as a significant health problem
- Preventative dental care prevents most tooth loss
- Children grow up healthier which helps ensure top school and work performance in later years
- Through comprehensive family planning, children and parents will be healthier and happier

#### **LAW ENFORCEMENT**

##### **No Policy Changes**

- Law enforcement measures minimal on reservation
- Court continues to operate but only at current level of efficiency
- Lost or misplaced records will cause disruptions and challenges to decisions
- On reservation jurisdiction not recognized by off reservation jurisdictions
- Lack of capacity to deal with juvenile offenders
- No counseling for indigents
- Law enforcement equipment deteriorates without adequate replacement

- Morale dips
- Experienced officers eventually resign

#### **Moderate Policy Changes**

- Officers encouraged to stay on job
- Enforcement procedures strengthened for off and on reservation offenders
- Record keeping system enhances enforcability of court decisions
- Some rehabilitation of juveniles will begin, but limited options
- Indian judge appointed
- Equipment maintained and supplemented with breathalyzer and radar gun

#### **Maximum Policy Changes**

- Full complement of police equipment with regular maintenance
- High morale and credibility among police
- Prevention programs established
- Courts credibility to other jurisdictions increased with good performance record
- Inter agency cooperation to assist such problems as marital, alcohol, mental health
- Services of Indian judge and Indian attorney obtained
- Enforcement of alcohol and traffic laws, accidental death rate drops significantly

### **SUGAR ISLAND**

#### **No Policy Changes**

- Small population
- Mostly summer occupancy
- No services for housing, health, education, police, roads, fire, trash removal, water and sewer, employment, etc.
- Limited participation in Bay Mills community affairs
- Continued friction with Soo Band over legalities and rightful ownership of property



### **Moderate Policy Changes**

- Increased housing with water and septic
- Population increases somewhat with more year round residents, some families
- Increased demand for other services; especially health and education
- Increased participation with Bay Mills Community Affairs
- Friction with Soo band over property rights continues but abated somewhat
- No fire protection, trash removal, police services
- Employment opportunities in Sault Ste. Marie

### **Maximum Policy Changes**

- Permanent community established
- Increased community demands for parity with Bay Mills Indian Community
- Tribal government established
- Primary loyalty bond to Bay Mills Indian Community established
- Fire protection, trash removal, road maintenance arrangements in cooperation with Sault Ste. Marie
- Positions for police protection and health services established
- Transportation costs cut either by bridge construction or reduction in ferry rates

## **TRIBAL GOVERNMENT**

### **No Policy Changes**

- Increasingly swamped with paperwork: correspondence and records misplaced
- Confusion as to job responsibilities
- Increasing apathy due to lack of clear direction: results in poor attendance and minimal effort to improve programs or work performance
- Overlap and duplication of efforts due to lack of coordinated programming and inter-staff communications
- Good performance seldom rewarded because of absence of program or job evaluation
- Buildup of resentment among population due to lack of information, irregular meetings and toleration of shoddy job performance

- Tribal executive must constantly travel, unable to keep up with reservation business and no authority delineated to make decisions in his/her absence
- Erratic funding for programs due to lack of follow up or performance

**Moderate Policy Changes**

- New procedures initiated: new filing system, job descriptions, staff meetings, calendar of scheduled events and appointments kept, funding proposals submitted before deadline
- Published agendas and information on proposals ahead of time for regular meetings of General Tribal Council, Executive Council and Committees
- Stand in for chairman in his/her absence

**Maximum Policy Changes**

- Regular evaluation of personnel and programs
- Strategy developed to secure regular program funding
- Chain of command established to free up executive for policy level administration
- Promotion and hiring by merit instead of family ties, recognition of good workers
- Regular on job training opportunities for orientation and upgrading
- Regular flow of information among staff and between staff and community at large

**CULTURE**

**No Policy Changes**

- Lack of cultural awareness will prevail
- Limited attempts by some young people to renew traditional outlook
- Cultural activities occur sporadically or away from Bay Mills

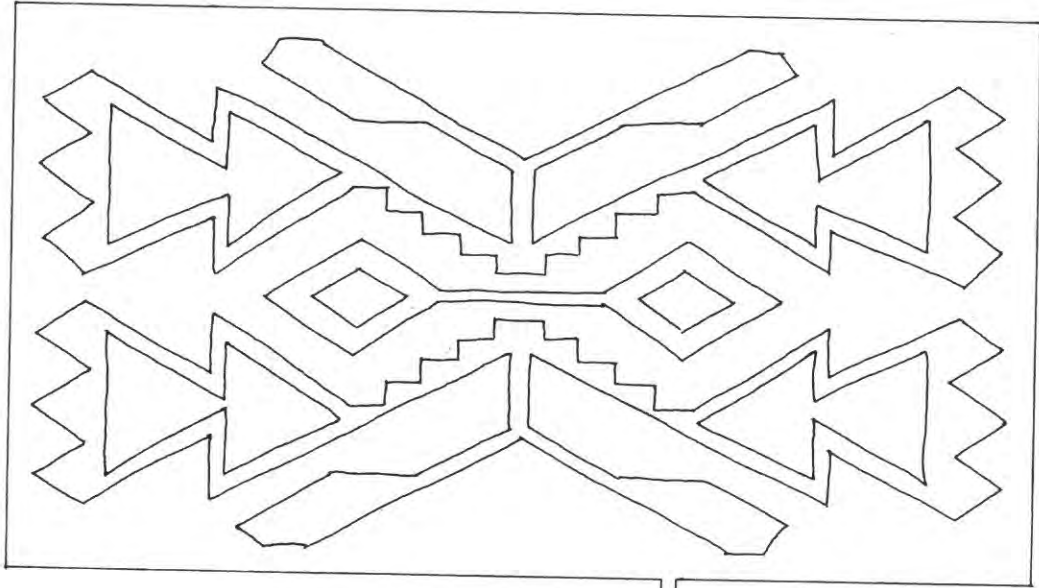
**Moderate Policy Changes**

- Culture classes offered in school
- Small museum or library displays
- Some restoration of special places
- Increased knowledge and adaptations of traditional ways
- Programs related to alcohol and drug abuse established

- Environment protection measures enacted
- Some regular participation in ceremonies
- Increase interaction with traditional and other progressive Indian communities

**Maximum Policy Changes**

- Culture integrated into daily life activities
- Regular interaction with other Indian Communities
- Use of restored special places by community
- Special education in homes or with groups on reservation
- Indian ceremonies held regularly on reservation
- Sharp decline in alcohol and drug abuse
- Sharp increase in environmental protection as part of land use plan



APPENDIX



## METHODOLOGY

Initial orientation to the community was accomplished through extensive review of documents on Bay Mills. These included a resource inventory by the Bureau of Indian Affairs (BIA), an Overall Economic Development Plan (OEDP) from 1974 and newspaper articles, especially regarding the fishing rights controversy. A general overview of conditions of Michigan Indians was achieved by review of the Touche-Ross study to the governor in 1971, and development plans for Keweenaw Bay Indian Community by Vilican-Leman and the Hannahville study by Central Upper Peninsula Planning and Development (CUPPAD). Regional perspective was gained by study of Eastern Upper Peninsula Planning and Development (EUPPAD) planning documents and conversations with staff at EUPPAD and CUPPAD.

The initial orientation was followed by an on-site visit which consisted of driving and walking the reservation with Art LeBlanc, Tribal Chairman, who provided specific background on some of the more outstanding priorities. Introductions to tribal staff and initial introductions to other non-government community members followed the tour. The first community entry efforts were decidedly low profile.

For the first month, the professional trainees gathered base data during the day, with discussion and reading in the evening. Initial data gathering was for base map development and history. Both these data needs can be met with a minimum of personal interaction between staff and community members. This allowed the professional trainees and the community the chance to get accustomed to one another without placing any additional load on personal interactions. It also gave staff a chance to evaluate work habits before developing a training and planning schedule. Evening readings and discussions were on planning theory (why plan?) and techniques community organizers use to establish a working relationship with a community.

Because of the positive relationships the project had with the tribal leadership, the professional staff and trainees were invited early on to begin attending meetings related to community business. Though none of the professional staff or trainees contributed much to these first meetings, these meetings served the dual purpose of bringing the staff up to date on tribal information and establishing our role as working for the community.

Once the priorities of planning effort were identified by tribal leaders and staff, work schedules and tentative priorities were developed for the trainees and staff. First level priorities included economic development, housing, land use, education and health. Secondary priorities were youth and elderly, recreation, transportation and public services. Activities to be undertaken were data collection, problem statement, needs assessment, feedback activities to community, goal development, priority preference from community, relating objectives and activities to goals and finally the tying in of resources for funding and technical assistance to community programs.

At this time the community trainees joined the planning effort. The professional trainees, though on the job only slightly longer, were enlisted as teaching aides. The dual purpose of this assignment was to learn by teaching, and to provide more individual attention to the community trainee's insights into the community. An additional benefit was the exposure of professional

trainees to community trainees. Several exercises were undertaken to acquaint all the trainees with the type of perspective desired in their planning efforts. Exercises included mental mapping of the trainees neighborhood, an extensive essay on personal perspectives on their neighborhood, discussion around the type of vocabulary that would be needed and a chance to review plans done for the other communities. Strong efforts were made to tie the concepts of planning to what people already knew about their community and to provide positive support for correlations trainees could draw between personal experience and the task at hand.

Particularly useful to staff and trainees was an exercise of deriving demographic data. No census existed for the community. The community trainees volunteered the notion that among them, they already knew everyone in the community. After discussion about the importance of reliable statistics, and the insights to be gained by aggregating their personal data, the trainees compiled from personal knowledge a census of names of all members of households; ages, occupation and locations of homes. Field check and survey work confirmed the accuracy of this census. Also important, it clearly demonstrated the value of the community trainees to the task of planning for Bay Mills.

Staff initially established information needs in each subject area. Trainees, professional and community, then worked together to outline a strategy for gathering the data, combining surveys, interviews and research. Extensive discussions with staff helped to expand the initially limited scope of questions and sources.

As the trainees more clearly defined their information needs, it became obvious that much of the information required could only be gathered through a household survey. Professional and community trainees pooled their questions and an instrument was developed by them. The necessity of sharpening the questionnaire raised the issue of focusing information needs; review, pretest, rewrite, until the order and wording seemed satisfactory. What ambiguities were still left in the instrument weren't corrected by staff beyond a certain point. Given the scope of material to be gathered and the skill of the interviewers, it seemed sufficient for the purpose at hand. Also, attempts to use the data gathered would make the point most clearly.

The development of the household interview form can be contrasted with the home inspection form with revealing results. The home inspection form was developed entirely by professional staff and carried out by trained inspectors. There was no room for ambiguity. It was 100% survey. However; the staff that developed this form didn't know the community well enough to know what problems should have been looked for. Thus, the results, while standard and unambiguous, didn't highlight the special home problems of heating, utility services and mobile homes. The wrong questions, however well asked, reveal nothing of significance. The questionnaire developed by the trainees was more valid.

A large portion of the success of the questionnaire was the interviewers. To standardize results only two interviewers were used for household surveys, though all trainees participated in two day session on interviewing techniques. These sessions consisted of a review of the instrument, as well as practicing on each other. The varied work experiences of the trainees including a community outreach worker and two former salesmen, added to the sessions. The special techniques of each added to interviewing repertoire. Pretests of the instrument and practice for the interviewers was done on three members of the community who were familiar with our program, but not heads of households.

Constant monitoring of the interviewers revealed little hassle. The fact that the interviewers were active residents and members of the community had much to do with the positive response rate on household interviews. A letter sent to all households previous to a visit by an interviewer helped to allay any fears of intrusion by outsiders. The letter explained briefly the purposes of this project, made an open invitation to participation or criticism by any member of the community and asked for their cooperation with the interviews. The letter listed the subject areas each person would be working in, and was signed by all members of the program.

Planning staff received no feedback that was directly attributable to the letter. However, there was a 95% completion factor on surveys. Surveys attempted both before and after ours, conducted by personnel familiar to the community, achieved less than 40% completion. Of the households who weren't surveyed, about one half refused interviews and the other half were hospitalized.

The survey was taken both afternoons and evenings at the homes, primarily during the work week. Where that was inconvenient or impossible, contact was on weekend days. Data was related to head of household and determined by the household. All households with head of household over 55 years of age, were interviewed by one interviewer, all under 55 by the other.

All information collected was insured confidentiality by a coding system known only to interviewers.

Once the data was collected, each trainee extracted and tabulated that information necessary for their particular purposes. Analysis was then developed in conjunction with staff, as to correlation and significance.

Besides the household surveys, each trainee conducted interviews appropriate to their subject areas. The interviewing seminar for household surveys served as interviewing background for all trainees. These subject area interviews were less rigorous, providing only general background information and leads to more specific sources. None the less, questions were reviewed and pretested on staff. Where a trainee wished, staff or a professional trainee would accompany them on the interview. Besides the data gathering function, these interviews had the effect of stimulating and sharpening discussion within various programs about services to the community. While no result can be directly attributed to these interviews and the ensuing discussions, numerous expressions were made of heightened consciousness of community needs. In at least two instances, action, in the form of requests for proposals, followed by funding, came in response to interviews of outside agency personnel. It was clear that these interviews had a political as well as an information function.

Within the program, two functions were required that added depth and cross-reference capacity to the planning effort. Trainees were required to plan their activities a week ahead of time and to share those plans at weekly staff meetings. At the staff meetings, each trainee also reviewed the previous week's activities. This initially evolved not only as a way to keep interviewers from being contacted repeatedly but also as a means for trainees to share their work progress and insight with other trainees. Criticism at these meetings was kept to a minimum, to encourage people to speak freely without fear of humiliation. This helped to set an appropriate tone, not just for a cooperative working relationship among team members, but also to achieve utilization of the plan itself.

Those initial problem statements have been reviewed by staff. Through discussion, data needs and goals have been refined, and new work developed. Final write-up on the plan is being done by staff off site. Format modification and editing by outsiders who are planning practitioners has been utilized to restrain the particular bias of those too close to the work.

Continuous feedback went on, between staff, trainees still on site, community members and tribal employees, regarding development goals and priorities, and program development. This plan, though the first written for the community, doesn't exist in a vacuum. The community had many ideas about growth and priorities previous to this planning effort, as well as a history of development. The continuous feedback attempts to insure that this plan reflects those community priorities and can easily become a part of an existing development process, supplementing and strengthening existing efforts.

This strategy has implications in three areas; data gathering, needs assessment and implementation programs. The importance of community participation in collecting information has already been discussed. Needs assessment and priority setting is well established as part of the planning process. It is in the area of follow through that many planning efforts have faltered. Having derived, with the community, priority areas, having documented the needs and having tied potential resources for funding and technical assistance to areas needing work, a mechanism for action has been created and pointed in a direction. How then, to make it move?

Planning efforts should create a certain tension in a system. Raising problems and raising expectations generates a need for activities to release that tension. This plan presents a program of activities whereby those community members who are concerned have a positive means of using that concern. The final step for the planner is to insure the linkage between community priorities and political action.

The planning staff and community trainees will review this plan with the committees and persons involved in community actions. Not just a presentation meeting but an overall review of problem statement, needs assessment, priorities, goals and actions to be taken. It is said, "The wisest one is the one who can tell people something they already know." This plan represents another way of looking at what the community knows all too well. If it's a bad plan, folks will thank the planners and put the plan on a shelf somewhere. If it is a good plan, it will spark insight and understanding that will lead to positive action towards achieving desired goals.



## FINANCIAL AVENUES

### Raco Development

#### Federal

- E.D.A. — Grants and loans for industrial facilities  
(maximum 80% grant) (loan to 65% of fixed assets)
  - Technical assistance (11.303)
- F.H.A. — Business and industry loans (10.422)
  - Business and industry grants (10.424) 50%  
project cost
- U.G.L.R.C. — Supplemental monies on grant projects

#### State

- Industrial Revenue Bonds
- Job Development Authority

#### Local

- Chippewa County Economic Development Corporation
- (possible) Superior Township E.D.C.

Master Plan Suggestions for Bay Mills Indian Industrial Park C. Hazen 1-75 — 1

## THE MASTER PLAN

The Master Plan, comprehensive plan, or guide plan for a community and for the region will identify the proposed location of future industrial areas. The most desirable tract of land may or may not be shown as a future industrial area. In fact, there's a good chance that such land has not been designated for future industrial use on the master plan. Not all planning staffs are aware of the latest trends in industrial location. Remember that industry — not community planning — was the leader in the up-grading of industrial sites!

This Master Plan is significant to the industrial park in three respects:

- a. The Master Plan should be the first, but not the only reference.



- b. Understand the relation of the Bay Mills Indian Industrial Park land to other proposed land uses in the vicinity, existing or proposed transport facilities, and proposed public works such as water, sanitary and storm sewers, schools, and other critical public services. All of these will affect site planning, the types of industry attracted, and the timing of the development.
- c. If the tract is not shown as "future industrial" testify at a public hearing on the plan requesting that your site be considered for future industrial development.

#### **Development Standards**

Development standards normally cover minimum tract size; minimum lot size; minimum floor area; required yards and landscaped areas; coverage; sign regulations; and off-street parking and off-street truck loading facilities. An overall development plan is required and a specific site plan must be approved before a building permit can be issued. Occupancy permits can be withheld for failure to meet required standards or procedures.

Many make the mistake of viewing these zoning requirements in the light of land preparation costs, net acres, number of sites, and current market price for industrial acreage.

When the list of permitted uses and space standards handicap or repel the types of industries which need this location, then neither the industrial park nor the community benefit fully from a precious land resource.

#### Master Plan Suggestions for Bay Mills Indian Industrial Park — C. Hazen 1-75 — 2

This does not mean that development standards for industrial parks should be low. More, not less, control is the trend in zoning and in industrial park development for two reasons. First, responsible industrial management wants not just an efficient site, but an attractive and a protected environment for its plant investment. Appropriate zoning standards or protective covenants will help provide this goal of a high quality industrial park.

A second, and equally important reason for development standards industrial zoning ordinances is the continuing citizen resistance to any kind of growth, particularly industrial development, even including industrial parks. Good zoning standards, however, permit local legislators to rezone quality land for industry. They can then show that they have protected the aesthetic interest of the community at the same time as they are planning ahead for the economic benefit of the general public.

#### **"Your Role"**

You must know the proposed site and the vicinity thoroughly, gathering data through field

inspections, map studies, and analysis of aerial photos. You also need to observe the community. Although you are trained to be quick, competent field worker, "windshielding" a town is not enough. Also, it is preferable to work in the Indian community for one day a week for a month than to spend a week straight through.

**Evaluate location characteristics of the site in terms of:**

- the relationship of the land to the transport network (existing and planned highways, rail, airport, and maybe water transport and pipelines)
- land use trends in the vicinity
- the relationship of the site to other new growth areas in the region. (In other words, if there is other vacant land for industry, why should this land be used first.
- 
- deficiencies in the site and possible adjustments (identifying land planning problems that could arise on the site or in the immediate vicinity because of the proposed development and be prepared to recommend how these can be corrected.

Obtain information about and analyze many official plans related to the site and the vicinity. This could include public agencies' studies underway but not yet adopted as policy.

Master Plan Suggestions for Bay Mills Indian Industrial Park — C. Hazen 1-75 — 3

A brief economic evaluation of the community and an investigation of the local market for industrial land must be made.

Some typical areas of investigation would include the following:

- a. What are the economic growth generators in the community? In the region?
- b. Is there a unique asset or potential asset?
- c. What types of industry will probably grow in the industrial park.
- d. Where are the competing industrial sites? What is happening on these sites? How do these locations compare?

All of this type of questioning and analysis leads up to these major questions:

What industries will seek this location?

Which ones of those industries are best suited to the site?

This kind of analysis is required for two reasons: to justify the creditable potential market for the land; and as a guide in designing the park. Industries have different space needs, different degrees of compatability, different tolerances, and different tastes. You must also critically evaluate existing industrial zoning standards.

- Will these protect the site, protect the environs and neighboring land uses, and protect industries which will settle here? Does the zoning ordinance prohibit the types of uses that need the proposed site?
- Does the zoning ordinance prohibit properly servicing the industries which will benefit from the location? Are the zoning standards confiscatory to this tract of land? Are the setbacks too deep or too restrictive? Will the resultant open space contribute to a harmonious design, or will the result be sterile and monotonous, and probably wasteful of land and unique topographic features?

If present zoning standards are inadequate, two alternatives are available:

You can prepare protective covenants for the site; or, prepare the standards for a new industrial park zone for submission to the planning commissioners.

Master Plan Suggestions for Bay Mills Indian Industrial Park C. Hazen 1-75 — 4

### **Design Concept**

A Design Concept graphically interprets the planning recommendations for the site's development.

This concept is more than a sketch plan and more than a theme for development. Unique topographic characteristics are identified to be preserved or enhanced. Special features and services for industrial and related occupants are located. Activities are distributed for convenience, and compatibility in a manner to encourage visual harmony and grace.

The Design Concept is not preconceived, but grows out of the topography of the site, the character of its environs, the existing and potential assets in the vicinity and the community, and the special requirements of the types of industries which are attracted to this kind of locations.

The Design Concept will aid in demonstrating to the Zoning board or the local commissioners the sincerity of intent and the depth of analysis made of Bay Mills Indian Industrial Park.

Among the new trends in industrial parks, four deserve some extended consideration: new locations, special purpose parks, multi-use centers, and the relation of industrial parks to residential neighborhoods and the community environment.

#### **New Locations**

The earliest planned industrial districts were developed by the railroads on land near their tracks. By the early 60's there had developed a significant trend toward freeway sites for industrial parks. While both of these should continue, with rail-oriented parks primarily for very large tracts of land, the emerging locations choices for the Seventies are airport sites and waterfront sites.

We already have seen a trend toward airport locations for industrial parks. These airport sites have become increasingly attractive to a wide range of industries for company headquarters offices, engineering and service facilities, parts warehouses, and some manufacturing operations. Parks near regional jet airports will also attract large airfreight users and an array of freight-handling services.

Bay Mills Indian Industrial Park should not overlook the opportunities adjacent to general aviation fields, particularly for multi-plant firms whose management or engineering talent must be spread over several states each week. Company-owned or rented planes will have less traffic delay for take-off and landing at general aviation fields, and provide a more flexible work-travel schedule for supervisory and technical personnel.

Master Plan Suggestions for Bay Mills Indian Industrial Park — C. Hazen 1-75 — 5

Usually a discussion of waterfront land for industry emphasizes the importance of preserving prime deep-water sites for water-transport oriented industry. The appeal of waterfront views, however, is not limited to those which require water transport.

Communities could upgrade the appearance of their waterfronts, and benefit from the resultant economic growth, if they would cooperate with this new trend in industrial park location. An outstanding example of this type of waterfront development is South San Francisco Industrial Park (a very successful and handsomely designed industrial park) with its tower on a hilltop park overlooking the famous Bay and including a planned waterfront restaurant and marina.

Proximity to universities, shopping centers, and quality residential areas also offer a range of location opportunities for future industrial parks. Getting the rezoning might be difficult, but well worth the effort.

#### **Special Purpose Parks**

Some, but not many, industrial parks are deliberately restricting their occupancy to tenants from

the same industry group or to tenants from the same industry group or to directly related industries. Research parks, oriented to a nearby university, are the best known and most numerous of these limited occupancy parks.

For example, an industrial park limited to building materials and components offers a real advantage to both builder and the public for a one-step display, distribution and, possibly, repair center.

Clusters of linked industries, such as Graves' and Tarralinga operations.

### **Some Precepts for Industrial Park Development**

1. An industrial park requires a greater amount of time and effort than does a housing subdivision. Do that which will give pride as well as profit.
2. Be careful of rail. If it is needed, get it, but locate it properly and do not waste land.
3. Keep traffic separated.
4. Know how to orient the site. Know the front door from the back door.
5. Create interest and prestige in the interior of the site, to increase the value of interior lots, and to give design continuity and form to the park.
6. Off-street parking and loading areas should be plentiful and hidden.
7. Make open space reservations significant. Give them purpose — don't waste open space.
8. Think about coordinating activities. Build them next to each other.

### **Principal steps in the development of an Industrial Park:**

- 1) Preliminary or background analysis
- 2) Site selection and acquisition
- 3) Preparation of a development plan
- 4) Formulation of use restrictions and controls
- 5) Preparation of a district layout
- 6) Installation of site improvements, and
- 7) Building construction

### **Development of Industrial Districts and Industrial Parks:**

- A. Preliminary Analysis
  - 1) Identification of the market
  - 2) Relation to the community



- 3) Investment feasibility
  - 4) Ingredients of preliminary investigations
- B. Land Selection and Acquisition
- 1) Selection
  - 2) Acquisition
- C. Development Plan
- 1) Size and shape of lots
  - 2) Facilities to be installed
  - 3) Staging
- D. Restrictions and Controls
- 1) Types of Controls
  - 2) Provisions of restrictions
    - a) Control of nuisances
    - b) Use of the land
    - c) Outdoor storage
    - d) Site coverage
    - e) Building lines and setback lines
    - f) Building construction and design
    - g) Sign and billboard control
    - h) Off-street parking and loading
    - i) Landscaping
    - j) Other provisions
  - 3) Frequency of controls
  - 4) Enforcement
- E. Layout
- 1) Flexibility
  - 2) Lot shapes and sizes
  - 3) Components of a layout plan
    - a) District streets
    - b) Rail leads and spurs
    - c) Utilities
    - d) Landscaping
- F. Site improvements
- 1) Facilities provided
  - 2) Site development costs and financing
- G. Building construction
- 1) Contract construction
  - 2) Speculative construction
    - a) Types of speculative or inventory buildings
    - b) Flexibility

- c) Occupancy
- d) Merchandising
- 3) Costs
- 4) Financing

H. Financing

- 1) Land financing
- 2) Site Development
- 3) Construction

**Development Tips**

1. Define objectives
2. Select a favorable location
3. Identify the market
4. Plan a flexible layout
5. Determine development costs
6. Arrange for adequate financing
7. Secure a desirable lead occupant
8. Name the park early
9. Create a distinctive character
10. Provide all necessary services and protections
11. Know the competition
12. Take care of timing
13. Arrange appropriate cash
14. Provide for flexibility
15. Employee and visitor services
16. Provide incubators
17. Emphasize moving the sites at the prices set
18. Help park occupants in public relations
19. Establish an effective sales organization

## Marketing Space in Industrial Districts and Parks

- A. Site Sales
  - 1) Sales plan
  - 2) Sales program
  - 3) Promotion
  - 4) Pricing
  - 5) Rate of Market absorption
  
- B. Industrial Building Space
  - 1) Custom versus shell versus Turnkey building
  - 2) Sale versus lease
  - 3) Financing
  - 4) Organization for sales
  
- C. Leasing
  - 1) Land leasing
  - 2) Total property leasing
  - 3) Subleasing
  - 4) Financing lease interests
  
- D. Management
  - 1) Occupant selection
  - 2) Enforcement of Standards
  - 3) Provisions for continuing management
  - 4) Financial management
  - 5) Reputation

**GENERAL DESCRIPTION OF SOILS  
OF BAY MILLS INDIAN RESERVATION**

**North End** (1975 S.C.S. Soil Survey)

1. **Augres sand**—The augres series consists of somewhat poorly drained soils formed in acid sandy glaciofluvial deposits. Augres soils have a dark gray sand, surface layer, dark reddish brown or dark brown sand soil and brown sand underlying material. Augres soils are on outwash plains. Lake plains and waterworked till plains. Slope gradients range from 0 to 6 percent.
2. **Bruce very fine sandy loam**—Bruce series consists of poorly and very poorly drained soils formed in loamy and sandy waterlaid deposits on lake plains, outwash plains and deltas. They have a black silt loam surface layer, 7 inches thick: Mottled, grayish brown. Friable silt, loam upper subsoil, 5 inches thick. Firm, light silty clay, loam lower subsoil, 10 inches thick. Underlying material is grayish brown stratified silt and very fine sand. Slopes range from 0 to 2 percent. Most areas are in permanent, pasture or forest. Few areas are in cropland or idle.
3. **Croswell sand**—The Croswell series consists of moderately well drained soils formed in sand on beach ridges and sand plains. They have a dark grayish brown, sand surface layer, 8 inches thick. The subsoil is dark brown to brown loose sand, 22 inches thick. The underlying material is light brownish gray to light gray. Loose sand with mottles. The slopes have from 0 to 12 percent. Most areas are in pasture, forest or idle.
4. **Kinross mucky sand**—The Kinross series consists of poorly drained, level to nearly level and depressional soils on lake plains, outwash plains and broad till plains. They have a black muck layer at the surface, 6 inches thick, a mottled grayish brown sand surface layer, 4 inches thick and a mottled dark reddish brown and dark brown friable sand subsoil, 32 inches thick. The substratum is brown sand. Slopes range from 0 to 2 percent. Used mostly for woodland.
5. **Marsh**—Marsh consists of level areas that are flooded much of the year. This land type is natural wetland. The vegetation is cattails, reeds and other water tolerant grasses and shrubs. Marsh is on lake plains, Moraines, outwash plains, and river bottoms. Most areas are used for wetland wildlife habitat.
6. **Rousseau sand**—The Rousseau series consists of well and moderately well drained soils formed in sandy, wind modified. Glaciofluvium. They have a dark brown fine sand plow layer, 8 inches thick. The upper part of the subsoil is dark reddish brown and yellowish red. Very friable to loose, fine sand, 9 inches thick. The lower part is strong brown, loose fine sand, 8 inches thick. The underlying material is reddish yellow fine sand. Rousseau soils are on old lake border dunes. Lake plains and outwash plains. Slopes range from 2 to 25 percent but are dominantly 2 to 12 percent. Mostly in woods or brush.
7. **Seney sand**—The Seney series consists of well drained soils, formed in deep sandy glaciofluvial deposits. They have a black and pinkish gray sand surface layer, 3 inches thick, and pinkish gray sand subsurface layer, 3 inches thick, and pinkish gray sand subsurface layer, 3

inches thick. The subsoil is dark reddish brown, reddish brown and strong brown loose sand, 16 inches thick. The underlying material is light yellowish brown and very pale brown sand. Seney soils are on outwash plains, valley trains and moraines. Slopes range from 0 to 30 percent but are dominantly 0 to 6 percent. Mostly in woodland.

8. **Tawas muck**—The Tawas series consists of very poorly drained soils formed in deposits of woody organic material, 16 to 50 inches thick, over sand. They have a black muck surface layer and subsurface layers with a combined thickness of 31 inches, over dark grayish brown fine sand. Tawas soils are in depressions within outwash plains, till plains, and moraines. Slopes are less than 2 percent. Used mostly for woodland.

#### **South End** (1927 soil survey)

1. **Bergland**—The Bergland series is a very-fine, mixed, nonacid, frid aeris haplaquepts. Typically these soils have very dark gray and dark gray clay A horizons, gray mottled clay upper B2 horizons and reddish brown clay lower B2 and C horizons.

2. **Brimley**—Brimley series are somewhat poorly drained soils, formed in loamy and sandy waterlaid deposits on lake plains and outwash plains. They have a very dark grayish brown silt loam surface layer and a pinkish gray silt loam subsurface layer. A total of 10 inches thick. The subsoil is dark brown mottled friable fine sandy loam and firm light silty clay loam, 16 inches thick. Underlying material is brown, stratified silt loam, silt and very fine sand. Slopes range from 0 to 6 percent. Most areas are in forest or permanent pasture. A minor acreage is used for cropland.

3. **Ewen** (Colonville)—Colonville series consists of somewhat poorly drained soils formed in moderately coarse textured alluvium on floodplains, they have a very dark grayish brown, fine sandy loam surface and subsurface layers totaling 17 inches in thickness. The substratum is mottled, dark brown, grayish brown, yellowish brown and brown sand. Slopes range from 0 to 3 percent. Most areas are in forest or permanent pasture.

4. **Ogemaw**—The Ogemaw series consists of somewhat poorly or poorly drained soils formed in sandy material over loamy material on till plains, outwash plains and low moraines. They have very dark grayish brown and pinkish gray loamy sand surface layers 10 inches thick. The upper part of the subsoil is 10 inches of cemented dark reddish brown loamy sand. The lower part is 6 inches friable dark brown loamy sand. The substratum is reddish brown and yellowish brown sandy clay loam and silty clay loam. Slopes range from 0 to 6 percent. Most areas are in pasture or woodland.

5. **Ontonagon**—The Ontonagon series consists of well and moderately well drained soils formed in lacustrine clay. They have a dark reddish brown silty clay surface layer, 6 inches thick and a reddish gray clay subsurface layer, 2 inches thick. Subsoil is reddish brown, extremely firm. Clay about 13 inches thick. Underlying material is reddish brown clay. Ontonagon soils are on lake plains. Slopes range from 0 to 30 percent, but are dominantly 4 to 12 percent. Most areas are in pasture and woodland.



SOIL SUITABILITIES

CODE NO.	SOIL TYPE	SLOPE	FLOODING	HIGH WATER TABLE	SEPTIC TANK	DWELLINGS WITHOUT BASEMENTS	DWELLINGS WITH BASEMENTS	SMALL COMMERCIAL BUILDINGS
83B	Seney Sand	0-6%	None	+5'	0-8%-Slight 8-15%-Mod.-Slope 15+%-Severe Slope	0-8%-Slight 8-13%-Mod.-Slope 15+%-Sev. Slope	0-8%-Slight 8-15%-Mod.-Slope 15+%-Sev. Slope	0-4%-Slight 4-8% Mod. Slope 8+%-Sev. Slope
31B	Rubicon Sand	0-6%	None	+6'	0-8%-Slight 8-15%-Mod.-Slope 15+%-Sev.-Slope	0-8%-Slight 8-15%-Mod.-Slope 15+%-Sev.-Slope	0-8%-Slight 8-15%-Mod.-Slope 15+%-Sev.-Slope	0-4% Slight 4-8% Mod. Slope 8+%-Sev. Slope
21B	Rousseau Fine Sand	0-6%	None	+6'	2-8%-Slight	2-8%-Slight	2-8%-Slight	2-4% Slight 4-8% Mod. Slope
21F	Rousseau	25-40%	None	+6'	8-15% Mod.-Slope 15+%-Sev.-Slope	8-15% Mod.-Slope 15+%-Sev.-Slope	8-15% Mod.-Slope 15+%-Sev.-Slope	8+%-Severe Slope
15	Bruce Very Fine Sandy Loam	0-2%	Frequent Long Duration-March-May	0-1' Apparent Nov.-May	Severe Wetness Floods	Severe Frost Action Floods	Severe-Wetness Floods Low Strength	Severe Wetness Floods Frost Action
30	Tawas Muck	+2%	Frequent Long Duration-Nov.-May	0-1' Apparent Nov.-May	Severe Wetness Floods	Severe Wetness Excess. Humus Floods	Severe Wetness Excess. Humus Floods	Severe Wetness Floods-Excess Humus
34A	Croswell Sand	0-3%	None	2-3' Apparent Nov.-Apr.	Severe Wetness	0-8% Mod.-Wet 8-12% Mod.-Slope	Severe Wetness	0-4% Mod. Wet 0-8% Mod. Wet 8-12% Sev. Slope
35A	Augres Sand	0-4%	None	0.5-1.5' Apparent Nov.-May	Severe Wetness	Severe Wetness	Severe Wetness	Severe Wetness
42	Marsh		Frequent Very Long Duration Jan.-Dec.	0' Apparent Jan.-Dec.	Severe Floods Wet	Severe-Floods Frost Action Wet	Severe-Floods Frost Action Wet	Severe-Flood Frost Action Wet

## SOIL SUITABILITIES (CONT'D.)

CODE NO.	SOIL TYPE	SLOPE	FLOODING	HIGH WATER TABLE	SEPTIC TANK	DWELLINGS WITHOUT BASEMENTS	DWELLINGS WITH BASEMENTS	SMALL COMMERCIAL BUILDINGS
56	Kinross Mucky Sand	0-2%	Frequent Brief Duration Sep.-May	0-1' Apparent Sep.-June	Severe Wetness- Floods	Severe Wetness Floods	Severe Wetness Floods	Severe Wetness Floods
Rp	Rifle (Peat)	0-2%	Frequent Long Duration Nov.-May	0-1' Apparent Nov.-June	Severe Floods- Wet	Severe Floods, Wet Excess Humus Frost Action Low Strength	Severe	Severe
Em	Ewen (Colonville) Em	0-3%	Common Brief Dec.-May	1-2' Apparent Sep.-May	Severe Floods Wetness	Severe Floods Frost Action Wetness	Severe Floods Wetness	Severe Floods Frost Action Wetness
B1	B1 Bruce	0-2%	Frequent Long Duration Mar.-May	0-1' Apparent Nov.-May	Severe Wetness Floods	Severe Wetness Frost Action Floods	Severe Wetness Floods	Severe Wetness Floods Frost Action
Bv	Bv Brimley	0-6%	Occasion- al Brief Mar.-May	1.0'-2.0' Apparent Nov.-May	Severe Wetness Floods	Severe Same- Frost Action Low Strength	Severe Wetness Floods	Severe Same Frost Action Flooding
Bc	Bc Bergland	0-2%	Frequent Long Nov.-Jun.	0-0.5' Perched Nov.-Jun.	Severe Wetness Slow Perc. Floods	Severe Wetness Floods	Severe	Severe
O1, Oy	O1, Oy Ontonagon	0-3%	None	Less Than 6'	Severe 0-15% Percs. Slow 15% Slope Slow Perc.	Severe 0-15% Shrink-Swell Low Strength 15%-Same Plus Slope	Severe	Severe 0-8%) 8%+
Os	Os Ogemaw	0-6%	None	0-1.5' Perched Nov.-May	Severe Wetness Cement Pan	Severe	Severe	Severe

SOIL SUITABILITIES (CONT'D.)

CODE NO.	SOIL TYPE	SLOPE	LOCAL ROADS STREETS	CAMP AREAS PICNIC A.	PLAY GROUNDS	PATHS & TRAILS
83B	Seney Sand	0-6%	3-8%-Slight 8-15% Mod.-Slope 15+% Sev. Slope	0-15% Mod.-Sandy Soil Blowing 15% Sev. Slope	Severe-Sandy Slope Soil Blowing	Severe-Sandy Too Sandy
31B	Rubicon	0-6%	3-8%-Slight 3-15% Mod. Slope 15+% Sev. Slope	0-15% Mod.-Too Sandy Soil Blowing 15+% Sev. Slope	0-2% Sev. Too Sandy Soil Blowing 2+% Sev. Slope	0-15% Too Sandy Soil Blowing 15+% Sev. Slope
21B	Rousseau Fine Sand	0-6%	2-8%-Slight	Camp-2-6% Mod-Soil Blowing 6-15% -Slope 15+% Sev. Slope	2-6% Severe Soil Blowing	Severe Soil Blowing Too Sandy
21F	Rousseau Fine Sand	25-40%	8-15% Mod. Slope 15+% Sev. Slope	Picnic-2-8% Mod. Sl. 8-15% MOD. SL. 15+% Sev. Slope	Severe 6+% Soil Blowing	Severe Soil Blowing Too Sandy
15	Bruce Very Fine Sandy Loam	0-2%	Severe Wet. Poor Strength Frost Action	Severe Wetness Floods	Severe Wetness Floods	Severe Wetness
30	Tawas Muck	+2%	Severe Wet. Frost Actions Low Strength	Severe Wetness Floods Excess humus	Severe Wetness Floods Excess Humus	Severe Wetness Floods Excess Humus
34A	Croswell Sand	0-3%	Slight	0-8% Mod. Too Sandy 8-12% Mod. Too Sandy Slope	0-6% Sev.-Sandy 6-12% Sev. Sandy Slope	LS: Mod. Too Sandy S: Sev. Sandy
35A	Augres Sand	0-4%	Moderate Wetness	Camp, Sev. Wet-Picnic Mod. Wet Soil Blowing-Too Sandy	Severe Wetness Too Sandy Soil Blowing	Severe Soil Blowing Too Sandy
42	Marsh		Severe-Floods Frost Action Wet	Wet	Wet	Wet
56	Kinross Mucky Sand	0-2%	Severe Wetness Floods	Severe Wetness-Floods Excess Humus	Severe Wetness-Floods Excess Humus	Severe Excess Humus Wet

SOIL SUITABILITIES (CONT'D.)

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CODE NO.	SOIL TYPE	SLOPE	LOCAL ROADS STREETS	CAMP AREAS PICNIC A.	PLAY GROUNDS	PATHS & TRAILS
Rp	Rifle (Peat)	Less than 2%	Severe	Severe Wet Floods Excess Humus	Severe	Severe
Em	Ewen Colonsville	0-3%	Severe Floods Frost Action	Severe Wetness Floods	Severe	S1, FSL, L-Moderate Wet LS: Mod.-Wet Sandy
B1	Bruce	0-2%	Severe Frost Action Floods-Wet	Severe Wetness	Severe	Severe Wetness
Bv	Brimley	0-6%	Severe	Campground Severe-Wet. Floods Mod.-Picnic	Severe	Moderate Wetness
Be	Bergland	0-2%	Severe Wetness Low Strength Floods	Severe Wetness Too Clayey Slow Perc.	Severe	Severe Wetness Too Clayey
Ol, Oy	Ontonagon	0-3%	Severe	Severe Too Clayey Slow Perc. 15+%-Slope	Severe	Severe
Os	Ogemaw	0-6%	Severe	Severe Wetness	Severe	Severe

6. **Rifle peat**—The Rifle series consists of very poorly drained soils. This formed in primarily herbaceous organic deposits, more than 51 inches thick. Rifle soils have a yellowish brown peat surface layer and black peat subsurface layer, 4 inches in combined thickness. Over layers of black and dark reddish brown mucky peat. Rifle soils are in bogs and depressional areas within lake plains, outwash plains, till plains and moraines. Slopes are less than 3 percent. Most of these soils are in brush or woodland.

#### AGRICULTURAL SUITABILITY

SOIL TYPE	CAPABILITY
Tawas	4—6W
Kinross	6W
Bruce	2W
Rousseau	3SE
Au Gres	4W
Croswell	4—6S
Marsh	8W
Seney	6S
Rubicon	6S
Ontonagan	3SE
Bergland	3W
Brimley	3W
Colonville	5W
Rifle	4W
Ogenaw	4—5W



## AGRICULTURAL SUITABILITY-KEY

### Land suited for cultivation and other use:

- Class 1    Few limitations
- Class 2    Some limitations which reduce the choice of plants or require moderate conservation.
- Class 3    Severe limitations that reduce the choice of plants or require special conservation practices or both.
- Class 4    Very severe limitations.

### Land limited in use—Generally not suited for cultivation

- Class 5    Little or no erosion hazard but have other limitations impractical to remove that limit their use largely to pasture, range woodland, or wildlife food and cover.
- Class 6    Severe limitations that make them generally unsuited to cultivation and that restrict their use largely to pasture or range, woodland or wildlife food and cover.
- Class 7    Very severe limitations that make them unsuited to cultivation and that restrict their use largely to grazing, woodland or wildlife.
- Class 8    Limitations that preclude their use for commercial plant production and restrict use to recreation, wildlife or water supply or to aesthetic purposes.

- e    Risk of erosion
- w    Wetness or drainage overflow
- s    Rooting zone limitations
- c    Climatic limitations

WOODLAND AND WILDLIFE SUITABILITY

CODE NO.	WOODLAND SUITABILITY		WILDLIFE SUITABILITY	
	SOIL TYPE	WOODLAND SUITABILITY *	OPENLAND & WOODLAND	WETLAND
83B	Seney Sand	3S	Poor	Very Poor
31B	Rubicon Sand	2S	Poor	Very Poor
21B	Rousseau Fine Sand	2S	Fair	Poor-Very Poor
21F	Rousseau Fine Sand	2S	Fair	Poor-Very Poor
15	Bruce-Very Fine Sandy Loam	4W	Poor	Good
30	Tawas Muck	5W	Poor	Good
34A	Croswell Sand	2S	Poor	Very Poor
35A	Augres Sand	2S	Poor	Very Poor
42	Marsh	8W	Very Poor	Good
56	Kinross Mucky Sand	5W	Poor	Good
72	Dune Land			
Rp	Rifle Peat	5W	Poor	Good
Em	Ewen (Colonville)	2W	Fair	Good
By	Brimley	20	Good	Fair
Bc	Bergland	4W	Fair	Fair
01, Oy	Ontonagon	2C	Fair-Good	Poor
Os	Ogemaw	3D	Fair	Poor

\*WOODLAND SUITABILITY

- |                                 |                             |
|---------------------------------|-----------------------------|
| 1. Very High Productivity       | W-Excessive Water           |
| 2. High Productivity            | S-Sandy Texture             |
| 3. Moderately High Productivity | D-Restricted Root Depth     |
| 4. Moderate Productivity        | C-Clay in Upper Soil        |
| 5. Low Productivity             | O-No Significant Limitation |

## WOODLAND SUITABILITY—KEY

KEY:	1—Very High Productivity	W—Excessive Water
	2—High Productivity	S—Sandy Texture
	3—Moderately High Productivity	O—No significant limitations
	4—Moderate Productivity	

### Management Considerations:

**Seedling Mortality:** Indicates the degree the soil affects expected mortality of planted tree seedlings when plant competition is not a limiting factor.

**Windthrow Hazard:** Characteristics of the soil that affect the development of tree roots and the ability of soil to hold trees firmly.

**Plant Competition:** Indicates degree to which undesirable plants are expected to invade or grow if openings are made in the tree canopy. The invading plants compete with native plants or planted seedling by impeding or preventing their growth.

**Trees to Plant:** Those trees that are suitable for commercial wood production and that are suited to the soils.

**WOODLAND SUITABILITY  
POTENTIAL PRODUCTIVITY – IMPORTANT TREES**

RUBICON: 2S

**Trees to Plant**

Red Pine  
Eastern White Pine  
Jack Pine

**Other Important Trees**

Balsam Fir  
Northern Red Oak  
Quaking Aspen

Management Problems: Moderate – Erosion Hazard  
Plant competition  
Severe – Seedling mortality  
Windthrow hazard

SENEY SAND: 3S

Red Pine  
Jack Pine

Sugar Maple  
Quaking Aspen  
Red Maple  
Yellow Birch  
American Beech

Management Problems: Severe – Seedling mortality

ROUSSEAU: 2S

Red Pine  
Jack Pine  
White Spruce

Sugar Maple  
Red Maple  
Balsam Fir  
Northern Red Oak  
Eastern White Pine  
Black

Management Problems: Severe – Seedling mortality

AUGRES: 3S

White Spruce  
Black Spruce

Quaking Aspen  
Bigtooth Aspen  
Balsam Fir  
Paper Birch  
Sugar Maple  
Red Maple  
Eastern Hemlock

Management Problems: Severe – Seedling Mortality

CROSSWELL: 2S

Red Pine

Jack Pine  
Quaking Aspen  
Northern Red Oak

## Trees to Plant

Management Problems: Severe – Seedling mortality  
Plant competition

BRUCE: 4W

White Spruce  
Black Spruce  
Northern White Cedar

Management Problems: Severe – Equipment limit  
Seedling Mortality  
Windthrow Hazard  
Plant Competition

ONTONAGON: 2 C

White Spruce  
Norway Spruce  
Northern White Cedar

Management Problems: Moderate – Plant competition  
Severe – Seedling mortality

BERGLAND: 4W

White Spruce  
Black Spruce

BRIMLEY: 20

White Spruce  
Eastern White Pine  
Northern White Cedar  
Austrian Pine  
Cottonwood

## Other Important Trees

Black Cherry  
Eastern White Pine  
Bigtooth Aspen  
Sugar Maple

Balsam Fir  
Quaking Aspen  
Yellow Birch  
Red Maple  
Black Ash

Sugar Maple  
American Basswood  
Yellow Birch  
Eastern White Pine  
Eastern Hemlock  
Balsam Fir

Balsam Fir  
Paper Birch  
Quaking Aspen  
Northern White Cedar  
Red Maple  
Black Ash  
American Basswood  
Tamarack

Sugar Maple  
Northern Red Oak  
Black Oak  
Yellow Birch  
American Basswood  
Balsam Fir  
Aspen



Management problems: Severe – Plant competition

**Trees to Plant**

EWEN (Colonville): 2W

White Spruce  
Eastern Cottonwood  
Eastern White Pine  
Northern White Cedar

Management Problems: Moderate – Equipment limit  
Seedling Mortality  
Severe – Plant competition

OGENAW: 3D

White Spruce  
Black Spruce  
Eastern White Pine  
Northern White Cedar

Management Problems: Severe – Equipment limit  
Seedling mortality  
Windthrow hazard  
Plant competition

**Other Important Trees**

Sugar Maple  
Red Maple  
Swamp White Oak  
Quaking Aspen

Quaking Aspen  
Sugar Maple  
Jack Pine  
Red Pine

**VEGETATIVE COVER OF  
BAY MILLS INDIAN COMMUNITY**

<b>SWAMP CONIFERS</b>	Northern White Cedar	White Spruce
	Black Spruce	White Pine
	Balsam Fir	Eastern Hemlock
	Tamarack	

Swamp conifers grow on both organic (peat & muck) and mineral soils, occupying low wet areas. Swamp conifers are an important source of posts, poles, pulpwood and provide food and cover for many species of wild animals. There is a strong tendency for swamp hardwoods to invade conifer swamps, especially after cutting. Keeping hardwood invasion in check is one of the more important and difficult problems involved in the management of conifer swamps.

<b>SWAMP HARDWOODS</b>	Elm
	Red Maple
	Black Ash
	<b>Balsam Poplar</b> (Balm of Gilead)

Other hardwood which grow in ass'n with Swamp Conifers are:

- Aspen
- White Birch
- Yellow Birch
- Mountain Maple

Swamp hardwoods occur on wet to moist mineral and muck soils. Most species in this class are relatively low in value and often highly defective, making it difficult to manage profitably. Only merchantable trees should be removed. It is frequently desirable to convert swamp hardwoods to conifers but it is difficult to do so. The planting of conifers is not advised because survival on wet sites is usually very poor. The best probability for converting to conifers exists where a young stand of conifers, such as spruce and balsam fir is growing underneath.

<b>LOWLAND BRUSH</b>	Alder
	Willow
	Dogwood

**ASPEN** Aspen, an intolerant species, grows in evenaged stands and is a temporary type. It comes in after a fire or after the cutting of a previous stand containing some Aspen. Balsam poplar (Balm-of-Gilead) occupies low, wet sites; Trembling Aspen is found on soils ranging from coarse, dry sands to heavy moist clays, and Bigtooth Aspen is found on better aspen sites. The most common species that grow in association with aspen are white birch and pin cherry.

## SPRUCE-FIR

The upland spruce-balsam fir type occurs on mineral soils on upland sites. The principal species in this type are White Spruce and Balsam Fir. Common associates of these two species are White Pine and Hemlock and in some localities Black Spruce. This type grows best on well drained loamy soils, but is found on a fairly wide range of soils, including clays. There is a strong tendency for hardwoods to invade the spruce fir type, especially after cutting. As a result varying amounts of Red Maple, Aspen, White Birch, Elm, Yellow Birch, and Sugar Maple are present in many stands.

NORTHERN HARDWOODS	Sugar Maple	Yellow Birch
	Basswood	American Elm
	Beech	
	Hemlock	

Northern hardwoods are generally found on relatively fertile loamy soils. Most northern hardwoods are relatively tolerant of shade and produce an abundance of no management care, are usually highly defective.

## SOIL REQUIREMENTS FOR VEGETATION COVER OF BAY MILLS INDIAN COMMUNITY

1. **Aspen**—SALICACEAE—*Populus tremuoides*: Prefers moist, sandy soil and gravelly hillsides.
2. **Balsam**—SALICACEAE—*Populus Balsamifera*: Prefers river bottom lands and borders of swamps.
3. **Basswood**—TILIACEAE—*Basswood*: Prefers rich, well drained, loamy soils.
4. **Birch, White**—BETULACEAE—*Betula papyrifera*: Prefers rich, moist hillsides; borders of streams, lakes and swamps, but is also found in drier situations.
5. **Birch, Yellow**—BETULACEAE—*Betula lutea*: Prefers rich, moist uplands but grows in wet or dry situations.
6. **Cedar, White**—PINACEAE—*Tuja occidentalis*: Prefers moist soils in low swamps and along river banks. Tolerant of all soils and exposures.
7. **Cedar, Red**—PINACEAE—*Juniperus Virginiana*: Prefers loamy soil on sunny slopes; dry rocky hills; also borders of lakes and streams and peaty swamps.
8. **Elm, Red**—URTICACEAE—*Ulnus Fulxa*: Prefers stream banks and bottom lands, rich moist hillsides, rocky ridges and slopes.

9. **Elm, White**—URTICACEAE—*Ulmus Americana*: Prefers deep, rich, moist loam; bottom lands; stream banks.
10. **Hemlock**—PINACEA—*Tsuga Canadensis*: Prefers well drained uplands and slopes of ravines.
11. **Maple, Hard**—ACERACEAE—*Acer Saccharum*: Prefers moist, rich soil in valleys and uplands and moist, rocky slopes.
12. **Maple, Soft**—ACERACEAE—*Acer rubrum*: Prefers swamplands or banks of streams; rarely found on hillsides.
13. **Spruce, Black**—PINACEAE—*Picea Mariana*: Cold, sphagnous bogs and swamps; shores of lakes.
14. **Spruce, Fir-Balsam**—FIR-PINACEAE—*Abies balsamea*: Prefers cool, moist rich soil: low swampy ground; well drained hillsides.
15. **Tamarack**—PINACEAE—*Larix laricina*: Prefers cold, deep swamp, or in the north coming out on the drier uplands.



United States Department of the Interior

BUREAU OF INDIAN AFFAIRS

Great Lakes Agency

Ashland, Wisconsin 54806

IN REPLY REFER TO:  
Forestry 339.3  
Bay Mills

Michael C. Parish, Chairman  
Bay Mills Executive Council  
Route 1  
Brimley, Michigan 49715

Dear Mr. Parish:

A revised forest operating plan for the Bay Mills Reservation is enclosed. This has been prepared using the statistical data derived from our most recent inventory of the forest lands of the reservation.

Several copies of this plan are being furnished for your use and information and for whatever distribution you wish to make.

Our foresters will prepare some areas for timber sales and submit them to the council for consideration. Timber sales under contract or permit may be advertised for competitive bids or may be negotiated with members of the community.

Sincerely,

R. C. Miller, Superintendent

By:   
R. P. Wallace, Forest Manager



## SOIL SUITABILITY-SUGAR ISLAND

SOIL TYPE	SLOPE	FLOODING	HIGH WATER TABLE	SEPTIC TANK	DWELLINGS WITHOUT BASEMENT	DWELLINGS WITH BASEMENT	SMALL COMMERCIAL BUILDINGS	LOCAL ROADS & STREETS
BERGLAND	0-2%	Frequent Long Duration Nov.-June	0-0.5' Percked Nov.-June	SEVERE-Slow Per. Floods	SEVERE Wetness Floods	SEVERE Wetness Floods	SEVERE Wetness Floods	SEVERE Wetness Floods Low Strength
BRUCE	0-2%	Frequent Long Duration Mar.-May	0-1' Apparent Nov.-May	SEVERE Wetness Floods	SEVERE Wetness Frost Action Floods	SEVERE Wetness Floods	SEVERE Wetness Floods Frost Action	SEVERE Frost Action Floods Wet
MUNUSCONG	0-2%	Common Long Duration Nov.-April	0-1.0' Apparent Nov.-April	SEVERE Wetness Floods Pers. Slowly	SEVERE Wetness Floods	SEVERE Wetness Floods	SEVERE Wetness Floods	SEVERE Wetness Floods Low Strength
NEWTON	0-2%	Frequent Brief Dec.-May	0-1.0' Apparent Dec.-May	SEVERE Wetness Floods	SEVERE Wetness Floods	SEVERE Wetness Floods	SEVERE Wetness Floods	SEVERE Wetness Floods
OGEMAW	0-6%	None	0-1.5' Percked Nov.-May	SEVERE	SEVERE Wetness Cemented Pan	SEVERE	SEVERE	SEVERE Wetness Floods Low Strength
ONTONAGON	0-3%	None	Greater Than 6'	SEVERE Slow Per.	SEVERE Shrink/Swell Low Strength	SEVERE	SEVERE	SEVERE
SHELLDRAKE	0-12%	None	Greater Than 6'	0-8% Slight 8-15% Moderate (Slope)	0-8% Slight 8-12% Moderate (Slope)	0-8% Slight 8-12% Moderate (Slope)	0-4% Slight 4-8% Moderate 8%+Severe (Slope)	0-8% Slight 8-12% Moderat (Slope)
WAISKA	0-15%	None	Greater Than 6'	0-8% Slight 8-15% Moderate (Slope)	0-8% Slight 8-15% Mod. Slope 15% Severe (Slope)	0-8% Slight 8-15% Mod. (Slope) 15%+ Severe (Slope)	0-4% Slight 4-8% Mod. (Slope) 8%+Severe (Slope)	0-8% Slight 8-15% Mod. Slope 15%+ Severe (Slope)

SOIL SUITABILITY-LAND NORTH/NORTH WEST OF RESERVATION

SOIL TYPE	SLOPE	FLOODING	HIGH WATER TABLE	SEPTIC TANK	DWELLINGS WITHOUT BASEMENT	DWELLINGS WITH BASEMENT	SMALL COMMERCIAL BUILDINGS	LOCAL ROADS & STREETS
BOHEMIAN	0-50%	None	Greater Than 6.0' Deep	0-8% Slight 8-15% Mod. 15%+Severe (Slope)	0-8% Mod. Low Strength Frost 4-8% Severe (Slope)	Same as Dwellings W/O Basement	0-4% Mod. Lowest Frost 4-8% Mod. 8%+Severe (Slope)	0-8% Mod. Lowest Frost 8-15% Mod. Slope-15%+ Sev. Slope
GREENWOOD PEAT	0-2%	Frequent Very Long Duration Nov.-May	0-1.0' Apparent Sept.-June	SEVERE Wetness Floods	SEVERE Wetness Floods Low Strength	SEVERE Wetness Floods Low Strength	SEVERE Wetness Floods Low Strength	SEVERE Wetness Floods Low Strength
SAUGUTUCK	0-4%	Frequent Long Duration Nov.-May	0-2' Percked Dec.-May	SEVERE Cemented Pan Wet Floods	SEVERE Wet Floods Cemented Pan	SEVERE Wet Floods Cemented Pan	SEVERE Wet Floods Cemented Pan	SEVERE Wet Floods Cemented Pan
SHELLDRAKE	0-12%	None	Greater Than 6'	0-8% Slight 8-15% Mod. 15%+Severe (Slope)	0-8% Slight 8-15% Mod. 15%+Severe (Slope)	0-8% Slight 8-15% Mod. 15%+Severe (Slope)	0-4% Slight 4-8% Mod. 8%+Severe Slope	0-8% Slight 8-15% Mod. Slope 15%+ Severe Slope
RIFLE	0-2%	Frequent Long Duration Nov.-May	0-1' Apparent Nov.-June	SEVERE Wetness Floods	SEVERE Floods-Wet Excess Humus Frost Low Strength	SEVERE	SEVERE	SEVERE
WAISKA	0-15%	None	Greater than 6' Deep	0-8% Slight 8-15% Mod. 15%+Severe (Slope)	0-8% Slight 8-15% Mod. 15%+Severe (Slope)	0-8% Slight 8-15% Mod. 15%+Severe (Slope)	0-4% Slight 4-8% Mod. Slope 8%+ Severe Slope	0-8% Slight 8-15% Mod. Slope 15%+Severe Slope
WALLACE	0-20%	None	2.5'-6.0' Percked March-May	SEVERE Cemented Pan	0-8% Slight 8-15% Mod. 15%+Severe (Slope)	0-8% Slight 8-15% Mod. 15%+Severe (Slope)	0-4% Slight 4-8% Mod. Slope 8%+Severe Slope	0-8% Slight 8-15% Mod. Slope 15%+Severe Slope

(All same as dwellings without basement)

## **FOREST OPERATING STATEMENT BAY MILLS COMMUNITY**

The land base of the Bay Mills Community consists of 2,189 acres located in Chippewa County, Michigan.

For the purpose of this report of the forest resource, the Brimley Community and the Sugar Island Community lands have been combined. The area of forest land is considered to be 1,450 acres while the balance of 739 acres is in dwelling sites, roads, water, fields, and other non-forest use.

The statistical data upon which this plan is based was developed from field data on 269 points established in the spring of 1974.

Of the 1,450 acres in the forest cover types, 40% is Swamp Hardwoods, 20% is Aspen and Birch, 20% Swamp Conifers, 12% Hardwood, 3% Pine, and 5% other.

The average per acre volume on the total forest area is 183 BF plus 13 cords. This average is relatively high for an area of this extent.

### **TIMBER CUTTING RECOMMENDATIONS**

The indicated annual allowable cut for the first five year cutting period amounts to 48,630 board feet and 676 cords which is about 3% of the total sawlog volume and 4% of the total cordwood volume. The cordwood volume is about 48% Aspen while the sawlog volume is 90% Soft Maple, Yellow Birch, White Birch, and Elm; predominantly a swamp hardwood association.

Of all of the material classed as pulpwood, 51% is in the 10-inch diameter class or larger, while 21% of the sawlog material is in the 20-inch diameter class or larger.

While it is possible that a large part of the allowable cut of sawlogs could be harvested, it is unlikely that the hardwood, cordwood produced would reach the volume indicated in the table since this is in low vigor trees scattered through all the hardwood stands. The possibility of realizing all or a part of the allowable cut of Aspen will depend upon the availability of markets.

While no Red Pine is included in the allowable cut table, a volume of cordwood or posts or poles can be harvested at any time in a thinning in the Red Pine Plantation on the north boundary. This would be a controlled silvicultural operation to reduce stocking in this stand.

## ENVIRONMENTAL CONSIDERATIONS

### 1. Visual Impact:

A large part of the area within sight of the roads is occupied by dwellings or is in use for pasture or other non-forest use. The kind of cutting practiced in the hardwood types does not produce any offensive esthetic effect. In those cover types which must be clearcut, the area in any one cutting operation is limited and the effect is not long lasting. No adverse criticism is anticipated as a result of application of standard cutting practices in this community.

### 2. Impact on Wildlife:

The habitat for deer and small game is improved by the kind of cutting recommended in this plan. There is nothing available for game species in a mature stand so by maintaining a succession of age classes through cuts of relatively small areas occurring annually, an optimum combination of cover and food can be achieved.

### 3. Impact on Watershed and Erosion:

The areas of the reservation lands that carry commercial forest cover are relatively level and erosion is not a problem. There are 200 to 300 acres of permanent swamp cover type which will be maintained as such. Erosion along the shore of Lake Superior is a serious and long standing problem but it is not one which can be controlled by manipulation of the forest cover. The maintenance of abnormally high water levels in the lake to the detriment of shore line property is beyond the control of the property owner.

### 4. Impact on other Land Use:

The management of the forest lands of this reservation as such is probably the best use for these lands within the foreseeable future. There are several grass fields which have been used for grazing in the past and which are not included as forest land. Also excluded are the areas now in use or which may be used for home sites. These include most of the higher and drier lands along the highway and some of the secondary roads.

## SILVICULTURAL CONSIDERATIONS

At the time of this inventory more than half of the forest lands of the community is in one of the hardwood cover types. Aspen and Birch, which make up 20% of the area, are transition types and will eventually convert to hardwood. Only the swamp conifer types which make up 20% of the area will retain an identity other than the climax hardwood type.

In the immediate future, Aspen harvest by clearcutting will receive first consideration. Stands of this species which consist of a high percentage of large trees will be cut first. Seventy-six percent

of the volume of this species is in trees that are in the ten inch or larger diameter classes. Some decadence is evident.

The hardwood will be cut selectively by marking, with consideration given to size, vigor, soundness, and residual basal area. Relatively light cuts at fairly short intervals will be used in the hardwood stands. Cutting periods for this type will be about 15 years.

A thinning operation in the Red Pine Plantation on the north boundary will be given consideration after further examination and market survey.

### AREA AND VOLUME IN COVER TYPES

BAY MILLS - 1974

COVER	ACRES	BF	CD	BA
Aspen	232	89,260	4,173	73.26
Birch, White	65	43,520	781	67.50
Cedar	5		151	160.00
Hardwood, Nor.	156	364,960	1,721	73.79
Hardwood, SW.	582	976,530	7,450	78.80
Hemlock	5	28,000	49	90.00
Oak	22	20,390	149	47.50
Pine, Red	49	84,240	434	87.78
Spruce, Black	11		193	80.00
Spruce, Fir	264	111,010	3,794	70.00
Open Prod.	59	6,820	63	8.18
<b>Total Forest</b>	<b>1,450</b>	<b>1,724,730</b>	<b>18,958</b>	<b>72.57</b>
Non-Forest	739			
<b>Total Reservation</b>	<b>2,189</b>			



**ANNUAL ALLOWABLE CUT  
BAY MILLS**

<b>SPECIES</b>	<b>BF</b>	<b>CORDS</b>
Aspen		326
Balsam		52
Basswood	1,370	
Birch, White	2,240	42
Birch, Yellow	16,770	61
Cedar		22
Elm	6,820	9
Hemlock	1,030	7
Maple, Hard	2,220	6
Maple, Soft	16,640	106
Misc.	1,540	16
Spruce		29
<b>Totals:</b>	<b>48,630</b>	<b>676</b>

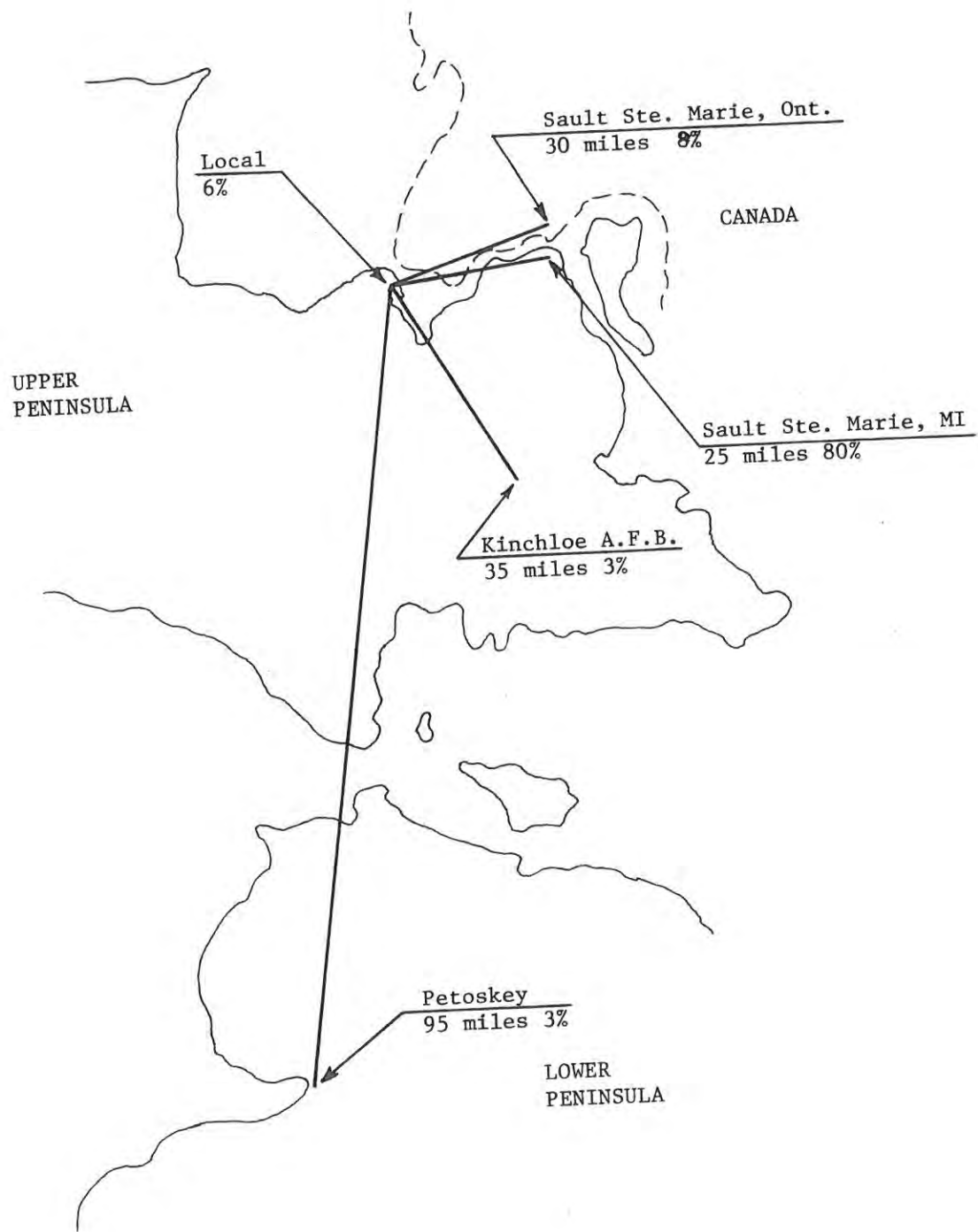
**POTENTIAL NATIVE PLANT COMMUNITY**  
(Rangeland or Forest Under Story Vegetation)

<b>Tawas</b>	- Balsam Poplar Bracken Bluejoint Reedgrass Sedge Maidenfern Tamarack	Speckled Alder Wintergreen Northern White Cedar Pitcher Plant Quaking Aspen American Elm
<b>Kinross</b>	- Northern White Cedar Sugar Maple	Balsam Fir Eastern Hemlock
<b>Bruce</b>	- Northern White Cedar Willow Redosier Dogwood Sedge	American Elm Reed Grass Speckled Alder American Cranberry Bush
<b>Rubicon</b>	- Sweetfern Blueberry Brackenfern Wintergreen	Sedge Saskatoon - Service Berry Swordefern Pin Cherry
<b>Seney</b>	- Eastern Hemlock American Beech Wintergreen	Sword Fern Blueberries
<b>Rousseau</b>	- American Beech Witchhazel	American Hornbeam
<b>Augres</b>	- Blackberry Common Ninebark American Hazel	Blueberry Eastern Hemlock
<b>Croswell</b>	- Bracken Wintergreen Pin Cherry Sword Fern Trailing Arbutus	Blueberry Thumbleberry Northern Twinflower Bearberry
<b>Marsh</b>	- Cattail Rush Sedge Reedgrass Red - Osier Dogwood	Willow Silky Dogwood Gray Dogwood Bulrush
<b>Ontonagon</b>	- American Hornbeam Eastern Hemlock Speckled Alder American Hazel	American Elm Balsam Fir Willow Canada Yew
<b>Bergland</b>	- Speckled Alder Northern White Cedar Balsam Fir Balsam Poplar	Quaking Aspen Red Osier Dogwood Willow
<b>Brimley</b>	- American Elm American Hornbeam Hawthorn Redosier Dogwood	Red Maple American Hazel Speckled Alder
<b>Ewen</b>	- Ironwood Hornbeam	American Hazel Sedge Species Balsam Fir
<b>Rifle</b>	- Northern White Spruce Sedge	American Hazel
<b>Ogemaw</b>	- Juneberry Pricky Ash	

(Colonville)

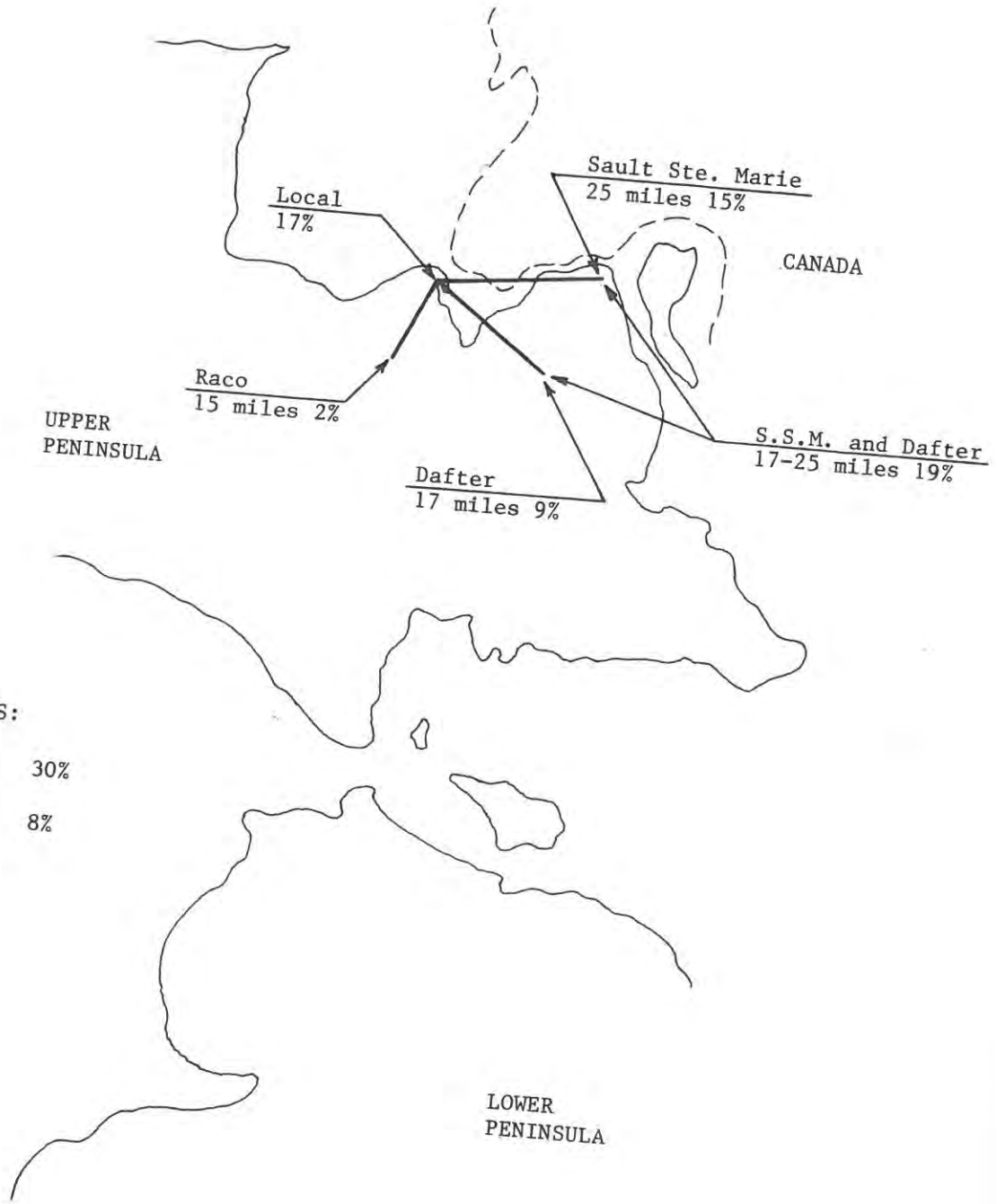
**VOLUME OF SPECIES**  
**BAY MILLS - 1974**

SPECIES	BF	CD
Aspen AB		5,061
Balsam SC		2,113
Basswood NH	56,410	192
Birch, White AB	122,280	1,136
Birch, Yellow AB	340,530	1,135
Cedar SC		624
Elm Sh	95,170	133
Hemlock SC	95,860	143
Maple, Hard SH	63,420	392
Maple, Soft SH	651,210	4,909
Misc.	44,800	367
Oak	46,440	131
Pine, Jack	5,050	
Pine, Red	81,900	344
Pine, White	121,670	
Spruce		2,066
Tamarack		212
<b>Total:</b>	<b>1,724,740</b>	<b>18,958</b>



TRIPS MAP  
Medical Needs

Scale: 1"=14.5 mi.



UPPER  
PENINSULA

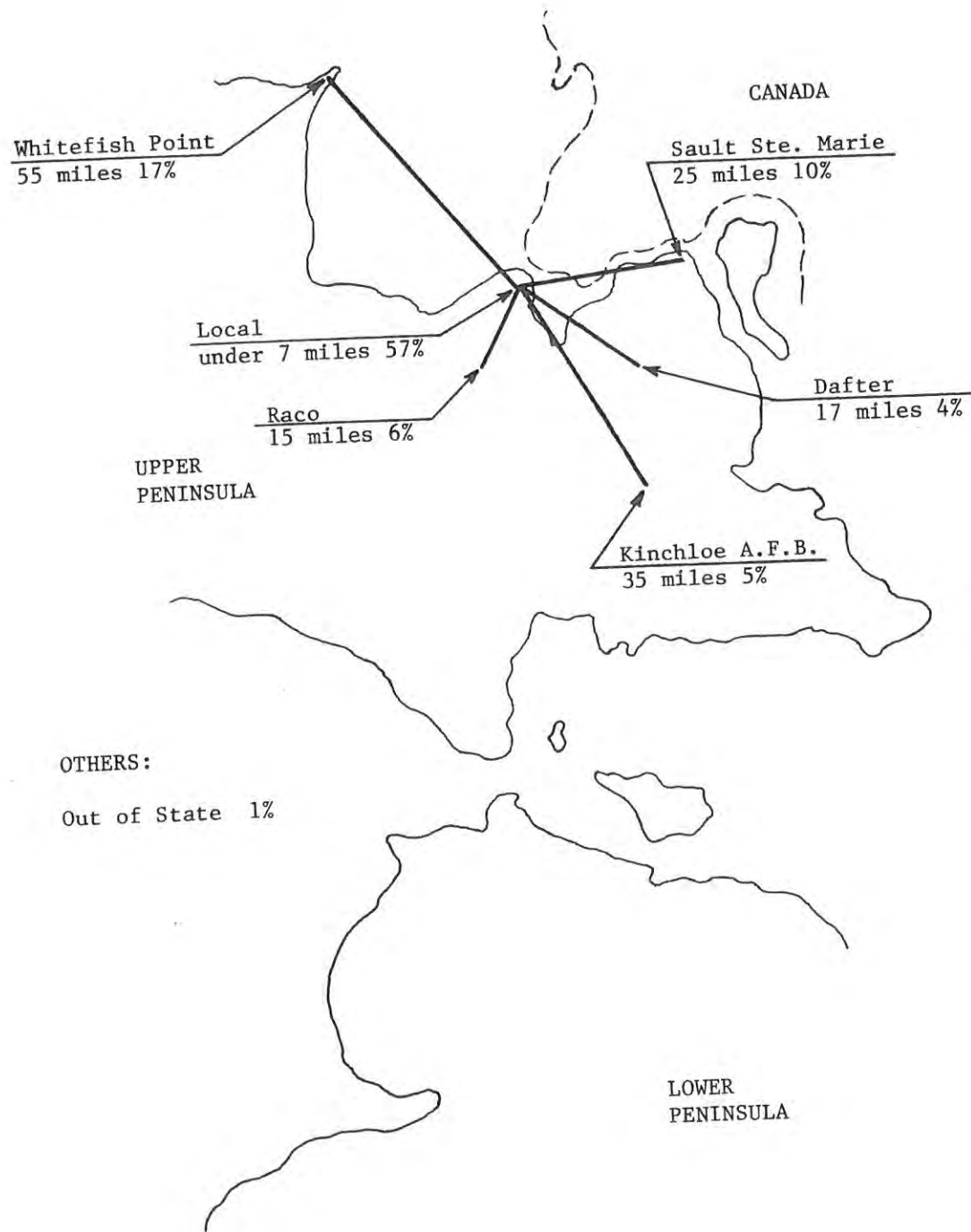
CANADA

LOWER  
PENINSULA

OTHERS:  
Mail 30%  
N/A 8%

TRIPS MAP  
Utility bills  
Scale: 1"=14.5 mi.





TRIPS MAP  
Employment

Scale: 1"=14.5 mi.

# Local Climatological Data

Annual Summary With Comparative Data

1975

SAULT STE. MARIE, MICHIGAN



## Narrative Climatological Summary

Sault Ste. Marie is located at the extreme eastern tip of Michigan's Upper Peninsula at the "hub" of Lakes Superior, Michigan and Huron. As a consequence of Sault Ste. Marie's proximity to the northern Great Lakes, climatic conditions are essentially maritime. Lake Superior, the largest, deepest and coldest of the Great Lakes, is nearby to the NW and provides the dominant climatic control for the area. Water in the northern Great Lakes remains relatively cool in the summer and does not freeze over during winter months, therefore, temperatures are moderated throughout the year whereas cloudiness and precipitation are increased.

Heavy fog occurrences reach a maximum in August, September and October and form in response to the passage of relatively cold air masses over the warmer waters of the lakes. The lakes are also responsible for higher cloudiness and increased precipitation. Destructive tornadoes and thunderstorms have occurred on occasion, however, such occurrences are rare. Summer and fall pollen counts are extremely low and sources of industrial pollutants are almost non-existent.

Terrain on the Michigan side of the international border is nearly flat and lies 700 to 800 feet above sea level. Very little climatological influence is related to Michigan terrain, however, terrain on the Canadian side of the international border rises rather abruptly to about 2300 feet above sea level and exerts a definite topographic influence on climatological conditions in that area as noted by increased rain and snow shower frequencies.

Changing weather patterns are common because of the high frequency of migratory low pressure systems moving toward the east and the northeast through the northern Great Lakes. Precipitation is well distributed throughout the year. Summer rains usually accompany a SE surface circulation whereas winter snows are most often associated with post-frontal NW winds.

Most summers pass without having a temperature reach 90°; 98° is the highest temperature ever recorded. Winters are cold and snowy. Seasonal snowfall has ranged from a low of only 32.1 inches (1899-1900) to a high of 172.4 inches (1971-72). November 24th is the average date for the appearance of the permanent winter snow cover which normally lasts until April 9th.

Annual sunshine values are low but are especially low during late fall and early winter. A pronounced increase in sunshine values from December to February is related to the development of the ice cover on Lake Superior. The ice cover effectively reduces a major source of moisture. Daylight during most of June and July will last almost 16 hours whereas winter daylight will shrink to less than 9 hours in late December.

The average length of the growing season from 1888 to date is 134 days (May 18th to September 29th) however, seasonal extremes range from a very short 98 day season (1950) to a significantly longer 170 day season (1903). The earliest late summer date on which freezing temperatures have occurred is August 22nd (1950) and the latest date in the spring is June 21st (1969).

noaa

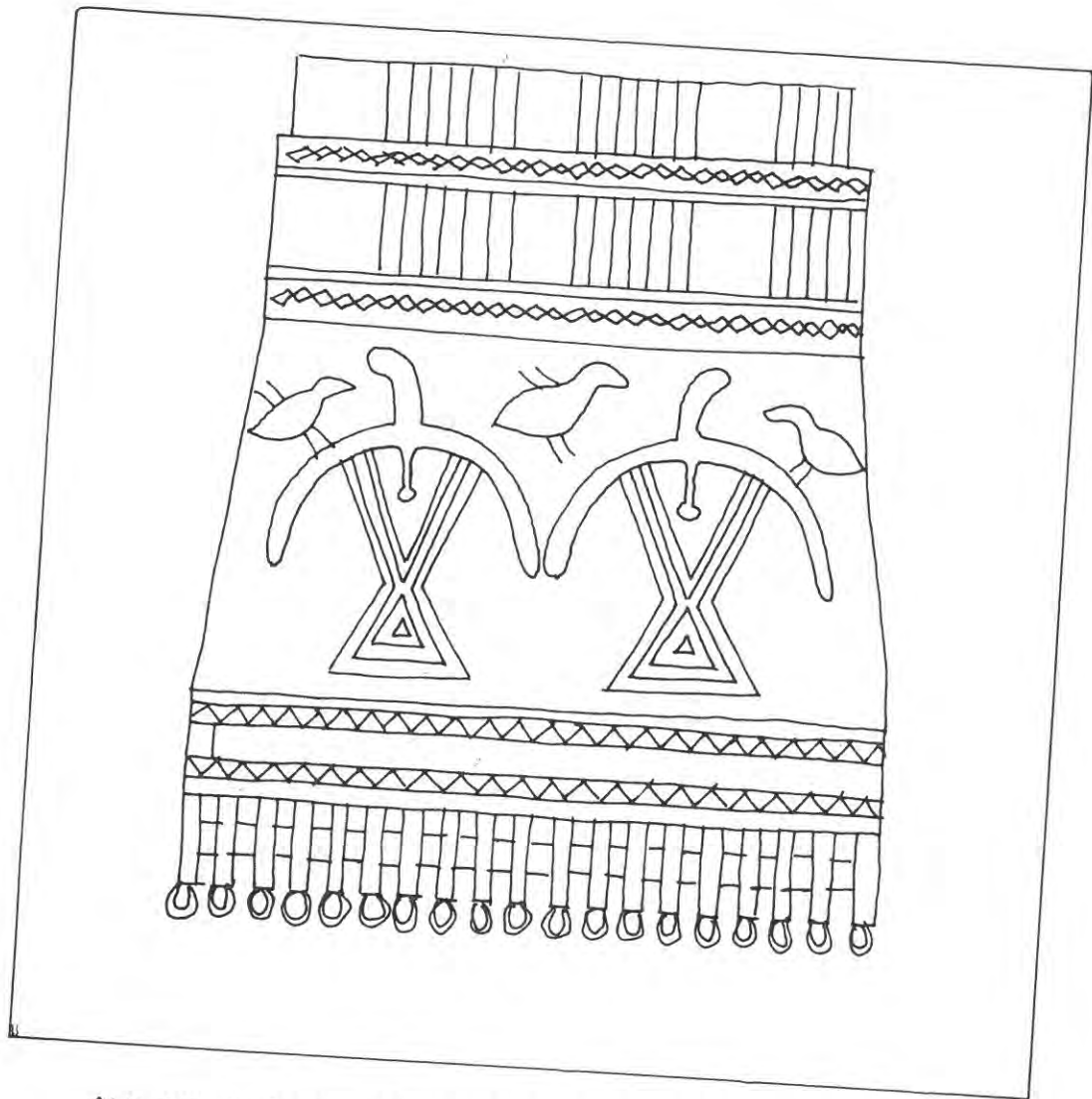
NATIONAL OCEANIC AND

ATMOSPHERIC ADMINISTRATION

ENVIRONMENTAL  
DATA SERVICE

NATIONAL CLIMATIC CENTER  
ASHEVILLE, N.C.





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THE DOCUMENT WAS DESIGNED AND ILLUSTRATED BY  
DEAN COKER AND KATHY GERDASI

# NOTES