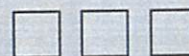




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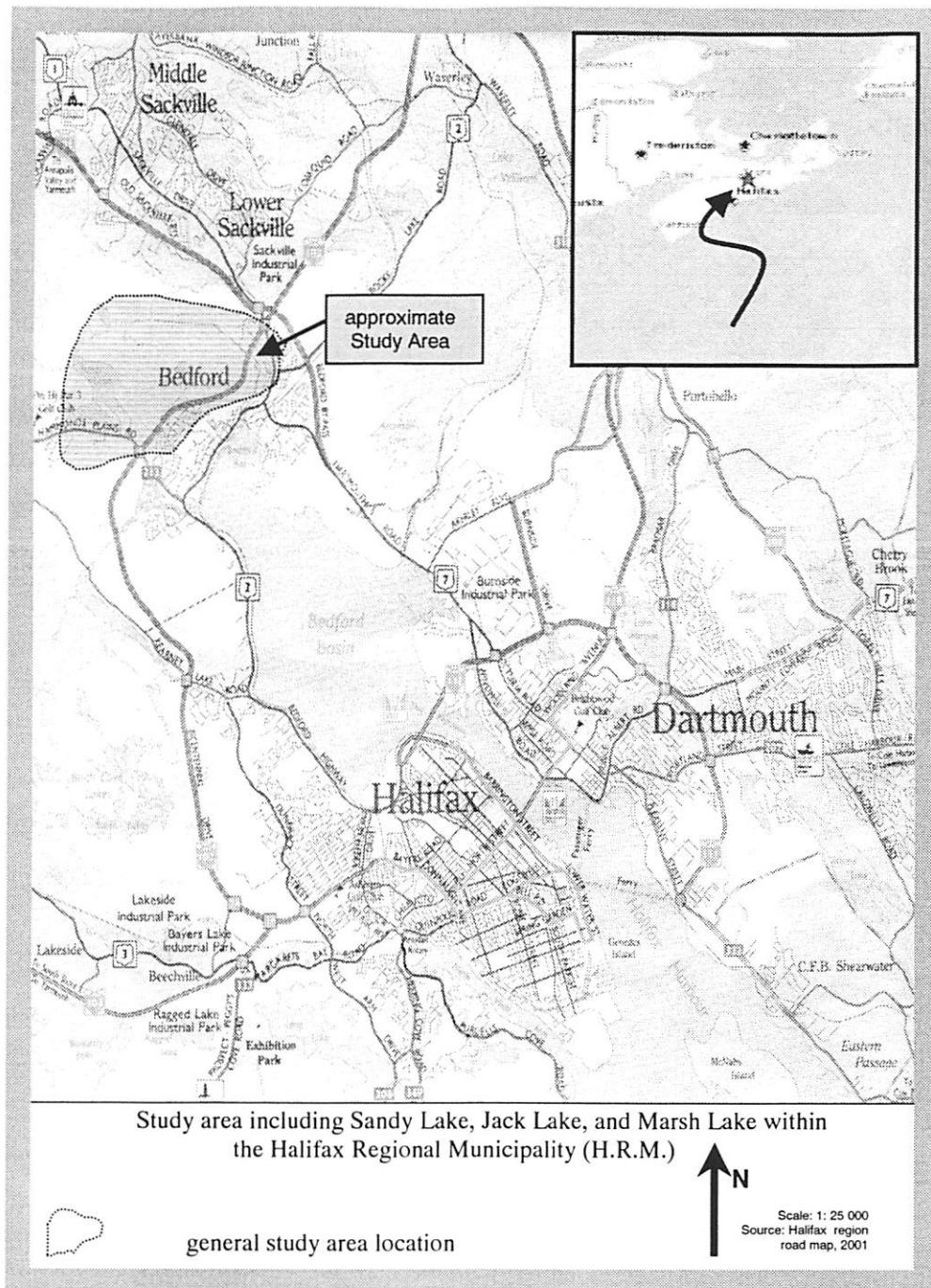


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Sandy Lake Community Profile



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Dear Reader:

In the winter term of 2002, a team of 21 students worked on what we called the Sandy Lake Community Research Project. The terms of reference for the project specified the following:

The proposed study will develop a community profile of the Sandy Lake area, identify the issues facing rural communities in the suburban fringe of the Halifax Regional Municipality, and provide background information that the community can use as it considers strategies for promoting environmental conservation. Given the regional planning exercise underway in Halifax Regional Municipality (HRM), this study may help to inform the debate about options for areas like Sandy Lake.

The project developed out of concerns expressed by members of the Sandy Lake Area Residents Association. Sandy Lake lies on the outskirts of Bedford NS: a rural enclave in a rapidly urbanizing urban rim around Halifax. Issues of changing land use, increasing traffic, and recurrent sewage spills stimulated residents around the lake to get involved in planning the future of their community. They turned to the School of Planning for assistance in gathering the information they need to make appropriate decisions.

In fall 2001, students from Environmental Planning at the Nova Scotia College of Art and Design completed an environmental inventory of the Sandy Lake, Marsh Lake and Jack Lake areas. Students from Biological Engineering (under the direction of Dr. Bill Hart, Centre for Water Resource Studies) at Dalhousie University began a study of water quality in the lakes. (These studies have been reported separately to the community.)

The community research initiative reported on here follows up on these environmental studies. It brought together students from two programs: Environmental Planning at the Nova Scotia College of Art and Design, and Urban and Rural Planning at Dalhousie University. The team collaborated in creating a work plan, executing the research, presenting the results to the community at an open house, developing a web site (www.dal.ca/sandylake), and producing a series of three reports:

Sandy Lake Community Profile
Issues of the Urban and Rural Fringe
Suggestions for Managing Development

The students faced significant challenges in coordinating a project of this scale, with a team so large (and in the midst of a faculty strike that lasted for the month of March). That they succeeded in bringing together the material as effectively as they did testifies to their organization, determination, and insight. I enjoyed the privilege of

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working with them in the initiative, and learned a great deal in the process.

We would like to thank the liaison members from the Sandy Lake Area Residents Association - Betsy Van Helvoort, Derek Sarty, and Katharine Mott - for their support, cooperation, and generosity. We are grateful to Counsellor Len Goucher and the staff of Halifax Regional Municipality (especially Kevin Conley and Anne Muecke) for finding financial resources to help with the costs of the research. Dozens of people who live or work in the area, or care about the lakes, gave of their time and other resources to help the students in their research: we sincerely appreciate their kindness and interest in our research, and hope they find the results worthwhile. If the work assists the community and HRM in their continuing efforts to produce good plans for areas like Sandy Lake, then we will have succeeded in achieving our objectives.

Sincerely yours,



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Summary

Project Background

This research project explores the impacts of development on a community that is located on the fringe of an urban centre. The focus community is Sandy Lake, located a twenty-minute drive north of Halifax, Nova Scotia. Residents in the area enjoy a semi-rural lifestyle in close proximity to a lake, and amidst a forested environment. Two nearby lake systems, Marsh Lake and Jack Lake, are part of the study area. There is interest in the community in developing a watershed management plan. The resident's association feels that development in the area should take account of the local natural and social environments. To assist the community in developing a watershed management plan, students from Dalhousie University and Nova Scotia College of Art and Design conducted research for the residents as part of their educational programmes.

Over a period of four months in winter 2002, students researched various topics, including: urban growth pressures, demographics, land use patterns (both historical and current), transportation patterns, and community perceptions of the landscape. The report that follows is a community profile of the Sandy Lake area. It begins with a historical picture of economic and recreational activities, and an overview of development in the area. Land uses are a focal point in the research, as they typically indicate changes to the landscape. Census information offers quantitative data about the community within a larger enumeration area. Community concerns and environmental issues are highlighted at the end of the summary. Further details of research findings are presented in the main body of the report. Although not a comprehensive report, it does document contemporary issues and conditions in the watershed and should provide a useful resource to the community as it considers how to plan its future.

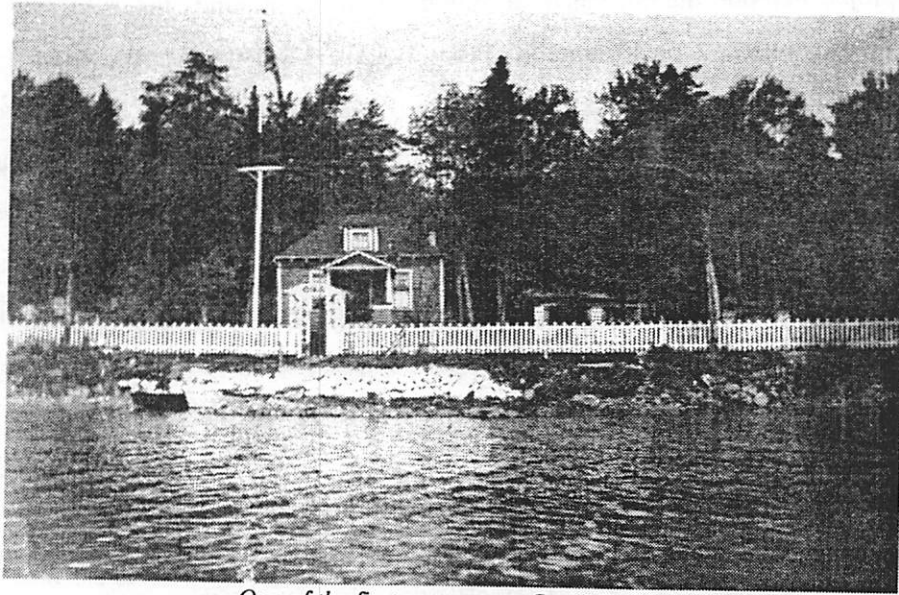
Historical Land Use

Though there is no immediate evidence, archaeological data from surrounding areas suggest that it is likely that Mi'qmaq populations would have utilised the Sandy Lake area first. They would have navigated the waterways and harvested from the lakes, forests, and wetlands. The people who followed, settlers from the 1700s on, obtained large tracts of land through land grants, and used the land for economic and recreational purposes. Historical uses of the land in the Sandy Lake area include logging, sawmill operations, waterpower generation, barrel and box manufacturing, homesteading, and recreation. Hammonds Plains Road began as a travel and supply corridor from Halifax to Lunenburg. Powerlines, telegraph lines, and rail lines cut through the forests in the area. Recreational activities such as skating, swimming, and skiing were popular



Sandy Lake Community Profile

with early residents of Sandy Lake. People began establishing cottages on the lake in the early 1900s, a development that contributed to the strong social and recreational history of Sandy Lake.



One of the first cottages on Sandy Lake.

Large scale industrial development in the immediate area, (apart from logging operations), did not occur until the 1970s when Farmers Dairy located on the shore of Sandy Lake. This was a significant development for area residents as it occupied a large tract of land, and had a number of impacts on the natural environment. Land subdivision began during the same time with the development of Peerless subdivision and Atlantic Acres Industrial park. Areas around Sandy, Marsh, and Jack Lakes were designated as parkland and residential reserve in the 1980s, slowing growth in the area considerably.

Present Land Use

Sandy Lake remains a quasi-private lake. On the whole, residents in the area are not transient—they are members of families that have been there for multiple generations. Public access is still limited, though the extension of Smith's Road, and completion of the Lion's Park and Beach will change this situation. Area residents continue to use the lake and lands recreationally, though less than residents of years past. There are no longer large homesteads on the lake, although a few residents continue to cultivate vegetables for household consumption. A recent recreational use, expanding steadily over the last ten years, is mountain biking. Mountain bikers consider this one of the best biking areas in the region, and hope to improve the trail system in an environmentally appropriate manner. All terrain vehicle (ATV) use is also relatively new to the area. Other



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popular activities include hiking, and dog-walking. Increasingly, visitors to the area are using the lands for recreational purposes.

Logging operations are not occurring in the area anymore. Farmers Dairy continues to operate, as does locally owned Giles trucking company. A newer subdivision, Kingswood, is located within the watershed, and Atlantic Acres industrial park still hosts numerous commercial and light-industrial activities. Hammonds Plains Road, as a result of subdivision development and industrial activity, is a heavily used transportation corridor.

Census Data

The statistical community analysis provided by data in Enumeration area 454 depicts a rural-suburban community on the urban fringe. The relatively low density and consistency of housing stock reflect a community that has developed on fairly large lots in the unserviced outskirts of a large urban centre. Data indicates a population that is predominately middle aged with few children, and even fewer seniors. Development pressure and new housing construction may result in an increase in overall population. Thus, the population of the enumeration area may not experience a decline in the coming decades even though the population will age. The housing stock in the Sandy Lake area is generally in good condition, although the age of the housing stock coincides with the demographic make up of the community (majority of housing construction took place between 1961-1970 and continued at a fairly consistent 14% increase per decade).

Also consistent with a rural community on the urban/rural fringe are the relatively large number of people who work outside the study area. Not surprisingly, due to their distance from Halifax and the lack of public transit, the community appears to be reliant on the automobile for all transportation needs.

Community Perspectives

The study area community includes residents and cottagers on Sandy Lake, Hammonds Plains Road, and in nearby subdivisions. The following bullets outline the key concerns, issues, and views of community members.

Lack of Community Consultation

- Some past development decisions were made without appropriate community consultation; residents want to participate in decision-making.



Sandy Lake Community Profile

Current and Future Impacts on the Environment

- New development and recreational use in the area may impact and reduce wildlife habitat for waterfowl and other bird populations: fish, reptiles, amphibians and mammals, and valued or rare vegetation such as mature forest stands and plant species.
- Residents noted that industrial and road development in the past affected lake water quality; some of these effects continue. Areas of concern include the effects of sedimentation in lakes and waterways, storm water runoff, construction in wetlands, undersized culverts on road crossings, and diversion of drainage into the watershed from other areas. Residents feel that if HRM deals with impacts from present developments it would demonstrate a commitment to the community, and to maintaining the valued environmental quality of the area.
- In the recent past, sewage leaks from broken sewer lines contaminated well water and lake water quality; boil water and no swim advisories were issued by the municipality. Residents would like to see groundwater quality monitored and conserved.
- Illegal dumping of refuse in secluded areas continues. Community members suggested that the municipality reduce the cost for garbage pick-up and disposal so that illegal dumping is no longer an alternative for local communities.

"This place has never had any promotion, and local knowledge was required to know what was in here. All of a sudden there's going to be people actively promoting that it's here."
- Resident

Lake and Land Use Conflicts

- There are conflicting opinions among residents and cottage owners regarding use of powerboats in the lake; the future park development will increase this conflict.
- ATV use conflicts with other trail users and cottage owners; ATVs used off trails damage wildlife habitat.

Traffic

- Development in surrounding areas has led to increasing car and large truck traffic on Hammond's Plains Road. Community members are concerned with current safety on the road and access to and from properties and connecting roads; future development in the area will increase traffic volume and these concerns.

New and Future Development:

- Although most community members feel that parkland is the most appropriate use of the lake areas, they are concerned with impacts from the new beach and park under



Sandy Lake Community Profile

construction on the east side of the lake. They worry that the development may be managed properly.

- The park will bring in a large number of recreational users of the beach, lake waters and trails. Along with concerns about increased traffic and environmental impacts, which are common to all development, community members fear compromises of security from uncontrolled access to the lake, loss of privacy, pollution of the lake waters, and changes in property values.
- In general, community members favour future parkland and residential development over other uses; they feel development should be approached from a conservation perspective and at a pace that allows assessment of impact on the environment. This would prevent further deterioration of quality of lake water and groundwater and protection of wildlife and habitat.

" 'Til this year Sandy Lake has been virtually unknown. With the advent of park development we anticipate...increased aquatic traffic and reduced privacy and water quality...increased vandalism and break-ins ... we fear no adequate preparations are being made for fire fighting, rescue etc...and no notions of the impact or the remediation seems to have been discussed."
- Resident

Public Education

- Community members are willing to share the land and waters; they would like to see education of new land users about valued environmental elements to generate respect for the natural quality of the area, perhaps through an Interpretive Centre located at the park. Some residents suggested a wildlife inventory and study to share with visitors.



Sandy Lake Community Profile

Valued Environmental Elements

Natural setting: The area has a wilderness feel that is remarkable in light of its close proximity to developed areas of HRM. Community members wish to continue their quiet enjoyment of the area with protection from noise and visual pollution.

Water quality in the groundwater, lakes and streams: This is important to human occupation of the area and to wildlife. The area is a sub-watershed of the Sackville river watershed and influences the success or failure of restoring salmon populations in the Sackville River.

Wildlife: The presence of loons, deer, snapping turtles, amphibians, raptors, and fish species, as well as wildlife habitat, is highly valued by residents.

Natural recreational and traditional recreational pursuits: For many generations the area has been used recreationally by people from the area, as well as by Bedford residents.

Lake access: With increased development comes the risk of losing public access to the lake for community members who do not currently reside on the lake.

Native vegetation: Stands of old growth hemlock trees, and other mature forest remnants, as well as species of orchids, are cited as being important features in the local environment.



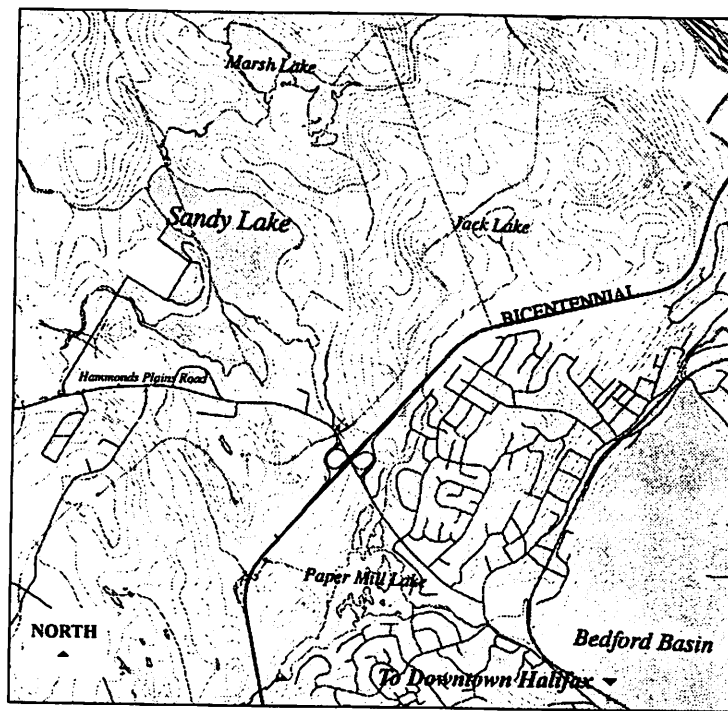
An old Hemlock stand on the shore of Sandy Lake.

Sandy Lake Community Profile

Introduction

The following community profile report compiles detailed information on how Sandy Lake and surrounding residents want their area to grow. The information provides background to help the Sandy Lake Area Residents Association develop a Watershed Management Plan. Without a clear strategy, the area may develop in an environmentally unsustainable way, damaging both the land and water systems.

Sandy Lake, located to the northwest of Bedford, is facing development pressure. Its ideal location with its natural features lends itself to commuters working in downtown Halifax seeking refuge from the 'urban life'. As a result, the Sandy Lake Watershed Association (SLWA) was formed to conserve and protect the area and to support environmentally sound development objectives and strategies (SLWA, 2002). Currently the immediate and surrounding area contains residential, commercial and some industrial uses.



This report describes the findings collected through reviewing census data, surveys, 'kitchen meetings' with residents, and through phone and personal interviews with individuals. The data collected focuses on land-use, population, and economics, through residents' feelings, attitudes, experiences and stories of the land, and waterways.



Sandy Lake Community Profile

Community based planning is now widely recognized as being important to the planning process. Governments, including Nova Scotia, have considered these principles important enough to enshrine them in legislation.

"...a consultive process to ensure the right of the public to have access to information... and to participate in the formulation of the planning strategies and the by-laws, including the right to be notified and heard before decisions are made..."

Municipal Government Act of Nova Scotia. 1999. Section 190c

The legislation makes it clear that public participation is required and necessary for the development of strategies and plans. It further underlines the right of the public to have a say in how they want their values to be reflected in their own communities. At the local level this means that people can participate in all plans, strategies and decisions that affect their communities. An obvious reason for including community members in making decisions for land use planning is that they live in the community. Local people have knowledge- of their cultural landscape, the historical context, and of their physical environment. They know what they value.

Project Background

Members of the Sandy Lake Watershed Association requested help from students in Dalhousie School of Planning and the Nova Scotia College of Art and Design (NSCAD). The association was interested in having some background research to help them develop a Watershed Management Plan. Students from the Environmental Planning program (NSCAD) and Urban and Rural Planning program (Dalhousie University) took part in this research project under the name "Sandy Lake Community Research Group" (SLCRG).

The first task was defining the study area. A geographic definition of the Sandy Lake sub-watershed was chosen as the focus for this community profile in order to relate back to the goals and objectives set forth by the SLWA. Research topics were not confined to watershed boundaries, but information gathered related to the area within these boundaries. The community, for the purpose of this study, consisted of five main groups: lake residents and cottagers, residents living near to, but not on, the lake, and surrounding residents (e.g. Peerless subdivision), area landowners, and user groups (e.g. hikers and bikers from Bedford). An analogy of throwing a pebble into a lake was used to establish this definition. Each ripple that forms around the focal



Sandy Lake Community Profile

point represents part of the community. In this case, the focal point was Sandy Lake, and the ripples represent surrounding neighbourhoods and community groups.

The Sandy Lake Community Research Group was divided into two separate groups to tackle the research the assigned question. The Urban and Rural Fringe (URF) group looked at issues affecting the community at a broader sense, comparing the area with other urban fringe areas. The Community and Environment (C&E) group gathered information about the local environmental and social communities. Research focused on collecting information from anyone who used or valued Sandy Lake. Census data was also collected for the area to get an overview of the growth that has occurred in the past to help predict future growth. The latter research topics formed the background for the community profile.

The Sandy Lake area was once a part of the Town of Bedford until amalgamation as Halifax Regional Municipality (HRM). One result is that development pressure is now mounting upon this relatively small watershed area. Already, many developments such as Kingswood and the Atlantic Acres Industrial Park have affected the area by increased traffic levels and lake degradation.

A significant topic within this study, and perhaps the impetus for this research, is the proposed and partially initiated development of the Lion's Club Beach situated on the north side of Sandy Lake. This new development is a contentious issue with residents, some of whom feel resentment from not being consulted prior to development approval.

Many community organizations have a stake in the development of the Sandy Lake area. The following groups were approached in order to have their comments and concerns documented:

Sandy Lake Area Residents Association (SLARA):

A group of local residents who organized themselves to address concerns dealing with new developments on and around Sandy Lake.

Sandy Lake Watershed Association (SLWA):

This group of residents were originally a part of SLRA. They formed in order to:

- Conserve and protect the Sandy Lake watershed for the purpose of supporting life and habitats of wild, aquatic, natural and human species;



Sandy Lake Community Profile

- To ensure the conservation of quality and quantity, and prevent further deterioration of water in the Sandy Lake watershed; and
- To ensure that the aquatic and land environments of Sandy Lake continue to support a diversity of plant, aquatic and animal species.

Peerless Subdivision Residents Association (PSRA):

Formed in 1985 to lobby successfully for sewer and water servicing. The organization is not active currently except for yearly social get-togethers, and has not typically liased with the SLARA or SLWA.

Historical Land Use

Pre-European Land Use

Though there have been no archaeological excavations in the immediate Sandy Lake area, evidence that indicates that the Bedford area has been used and occupied for thousands of years by Mi'kmaq people (Nova Scotia Museum, 2002). In many areas surrounding Bedford, archaeological discoveries date back thousands of years. An archaeological survey for petroglyphs (rock carvings) in the Hammonds Plains area that yielded no sites. Habitation by Mi'kmaq in the Bedford area was confirmed by early European visitors to the area. Mi'kmaq people were reported to have established camps during summers, using the Bedford area as fishing grounds. Thus, it is possible that the Sandy Lake area was used prehistorically.

Before Hammonds Plains Road was established, an old trail crossed the land from Pockwock Lake where the Mi'kmaq wintered (to the west), to the Bedford Basin (Evans, 1993). In summer, the head of the Basin was occupied by Mi'kmaq peoples engaged in fishing for salmon, sea trout and gaspereaux in the Basin and along the Sackville River. Fish caught were dried and cured on the shore. These activities had been carried for perhaps 5,000 years, with little impact on the surrounding landscape (Coakley, 1988).

Petroglyphs were discovered in 1983 in the Bedford Barrens, an area of exposed bedrock to the southeast of Jack Lake, overlooking the Bedford Basin. These carvings, made with stone tools, appear to date to about 1500 A.D., before the arrival of metal tools from Europe (Martin, 2001).

In Nova Scotia, the land occupied by the Mi'kmaq appeared very different from today (Davis, 1996). There were no extensive clearings, except for those created by forest fires, natural



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marshes (for example, Marsh Lake), or the numerous bogs (such as the area of Jack Lake). The navigable waters of Sandy Lake and its connecting stream to Marsh Lake, leading through Peverell's Brook to the Sackville River were very likely used by the Mi'kmaq for canoe travel as they harvested mammals, fish, birds and shellfish.

Arrival of the First Europeans

The initial European contact and settlement was confined to the coast at the head of the Bedford Basin and did not extend into the lake areas. Around 1500, the first European fisherman arrived in the Basin to fish, trading with the Mi'kmaq near the mouth of the Sackville River (Tolson, 1996, Coakley, 1988). In the early 1600s, French farmers settled the Sackville River valley at what is now Bedford, harvesting the marsh hay and planting crops in the floodplain (Coakley, 1988).

Fort Sackville

The British had established a fort at Halifax in 1749, under Governor Cornwallis, to protect settlers from attack from the French and their Mi'kmaq allies and to establish a presence counter to the French fortress of Louisbourg. Cornwallis immediately commissioned John Gorham and his Rangers (of Massachusetts) to build the garrison of Fort Sackville at the head of the Basin to protect the workers as they constructed roads around the Basin from Halifax and to the English speaking settlements along the Minas Basin (Withrow, 1999).

In 1752, George Scott received a land grant of 350 acres in the Fort Sackville area. This grant included what was known as Cocked Hat Lake (because of its shape), now Jack Lake (Tolson, 1996). George Scott's brother Joseph Scott, later established the Scott Manor House in Bedford.

Hammonds Plains Road

To bolster their presence in Nova Scotia, the British had also attracted from Europe a group of German speaking Protestant settlers who would establish the community of Lunenburg in 1753. The new settlement at Lunenburg was isolated and could only be reached by sea. The governor, concerned to facilitate communication and troop movement to and from the outpost settlement, ordered a road built from Lunenburg to Halifax. Dorothy Evans, in her book *Hammond's Plains: The First One Hundred Years*, discusses the construction of two roads which may have become Hammonds Plains Road (Evans, 1993). One was cut in the early 1760s by Joseph Pernette, of Gorham's Rangers. The ten foot wide trail was used to send firewood and produce from



Sandy Lake Community Profile

Lunenburg to Halifax beginning around 1762, and possibly for troop movement. Charles Morris, Chief Land Surveyor for the province, was ordered in 1782 to survey and mark a road from the Sackville River to Lunenburg; this route was most likely used to facilitate settlement. The road was planned in 1782; it was marked in 1784; and 1785 it was opened by Daniel Hail who the next year received a lot of 300 acres in a grant of lands in Hammonds Plains. The area was named Hammond's Plains in honour of Sir Andrew Snape Hamond, Lieutenant Governor in 1781-1782.

Land Grants

After the American War of Independence in the 1780s, their Loyalists flocked to the province. The 42 original Hammond's Plains land grants in 1786 were made mostly to prominent Haligonian businessmen who sought a share of the lands granted (Evans, 1993). They never lived on the lands themselves; most, however, put families on the lands to fulfill the grant conditions that the land be cleared, dwellings erected and cattle be kept. The land value for these grantees lay in its lumber, including mast timbers, far superior to other areas of Halifax. A water lot on the Basin in the area of Nine Mile River (now Paper Mill Lake) was requested by one businessman and granted by the government. This lot provided access by river to the head of the Basin (Evans, 1993). Logs could easily be boomed and floated down the basin to the Halifax dockyards. This site became an important industrial and transportation point in later years in the lumber trade.

The Yankeetown area, near the intersection of Lucasville and Hammonds Plains Roads, was settled beginning in 1785 by Loyalist families re-offered land grants not developed by the Halifax merchants (Withrow, 1999). Shortly after this time black refugees from the American South reached the Upper Hammond's Plains Area and settled on land grants (Early Pioneers, 1978).

After the War of 1812, Chesapeake Blacks, who were refugee slaves freed from plantations bordering on Chesapeake Bay, settled in Upper Hammond's Plains. They began farming, but the poor, thin soils forced them to turn to lumbering.

Early Industry Based on Waterpower and Lumbering

In 1811, Thomas Johnson (perhaps after whom Johnson's Brook is named) arrived and operated an inn and gristmill near the Lucasville Crossroad (Withrow, 1999). The early 1800s saw the development of many shingle and saw mills along the streams leading to Sandy Lake, and on the



Sandy Lake Community Profile

Nine Mile and Sackville Rivers. Schmidt's Mill, on Johnson's Brook near Sandy Lake was a well-known establishment (Coakley, 1988).

In 1836, William Piers operated a gristmill at the intersection of Hammond's Plains Road and the Bedford Highway, on his land grant. By 1876, this land had been purchased by William C. Moir, who built an industrial complex at the site. By 1890, Haverstock had built his shingle mill and dam, which operated until recently as a box manufacturing company on the Hammond's Plains Road near the Lucasville Road.

According to local residents' accounts, the harvesting of timber in the Sandy Lake area has been occurring since the late 1800s. Much of the lumber cut in the Sandy Lake, Marsh Lake and Jack Lake area over the next several decades was destined for the sawmill and box factory at the Moirs Site (Robertson, 1983). The Nine Mile River, dammed by a 1,700-foot wooden structure, flowed through a turbine to provide the 400 horsepower needed by the complex. Logs cut in the Sandy Lake area floated through Sandy Lake to Marsh Lake and Peverell's Brook to the Sackville River. Upon reaching the Basin, they were boomed until being processed in the mill. Dams for gathering logs were constructed in the stream connecting Sandy and Marsh Lakes, and below Marsh Lake. These dams remained into the mid-twentieth century, local residents recalled. Later in the twentieth century, logging trucks hauled lumber overland to the Hammonds Plains Road.

"The logging company took advantage of the lake in wintertime. The company would drive huge trucks full of logs across the frozen lake. The company used an old road that went right through the lake. You can see this road when you canoe over it now."

- Resident

Some residents and visitors still remember timber floating across Sandy Lake in the summer. One of these operations was run by a local family named Pender. Later, logs were hauled by truck over the ice in winter. Areas logged included the north side of the lake and around Marsh Lake. Timber was harvested for a number of uses, including for Moirs Mill, Haverstocks crate and barrel company (then the largest employer in the Hammonds Plains area), and a local barrel maker, Hedley Giles. Spruce was used for the barrel staves, and birch for the barrel hoops. Bert Giles had a small sawmill on his property.



Sandy Lake Community Profile



Logs on Sandy Lake in summertime.

There was a heavy impact on the environment from the intensive use of the waterways. Some were straightened to allow easier passage of the logs. Even in 1856, Captain Campbell Hardy had reported that “The Sackville River offers no sport to speak of now except for the sawmills and their obstructive dams have quite cut off the fish from their spawning grounds.”(Doyle, 2000: 11)

Logging remained the primary activity throughout the nineteenth century and the early twentieth century. A gold discovery at the north end of Kearney Lake Road, as shown on a 19th century mineral map, seems not to have been exploited (Church, 1855).

By 1916, the area had been extensively logged. The Water Power Commission (WPC) for the province reported that the lower part of the Sackville River watershed, containing Sandy and Marsh Lakes was “generally covered with a mixed hardwood and coniferous growth which has been severely culled...the area of cultivated land is very small” (WPC, 1916: 611). Frequent forest fires had devastated many of the forested areas near Hammond’s Plains and Sackville in the mid to late 1800s. Hemlock Ravine, south of the study area, remained unscathed.

Agriculture and Homesteading

The largest and oldest farm in the area was the McLellan family’s dairy farm, at the base of the hemlock peninsula on Sandy Lake. This was a 170-acre parcel, half of which was cleared for



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cultivation. The property was acquired by Stan McLellan's grandfather sometime in the late 1800s and was already cleared when he acquired it. Stan moved to the homestead when he was 8 years old. The main economic activities on the farm were: cultivation of hay and some vegetables, raising of cattle, and apple orchards. Stan recalls distributing milk to households throughout Bedford. The family kept the milk cold in dug wells, and in ice houses formed by layering ice cut from the lake and sawdust. Due to the rigors of daily chores, Stan does not recall having much time for recreational activities.

The Smiths also had a homestead at the end of Smith's Road. They grew vegetables and apples for their own consumption. Their homestead was situated where the proposed Lion's Club beach park is. A cabin on the Smith property was occupied by Timmy Smith and his family. Other residents in the sparsely settled lake area kept some animals, such as guinea fowl, ponies, and hens.

Cottages

Since the early 1920s, Sandy Lake has been home to summer cottagers. The first people to build cottages on the lake were Joe Mallard and Mr. Thornton in 1926, and later, the Duggans and Blakeney's. Since then a number of cottagers have built small structures along the western side of the lake. The permanent residents accept the cottagers as part of the community, or "Lake people". See Appendix 4 for detailed historical maps.

"Before the Dairy put the road in we would travel across the lake in boats, to go to work, to get groceries, or anything else really. We would use a horn to signal to our family to come pick us up from the road." - Cottager



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Access to cottages through Farmers dairy property.

Infrastructure and Road Development

An 1855 map of the province published by Belcher shows an extensive road network throughout the province, including Hammonds Plains. Main roads, such as those to Yarmouth and the Annapolis Valley, are lined with telegraph wires; the telegraph wires only extend to Sandy Lake on the Hammond's Plains Road. A proposed railway line is shown crossing the lake areas from Mill Cove to Sackville, the first of many proposed projects for the area that were not constructed. When built in 1854, the new rail lines bypassed the area and followed the shores of the Bedford Basin. Electricity came to Bedford in 1898. Initially, power lines passed through the lake areas from Hammond's Plains to Bedford, and north to Sackville. By 1973, extensive cuts were made for additional lines that crossed the area in an east-west direction; a transformer station and a microwave tower had been built east of Marsh Lake (Energy, Mines and Resources Canada, 1973).

The Bedford Ratepayers Association formed in 1921, and by 1950, the Bedford Service Commission had established service boundaries for the town, which included Sandy, Marsh and Jack Lakes. When the town was incorporated in 1980, these boundaries became the town limits.

Residents recall when there was very little traffic on the Hammonds Plains. Stan McLellan remembers walking along the road to get to school; the road was seldom used then because people did not have transportation. He recalls that the road was cleared by a team of horses and a plough made of planks. Paul Giles remembers when he could go sledding on the road in winter.



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Gravel for road surfacing was acquired from an area on the McLellan homestead. Hammonds Plains road was paved and straightened in the late 1950's.



The construction of Hammonds Plains road c. 1950s.

Where the road had once wound around the numerous hills in the area, such as that opposite Giles Drive, it now took a straight path. From the Bedford Highway, the old route along the banks of the Nine Mile River was abandoned. The Bicentennial Highway, or Highway 102, was constructed in the late 1960s to the east of the area.

Road access to the lake was off Hammonds Plains Road, to a point called "Whittimore's Landing." This was the only public access to the lake for many years, where people could launch their boats. It also served as a boat launch for cottagers reaching their properties by watercraft. Whittimore's landing probably had its beginnings as a logging road for trucks. It later became a popular spot for camping and partying. In the 1960s the access was restricted by the placement of large boulders on the road.

In 1978, the Pockwock Lake water supply system for Halifax was completed. A 54" main supply line runs across the western part of the Sandy Lake-Marsh Lake watershed and along Kearney Lake road; an additional 30" main to Bedford runs south of Sandy Lake. (Evans, 1993) In 1997, a planned additional main and water road were constructed parallel to Highway 102; the main supplies Bedford and Sackville.

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Industrial, Institutional and Subdivision Development

The lake area remained relatively sparsely populated, with little industry, until the 1970s. In the early 1970s, Twin Cities Cooperative Dairy (later to become Farmers Cooperative Dairy) relocated from Halifax city to a hill adjacent to Sandy Lake, to take advantage of the lake water supply. A new service road crossing Johnson's Brook at what is known as Murphy's Pit connected the Dairy to Hammond's Plains Road. Cottage owners on Sandy Lake negotiated road access to their properties with Farmers Dairy in 1975, ending their previous reliance on watercraft. The dairy cleared approximately 45 acres of land for the plant, some of which was on a steep bank overlooking Sandy Lake.



Farmers Dairy was a significant development in the Sandy Lake area.

In 1970 the Metropolitan Area Planning Commission (MAPC), charged with developing planning for the rapidly growing metropolitan region, recommended that the Sandy Lake area be designated a Regional Park, consisting of nature reserve and recreation area. A report described the Sandy Lake – Marsh Lake area: "...the whole comprising an excellent landscape unit. The forests here contain mature white pine, hemlock, spruce, maple, birch and beech" (MAPC, 1970: s:i). The MAPC report considered the siltation from erosion of the recently cleared dairy lands, and the risk of treated waste flowing into the lake as threats to Sandy Lake: "...erosion had caused massive siltation of the lake, and raised doubts whether the lake has not been so damaged by silt as to be no longer able to maintain plant and marine life..." (MAPC, 1970: s:v).

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In 1972, Seventh Day Adventists acquired the McLellan property for use as a school site. Construction of the school commenced in 1972, and it opened its doors in 1974. Students who live in the dormitories occasionally use the peninsula for campfires.

In 1973, construction began on the residential development of Peerless Subdivision and Atlantic Acres Industrial Park. Bedford sought to increase its tax base by attracting light industry to the outskirts of the town. Atlantic Acres industrial park was developed in the 1970's, along with Peerless subdivision. The 112-acre industrial park (currently 75% developed) was clear-cut, and the marsh area, locally known as "Verge's Marsh" was infilled. The area, at the base of Bluewater Road, remains prone to flooding. Residents recall that the marsh was very deep: "...they checked the depth of the swamp and it was bottomless." It was eventually filled with large rocks, and peat harvested from a nearby location.

Peerless residents petitioned for and were successful in obtaining water and sewer servicing of their area in the 1970s. Farmers Dairy received water servicing at the same time.

In 1975, 110 acres of land between Jack Lake and Highway 102 was proposed for a landfill for the metropolitan Halifax Area. Protests by local politicians and residents over a two-year period were effective in preventing the building of the landfill, and it was later located in the Upper Sackville Area. After the landfill issue at Jack Lake, the area was slated for residential development. An environmental evaluation recommended the area for residences, but the housing market fell off (Regan, 2002).

The Town of Bedford was incorporated in 1980. Its 1982 Municipal Development Plan encouraged development only within the town's residential development boundary (to those areas already serviced). The intent was to prevent more capital expenditures on trunk lines and to not increase the capacity of the treatment plant. (Town of Bedford, 1982). The residential development boundaries extended west to Highway 102. Most land in the area of Sandy and Marsh Lakes was designated parkland or residential reserve; the Jack Lake lands were designated residential reserve. This designation required a minimum lot area of 5 acres for the development of single unit dwellings, on previously undeveloped land. Development in the area was effectively halted. Outside the town boundary, however, Halifax County's Plan of 1987 zoned the adjacent land as Mixed Use B, permitting the development of low density residential districts,



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manufacturing operations, commercial recreational use, aggregate extraction and sawmills. (Halifax County, 1987).

In July 1986, the Town of Bedford hired consultants to complete a master plan for the Sandy Lake Park. (Northwest Community Council, 2001) In the late eighties, the town's parks and recreation department developed hiking and cross country skiing trails in the Jack Lake area on CMHC land which they promoted through their Bedford Blueprint publication. These trails were accessed from Smith's Road until a parking lot was built in 1991 (Bedford Blueprint, 1991). The use of motorized vehicles was discouraged.

In September 1994, 98 acres at the southwest corner of Highway 102 and Hammond's Plains Road was slated for the development of a Blood Fractionation Facility. The plant was never built.

In 1995, Smith's Road was upgraded in anticipation of further development.

Another unrealized potential development in the area was a proposed forensic/criminal psychiatric institution and correctional facility. The provincial government indicated that it had chosen 900 acres of the residential reserve lands near Jack Lake as the site for the facility. Access would have been from either Killarney drive, an additional exit from the 102, or the new water road to Sackville (Correctional Facility Fact Sheet). Widespread public opposition prevented the project from being realized; however, a large swath (50 acres) in the forest was cleared in anticipation.

Recreation- General

Residents and cottagers fondly remember recreational pursuits on and around the lake. People say that there used to be more social and recreational activity in the area- this included frequent visitors to the lake. Popular activities in the past included: ice skating, hockey games, cross-country skiing, softball games, picnics and campfires, camping, swimming, canoeing, sailing, fishing, and hunting. Favourite swimming spots were the "Sand beach" located at the northwest side of the lake, and off of the "Big rock", in front of Frieda Giles' property. Residents remember when the lake was clearer and sandier- more attractive for swimming. They perceive that the lake is becoming muckier (filling up with peat) and more susceptible to flood.



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Eric Giles recalls that the softball field was on his property and that “home base was where [his] driveway is now.” The Sandy Lake team would play teams from surrounding areas, including teams from Hammonds Plains and Bedford.



Sandy Lake baseball team.

More recent recreational uses in the area include motor boating, windsurfing, ATV-ing, horseback riding, and mountain biking.

Recreation- Harvesting

One resident recalled that a family of Mi'kmaq used the area for harvesting bark from poplar trees for the manufacturing of baskets. The Jack and Marsh Lakes area were also used for fishing and hunting. Marsh Lake was identified as being a good spot for picking cranberries. Generations of women recall that there were good blueberry picking spots, particularly along the old power lines. Roy Giles used to be hired by wealthy Haligonian businessmen to guide fishing trips. Deer, grouse, and more rarely, moose were harvested for meat, and rabbits were snared. Eric Giles remembers covering “most of the woods from Sandy Lake to Lucasville” for hunting purposes. In the 1950s and 1960s fur prices were good, so some residents trapped beaver, muskrat, and weasel.

“I used to cross- country ski on skis that I made from old barrel staves.”

- Former Resident

Refuse Dumping

An element of Sandy Lake’s history involves its use as an informal garbage dump. Residents tell stories of cars and large appliances being left on the lake ice in spring; they fell into the lake with spring melt. A few reasons offered for this behaviour were simply that there was no serviced



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garbage pick-up, and nowhere to put garbage in the early days. Dumping of household wastes also has occurred (and continues to occur) on the land adjacent to Frieda Giles on Giles Road.



Midden at Whittimore landing.

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Census Data

Introduction

The census data used for compiling a statistical community profile is derived from the enumeration area (EA) 454. An enumeration area is a specific geographical area created for each census; it has a population sufficient to be surveyed by one enumerator. Specific EA areas then combine to form a specific census tract (CT) that remains constant from census to census and is derived solely on the basis of population and federal electoral boundaries. A number of census tracts combine to form a census metropolitan area (CMA). In the case of the Halifax CMA, there are 43 separate census tracts.

The watershed, which includes Sandy Lake, is part of six separate enumeration areas (313, 314, 315, 321, 322, and 454). For the purpose of generating an objective statistical community profile, it was necessary to use EA 454, a statistical division that covers 25 square kilometers and completely encircles Sandy Lake and its environs. The difficulty with using a specific EA is that enumeration area boundaries are redrawn each census so a comprehensive historical comparison of trends is difficult. However, for the purposes of compiling a localized statistical analysis, the EA provides data for the census year 1996. The data provided includes: population (age and sex), employment, education, migration and housing. Census data offers a statistical background to assist in the understanding of community needs, attitudes, and recent growth patterns.

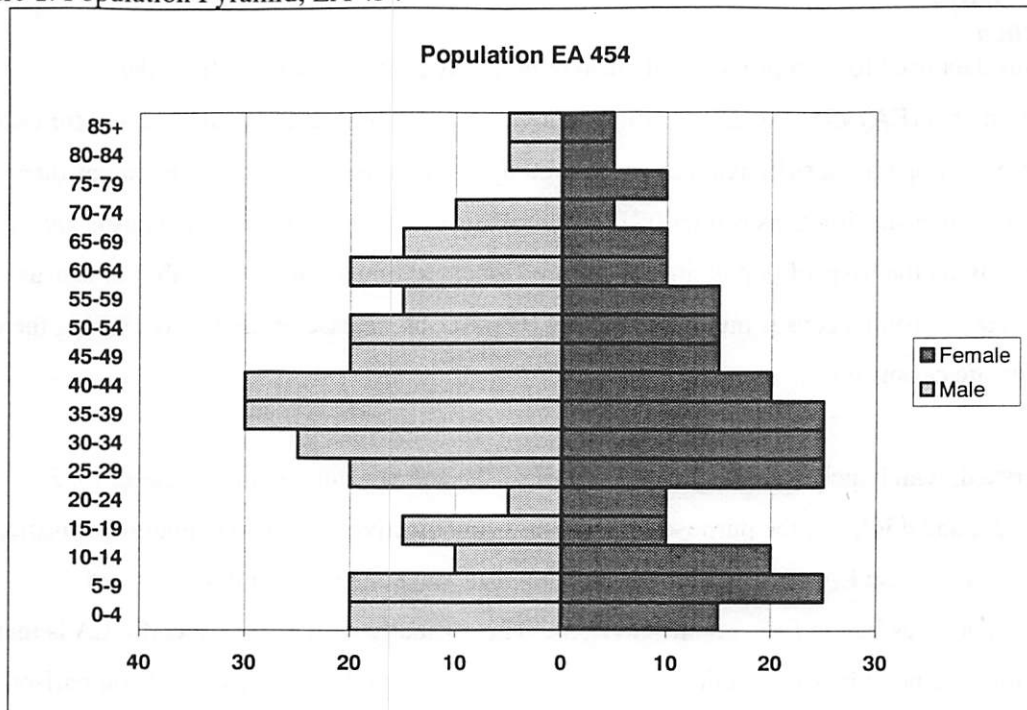
Population

The population pyramid shown in Figure 1 is a graphical illustration of the community's age and sex composition. Age groupings are displayed as vertical bar graphs for each sex, with males on the left and females on the right. The pyramid indicates that the population of the Sandy Lake area is an aging one. The population pyramid narrows for ages 10-14, 15-19, and 20-24; this indicates that there are very few young people or children living in the EA (27% of the total population are under 24 in 1996). The total population of men is slightly higher than women (53% compared to 47%). Those aged 25 to 40 represent 40% of the total population. The upper levels of the pyramid also indicate there are very few elderly people in the area (only 13% of the total population are 65 or older). Without migration into the area, the population will decline.



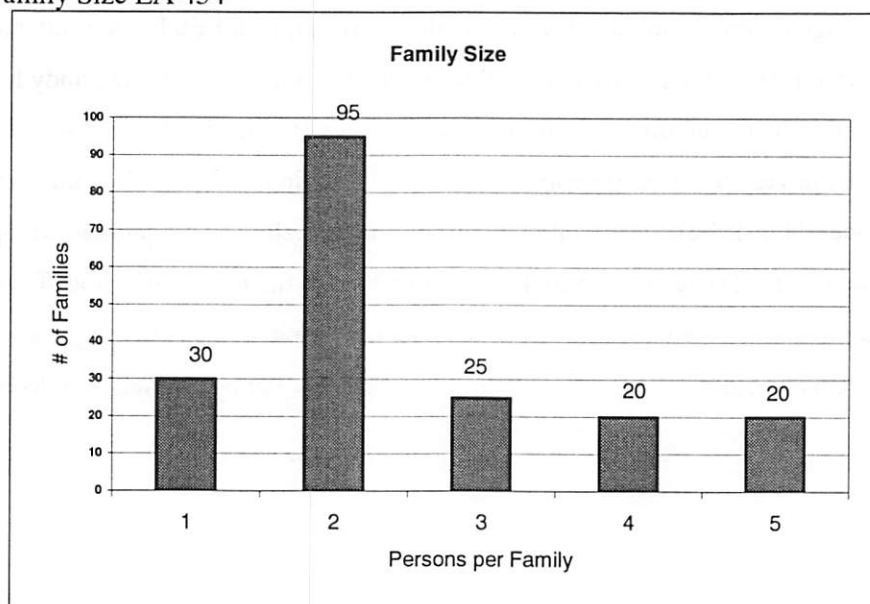
Sandy Lake Community Profile

Figure 1: Population Pyramid, EA 454



As indicated by Figure 2, 95 families in the Sandy Lake area are two person families. Another 25 families are three person families. Combined with one-person households (30), the total number of families with three people or less represent 74% of the total population. The average number of people per household is 2.9 in the entire EA.

Figure 2: Family Size EA 454

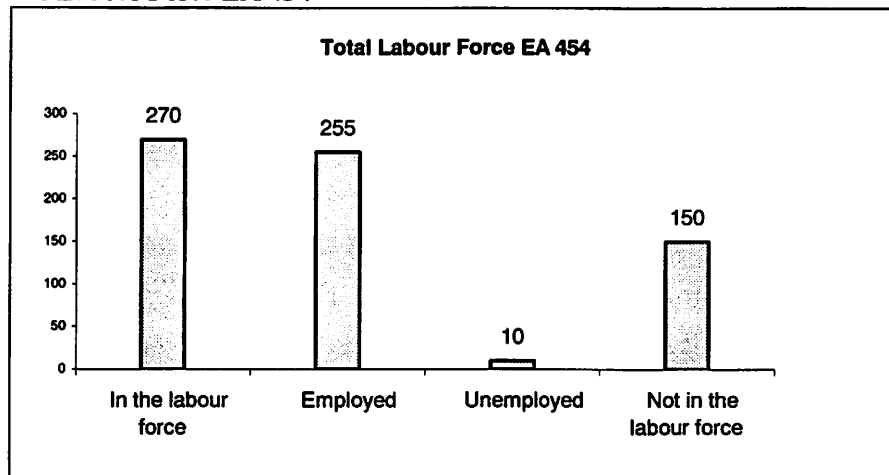


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Employment

The 1996 Census data is displayed visually through the aid of six graphs, (which can be found in Appendix 2) each representing a different component of employment statistics. Figure 3, below, shows those who are in the labour force (270); those that are employed (255); those that are unemployed (10); and those that are not in the labour force (150). Of note are the low rate of unemployment, and the relatively high percentage of the population that are not among the labour force. This indicates the presence of both retirees and people below fifteen years. Amongst those that are employed, few are self-employed. Considering the absence of incorporated companies within EA 454 this would indicate a pattern of movement in and out of the community typical of a commuter area.

Figure 3 Total Labour Force EA 454



Of interest is the contrast between place of work amongst men and women. Eighty-five percent of women work at a usual specific location and 15% work at home while 59% of all men have a usual place of work, 35% have no fixed work place and 6% work out of home. A breakdown of employment by sector, demonstrates that a high percentage of residents in EA 454 work construction, a field dominated by men. The contrast between men and women is even more pronounced in terms of income. Men within the EA earn on average \$30 574 per year, almost double that of women at \$16 210. Both these figures are lower than the incomes earned by men and women within the census tract and the CMA.

Education

Census data on education levels of EA 454 demonstrate that 40% of community members have completed a grade level between 9 and 13. (Grade 13 was used in Ontario at the time of the Census). Of the 40% of the population that attended secondary school, 18% achieved a



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graduation certificate. There is also a segment of the population (14.4%) that have less than a grade nine education. Twenty-three percent of the population had attained another form of non-university education, 3.6 % have a trades certificate or diploma while 19% are university graduates.

Transportation

The modes of transportation used by the Sandy Lake community are demonstrated in Figure 11. A high percentage of the population (82%) rely on their cars as a primary mode of transportation while a small segment (13%) ride as passengers. The remaining portion of the population (5%) rely on either public transit or an alternative method of transportation.

Migration

There was significant movement into the area between 1986 and 1991, seeing the arrival of 195 people. Classified as 'movers' these people are either migrants or non-migrants. Fifty-six percent of movers are classified as non-migrants or people who have moved to the Sandy Lake area from a neighboring community. This would also include 'cottagers' who reside in the area on a seasonal basis. Of the 44% of migrants to the area between 1986 and 1991, 24% have come from outside of the province (inter-provincial migrants) while 76% have come from inside the province (intra-provincial migrants). This may correlate to increased levels of development within the region during this period. Movement in the area between 1991 and 1996 slowed dramatically as 91% of the population are classified as non-movers. Of the movers in this period, all 9% are classified as non-migrants. As indicated by migration data, a segment of the EA are relatively new to the area, having been there only 11 to 16 years.

Housing

Data on periods of housing construction, housing condition, and type relative to the CT and the CMA were collected. The majority of housing in the Sandy Lake area was constructed after 1946, 5 % of the total to date. Between 1946 and 1996 there is a fairly even distribution of construction that has occurred with the exception of 1961-1970. Thirty-one percent of the construction occurred during this ten-year period. Between 1991-1996 there was a slight decline in housing construction, down to 14% from a previous rate of 17% per decade (excluding 1961-1971 data). Of the 190 housing units in EA 454, 175 are single-detached homes while 15 are semi-detached. This reinforces the low density housing type making up the rural community.



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Of the existing 180 units, 66% were deemed as being in good condition requiring general maintenance. 1996 census found that 21% of the units were in need of minor repair while 13% were in need of major repair. Considering the age of the housing stock these figures are positive. The only significant difference in dwellings in the CT area is the number of mobile homes; however, housing densities remain the same. Approximately 18% of households in EA 454 spend more than 30% of their income on housing related costs. A population spending this proportion is considered "at risk" by Statistics Canada.

Present Land Use

Land Tenure

Approximately one-fifth of the land in the Sandy and Marsh Lake areas, and Jack Lake Land Assembly is held in public hands. Publicly-owned lands are located in the eastern portion of the watershed area; large corporate holdings dominate the central area (including lands bordering the west and south sides of Sandy Lake), and small, individually owned parcels make up the remaining area.

Access

There have been some questions as to who should gain access to the lake and general area. In the past, Whittimore's landing served as a public access point. Though there has always been public access, Sandy Lake has generally been perceived by residents to be private. Access to the lake and area is an important issue for residents- it has implications for security, privacy, quality of life, and environmental health.



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Boulders block road access from Hammonds Plains Road to Whittimore's Landing

An agreement between cottagers and Farmers Dairy resulted in road access for cottagers. This access is viewed as positive because it helps cottagers bring supplies to their property. Residents of Peerless subdivision may access the lake through a right-of-way on the Dairy property. This arrangement was negotiated with Farmers in the 1980's.

Some residential landowners are concerned that boat access from the beach park will infringe on their privacy.

Recreation

The stream connecting Sandy and Marsh Lake, and Peverell's Brook (draining Marsh Lake to the Sackville River system) are navigable by canoe. They are used occasionally for this purpose, in particular when water levels are high in the spring.

The forested lands in the areas of Sandy, Marsh, and Jack lakes are used by many residents and visitors for cross-country skiing, walking, mountain biking. Residents recognize that the lands are a greenspace for Bedford residents. Recreationalists access these lands from Smith's road, or their own properties.

Mountain bikers and ATV users have differing interests in trail types. The bikers tend to avoid the main pipelines which the ATV users tend to follow. At times, ATVs go off the paths and make new trails through the woods. Evidence of heavy track marks supports this observation. The

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bikers and hikers share the narrower trails. Bikers have noted deterioration in trail quality over recent years, as they observe signs of stress in vegetation and exposed tree roots. Bikers want to fix trails in poorly drained sites.

The sport of mountain biking has been growing since the 1970s. Biker groups use the area throughout the year, but prefer winter and summer months when the ground is frozen and dry. Spring time is cited as a poor time because of drainage problems from snow melt. Mountain bikers have constructed ramps, jumps, and catwalks in the forest.



Mountain bikers have created stunt trails in the forest near Sandy Lake.

Power line cuts and the “water roads” lying above the water mains provide open areas for walking and horseback riding.

School Activities

The Sandy Lake Academy uses its land primarily for field sports. The live-in students occasionally use the wooded peninsula for campfires in spring and autumn months. Currently the school does not use the area beyond the playing fields in its curriculum. During summer months, the school does not use the land, though community groups regularly meet at the school for activities. There have been many wildlife sightings on the property.

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Traffic

Residents report that Hammonds Plains road has been carrying an increasingly large volume of traffic over the past several years, due to subdivision development in the surrounding area (for example Kingswood and Glen Arbour, built in the 1990s). Increased traffic has increased noise levels along the road. Residents on Hammond Plains road say that it is extremely difficult and dangerous to get in and out of their driveways. In particular, movement from Smith's Road is extremely difficult between 2 p.m. and 6 p.m. due to traffic volumes. Peerless subdivision residents report a similar situation with Lewis Drive, opposite the entrance to Farmers Dairy.

Interview participants stated that a large number of trucks use the road, despite restrictions in place. This can be attributed to the number of trucking companies located in the area. Residents expressed concerns about the lack of crosswalks, safety of school bus stops, and speed and volume of traffic. The lack of enforcement and policing (for trucking violations and speeding infractions) was cited as a further problem with traffic.

The Lakes and Natural Environment

Sandy Lake is not well known to the general public in HRM outside of the residents who live on or near it. Our survey revealed that the further a respondent lived from Sandy Lake, the less likely they were to be familiar with the lake area and concerned with potential development there. For example, most people surveyed in Peerless subdivision (25 out of 29) and Hammonds Plains Road (21 out of 23) knew about the lake, while few surveyed in Kingswood did (5 out of 21). As to be expected, only a small number of Kingswood residents surveyed visit the lake or felt the lake area was important to them.

On a tour of the Sandy Lake area with Walter Regan, of the Sackville Rivers Association, members of the research group visited the banks of a brook that flows into Sandy Lake. The snowmelt-swollen waters of the well-established brook rushed by. The surrounding forest, Walter estimated, was at least 80 years old. Walter sees this area as valuable wildlife habitat, and as an important factor in the maintenance of water quality in the watershed. "This is the stuff we've got to protect with a good size buffer, or one day this is going to be a subdivision," Walter said, "...you've got to be afraid of the first five hundred house subdivision... and the second... and the third."

Fewer people knew about the more isolated Marsh Lake; Jack Lake was best known, because of the nearby trail system. Those who knew about Marsh Lake recognized its importance as part of a watershed system, and that the marsh and associated vegetation support a diversity of wildlife.

Not surprisingly, our interviews and surveys of residents and cottagers living on or near Sandy Lake revealed that this lake was at the forefront of most environmental concerns.



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Although the community expressed various perspectives about the environment, most recognized that the headwaters and waterways within the watershed were important for maintaining water quality in Sandy Lake. During interviews, some residents described Sandy Lake as “an oasis in the middle of the desert”. Those living on the lake appreciate the sense of privacy and solitude. The community agrees that the opportunity to enjoy the natural landscapes is one of the most valued aspects of living in the area. Many respondents noted that this opportunity has been jeopardized by a variety of environmental changes; however, years of minimal development have allowed the lake to maintain its natural quality and most of its wildlife species.



“The Narrows” on Sandy Lake.

Fish, Wildlife and Vegetation

A common perception of community members is the association between water quality and the presence of wildlife. They therefore consider the protection of wildlife a high priority.

Although the lake has traditionally been used for fishing, this use has diminished. Areas such as “The Narrows” on Sandy Lake, Schwartz’s Pond and Verge’s Marsh were popular trout fishing spots. Bass and perch were other common fish. Species found throughout the watershed include: Atlantic salmon, speckled and sea run speckled trout, gaspereaux, American eel, chub, bull nose trout, brown stickleback, shiner, perch, shad, sea trout, small mouth bass, and catfish. Sandy Lake cottager Mr. Thornton caught one of the largest trout at 19.5 inches. Species of mussels and freshwater clams were caught but not harvested as food.

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Beavers have been spotted at beaver dams in the lake area. Other animals of significance within the Sackville River system, of which Sandy Lake is a part, are the Eastern Wood Turtle, and a freshwater mussel – both species on the endangered list.

Waterfowl, in particular loons, are of interest to the Sandy Lake community. For years two pairs of loons have been observed as early as first ice break-up.

They fly between Marsh Lake and Sandy Lake where they nest and reside for the summer and fall. Other birds inhabiting the area include ospreys, eagles, and kingfisher.

The area is deer habitat; some have been spotted swimming across the lake. Some respondents noted that wildlife sightings have increased; they speculated that this is due to encroaching development and road barriers to the north.

At the Academy, the deer come right into the parking lot to feed in the old orchard. We find tracks in the winter. They hide when they see you coming.
– Academy Employee

Most members of the community mentioned the significance of a mature hemlock stand on the peninsula. Although most of the forest in the area is composed of recent re-growth after logging and fires, this isolated stand appears to be a unique remnant of older forest in the Sandy Area, similar to that found in Hemlock Ravine Park to the south. Orchids and lady slippers have been observed along the shorelines of Sandy and Marsh Lakes.

Impacts on the Lake Environment from Industry

Farmers Dairy was cited by many residents as causing negative impacts on the water quality and clarity of Sandy Lake, after the Dairy cut a tract of land adjacent to the shoreline in the mid 1970s. Residents noticed increased siltation in the lake following the clearing operation. Several residents recollected a spill entering the lake, and that the Department of Fisheries and Oceans subsequently limed the lake. Other residents have indicated that since the cleanup, the water has been much clearer, although not as clear as they remember the lake before the Dairy development. Sand Beach, at the north end of the lake where a stream flows into Marsh Lake, was a popular spot for swimming and gathering. Residents comment that tadpoles and frogs were prevalent here until the Dairy was constructed.



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Some residents are suspicious of a water line extending from the Dairy into the lake; they speculate that some form of contamination may be entering the lake. Problems with a faulty sewage lagoon at the Dairy in the 1980s created unpleasant odours that disturbed local residents; this issue seems to have been resolved.

Some residents noted an impact on drainage and lake water quality after the development of Atlantic Acres Industrial Park on the steep slope overlooking the lake. Many residents who lived in the area in the early 1970s, when the industrial was constructed, commented on the infilling of Verges Marsh, located at the bottom of the present Bluewater Road. Where the road crossed the marsh, the area was filled with large rocks; other low lying areas were filled with peat excavated during construction of the industrial park. Some residents conjectured that runoff into the lake moves through this peat, taking some of the peat with it and into the lake.

"The lake used to be crystal clear. You used to be able to see 12 ft. down. Now you can't see 4 ft. down...Disturbing huge swamps like that can't be good...Along the shore where the cottages are, you used to be able to dive down to the bottom - there was white sand at the bottom there. Now it is all black with peat. There used to be weeds at both ends of the lake. Now there are weeds growing throughout the lake. The peat in the lake bottom is what is making the plants grow. If you take a sample, you will see that it's peat going into the lake. Every time it rains the lake gets darker. You can't see - it's not until the water drops that you can see into the water." - Resident

Other interviewees noted that contaminated storm water runoff from the extensive paved areas in the industrial park continues to have a negative effect on water quality in the lake.

General Changes to the Lake and Surrounding Land

Cottagers and residents have noticed that mud has replaced the sandy lake floor and aquatic vegetation has increased. Some residents observed that trout and bass are not as plentiful as they once were, and that the number of eels, frogs, and tadpoles have also decreased in recent years. Along with the perception of pollution and sewage contamination, the decrease in fish populations has made fishing in Sandy Lake less desirable than in previous years. Interviewees were not clear on the source of the pollution.

The Hammonds Plains Road crosses many streams which supply the lakes. In several locations, the size and number of culverts installed are insufficient to drain waters adequately to Sandy Lake. Subsequent flooding upstream has killed trees and created new wetlands.



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After the construction of the Bicentennial Highway in 1968, some residents noticed a drop in water levels at Sandy Lake along with a direct correlation to a change in ground water levels for the surrounding area.

During the construction of Kingswood subdivision in the 1990s, drainage from an adjacent watershed was diverted into that containing Sandy Lake. Although households in Kingwood are supplied with municipal water, they use on-site septic treatment. Some community members in Sandy Lake area are concerned with the additional burden this effluent places on Sandy Lake.

Some people expressed their concerns that dog walkers are not cleaning up after their dogs and that bacteria from dog droppings may be entering the lakes.

Drinking Water Quality

The primary sources of drinking water for local residents and cottagers are groundwater from drilled and dug wells and the water of Sandy Lake. Until a couple of sewer breaks that occurred on the sewer main near Giles Drive in 2000 and 2001, residents had no problems with water quality (for drinking or swimming); in fact, they were proud of the high quality of their water.

The municipality issued boil water and no swimming advisories following the sewage leaks.

Those of us with drilled wells have had high quality water (quantity and quality) until the sewage leaks. Our wells have continued to clear after every spill yet HRM maintains that the temporary increase in coliform count [after each break in their septic lines] has no confirmed relationship to our well water. We feel like the canaries in the mine. Government has not had a history of monitoring and protecting our groundwater through conservation practices. - Resident

Conflicts in Recreational Use

Some community members articulated concerns over land use conflicts that were generated from the variety of recreational uses of the land and water. Some cottagers reported ATV use near and on their property from nearby power line clearings. One resident reported that she had been confronted with ATV users making noise, drinking and even screaming death threats. ATV users are reported to have torn up the sand beach area near the northern outlet stream. RCMP currently patrol using two trail bikes.

There was a range of opinion among residents and cottagers about the use of power boats, and this issue was an emotional one. Some residents believe that power boats should not be permitted because of the small size of the lake, the impact on the lake ecosystem, the danger to



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swimmers and the noise impact. Some cottagers fear the banning of power boats to access their property if they also lose access to their land through Farmers Property. Others who use power boats worry that power boats will be banned on the lake when the park is developed, and suggested that they be permitted to continue to use their boats. Some have suggested that introducing a “grandfather clause”, and restricting certain types of motorboats such as jet skis may help to resolve this issue.

Future Development

The Lion's Club Park and Beach

In the fall of 2001, the Bedford Lion's club unveiled its plans for a Sandy Lake park as part of a Millennium project. A component of the park will be a man-made beach on the lower eastern bay of Sandy Lake. The club approached Halifax Regional Municipality about building a park, and produced a plan that includes: an access road and parking lot, a simulated beach, a dock for non-motorized boats, toilet facilities, picnic area, trail system, and administration building. A future development phase includes cabin construction.

Plans for the park and beach developments were designed by the firm *Environmental Design and Management Limited (EDM)*. Development according to this plan would require clearing trees and bushes, and levelling the ground in the proposed beach area. A retaining wall will also be placed to prevent erosion of the beach. This may prevent sand and dirt from the beach area from entering the lake.

During the summer of 2001 the access road and parking lot were completed. As this development represents one of the larger developments on the lake, it is worth noting the concerns brought forward by immediate and surrounding residents.

Concerns About Lion's Club Park and Beach

Dog Walking

Droppings from dogs will degrade the trails and potentially lead to water contamination and human health issues. There is also concern about unleashed dogs on the beach and through local properties as it may cause stress in wildlife populations and damage to property.

Security and Privacy

Some residents feel that the beach will become a party spot for visitors. They feel that their lifestyles and home security are at risk. As the lake is small, visitors may explore beyond the



Sandy Lake Community Profile

boundaries of the park. Expanded access to the park, along with the publicity of the facility, may change the atmosphere of the lake community.

Boats

Plans for the development show there will be a public boat launch. There is concern that additional motorized boats on the lake will create water quality problems and negative impacts on wildlife. For example, there is a small population of loons in the area that is timid. Added stress to their habitat may force them to leave the area.

Preferred Development Form

Many participants in this study expressed a desire for the area to be left undeveloped. Survey respondents were generally in favour of parkland designation for the area, particularly by those who live in surrounding subdivisions. Residential development was favoured over industrial and commercial designations. Some survey respondents and area residents felt that residential development should be in the form of single-family dwellings, so to complement the existing character of the neighbourhood. A few people commented that if residential development occurred, it would favourably affect the value of their land holdings. People who felt that development was inevitable felt that it is important to approach all types of development from a conservation perspective, and at a pace that allows for assessments of impacts on the environment.

"I want whatever is best for the environment."
Resident



Sandy Lake Community Profile

Conclusion

The goal of this research was to develop a community profile of the Sandy Lake area. Throughout this endeavour, we discovered information that was “typical of a community on the rural/urban fringe.” Simultaneously, however, we discovered a “not so typical community” where residents still take time to notice features in their landscape: the orchids growing, the behaviour of loons over many years, the overall health of the ecosystems. The report describes a community that is linked closely, historically and presently, with its environment. Members of the Sandy Lake community speak of their landscape as a place full of meaning and importance.

It is not an unreasonable request by this community that development affecting the lake proceeds in a cautionary, accountable, and researched manner. With their strong attachment to the landscape, along with their enthusiasm and energy for participating in the planning process, Sandy Lake residents are well equipped to begin planning their future. It is hoped that this report is a useful tool for building the watershed management plan, and that this community, so uniquely embedded in its place, will continue.



Sandy Lake Community Profile

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Members of the Community Profile and Environment Research Group:

Sarah Anderson, Jamie Anfossi, Tonya Crawford, Charlene Cressman, Jeff Daniels, Pierre Heelis, Jen Meurer, Lynda Sooriyakumaran, and Kate Thompson.

Acknowledgements

To the following people for: answering our endless questions, responding to surveys, inviting us into their homes, providing direction and expertise, and supporting the research, THANK YOU.

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Walter Regan, Sackville Watershed Association

Myles Boutilier

John Emmett

Jim Perrin

Kathy Martin

Glenn Eisen

Audrey Lauder

Philip Giles

Lorna Slaunwhite,

Joyce Peverill

Brian Shaw

Mike O'Quinn

Len Goucher

Glenn Mitchell

Catherine Reilly

Shirley McFee

Ken and Mary Greenham

Nelson Kennedy,



Sandy Lake Community Profile

Appendix 1 Research Methods

Introduction

We wanted to speak with as many people as possible that are part of the Sandy lake community. We were also interested in obtaining current census data for the area. Research methods used included: surveys, individual, group, and telephone interviews (with mapping exercises), and site visits and documentation. Further historical information was obtained from books, reports, maps, aerial photographs, and government documents.

Survey distribution

Four students did an initial walking canvass on February 12, 2002. At this time, 168 surveys and an introductory letter (see Appendix 3) were distributed to homes along Hammonds Plains Road between the Bicentennial Highway and Kingswood Drive. This drop-off included homes on Smith's Road, Giles Road, Killarney Road, and Peerless subdivision.

One week later, four students began collecting the surveys in Peerless subdivision. Residents who were not home during this collection period received a letter in their mailbox reminding them of the survey, and stating that survey responses could be telephoned in to Professor Jill Grant at Dalhousie or to a voice message system. Forty letters and surveys were distributed at this time. Two additional pick-up dates on February 19, and 20, completed the survey collection.

On February 19, two students set up a booth at Greco Pizza during lunch hours. Twenty-five surveys were distributed: five were rejected and four were not returned. The surveys were completed by workers from local businesses and industrial area, residents from Kingswood, and residents collecting their mail.

An evening survey distribution at Kingswood market resulted in the collection of 19 surveys. The intent of this was to capture the views of people who were on their way home from work, for example, those who commute to Halifax from rural areas.

Nine surveys were distributed and collected at various locations in Bedford Village between the Bedford Highway and Hammonds Plains Road. On February 24, two students distributed six surveys to a popular dog walking area along the cell tower access road (Bicentennial Highway just south of Highway 101). Most of the respondents were from Bedford and Lower Sackville.



Sandy Lake Community Profile

The intent was to capture the views of people who reside well outside the Sandy Lake area- the community defined in our research project as most " remote."

Interviews or " Kitchen Meetings"

Ten group interviews were conducted in February and March. These were dubbed 'kitchen meetings' to connote an informal tone. A few of these interviews were conducted in private homes, or on tour in a car. The others occurred in neutral environments at the LeBrun centre, at the Sandy Lake Academy, and at the Bedford Place Mall. Five of these were group interviews with an average of six people attending. The groups were kept intentionally small to enable the sharing of personal stories and comments from everyone to be heard. The duration of these interviews was 2 to 3.5 hours. The research team assigned a primary note taker at each interview. Tools used for the interview process were: tape recorders, photographs, videotape recorders, and maps.

Interview candidates were grouped according to their likeminded views and/or geographical areas and/or family connections. Because they were set up this way, each group offered a different flavour. To assist in this grouping effort we invited two of the residents who knew the dynamics of the people in the area to help. Another reason we asked residents to help was because we wanted residents to feel at ease about discussing the various issues and ideas they had. Group interviews were carefully arranged to avoid potentially confrontational situations over certain issues. Conducting pre-interviews over the telephone allowed many of the confrontational issues to be expressed ahead of time, and enabled constructive discussion.

There were also several informal interviews which lasted anywhere from 5 minutes to 25 minutes. These were conducted at various times throughout the term, for example, when setting up interviews or when passing out surveys.

Twenty phone interviews were conducted. These were with people who had indicated on the survey that they had further information or specific interests to discuss. These lasted between 5 and 45 minutes, and offered further information from members of the Sandy Lake community who do not live next to the lake.



Sandy Lake Community Profile

Conclusion

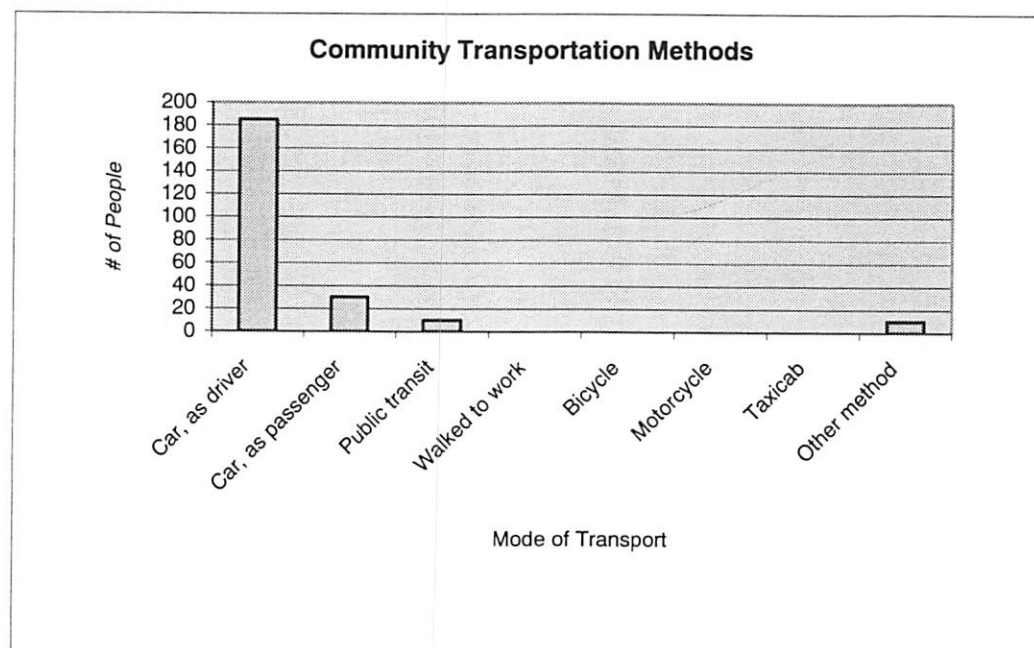
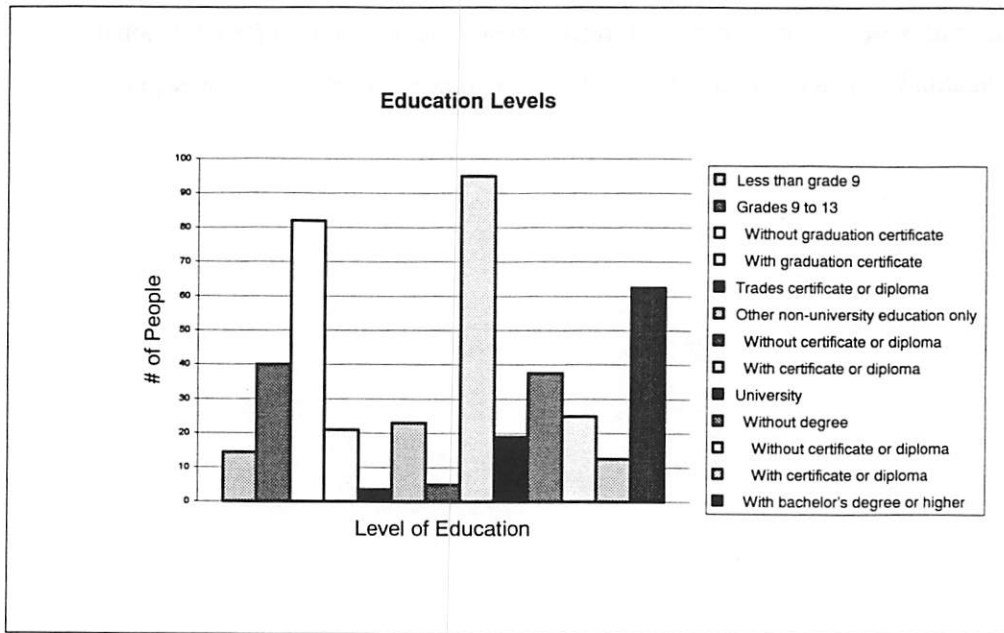
Of 227 surveys distributed throughout the study area, 134 were returned. The surveys were anonymous, though respondents were asked to identify which neighbourhood they lived in. Ten interviews occurred: six in groups, and four individually. Interviews were conducted with people who volunteered to share information. Generally the survey results offered information about common concerns and issues (such as increased traffic), while the interviews offered detailed information and qualitative data about land use, and residents' perceptions of the landscape.



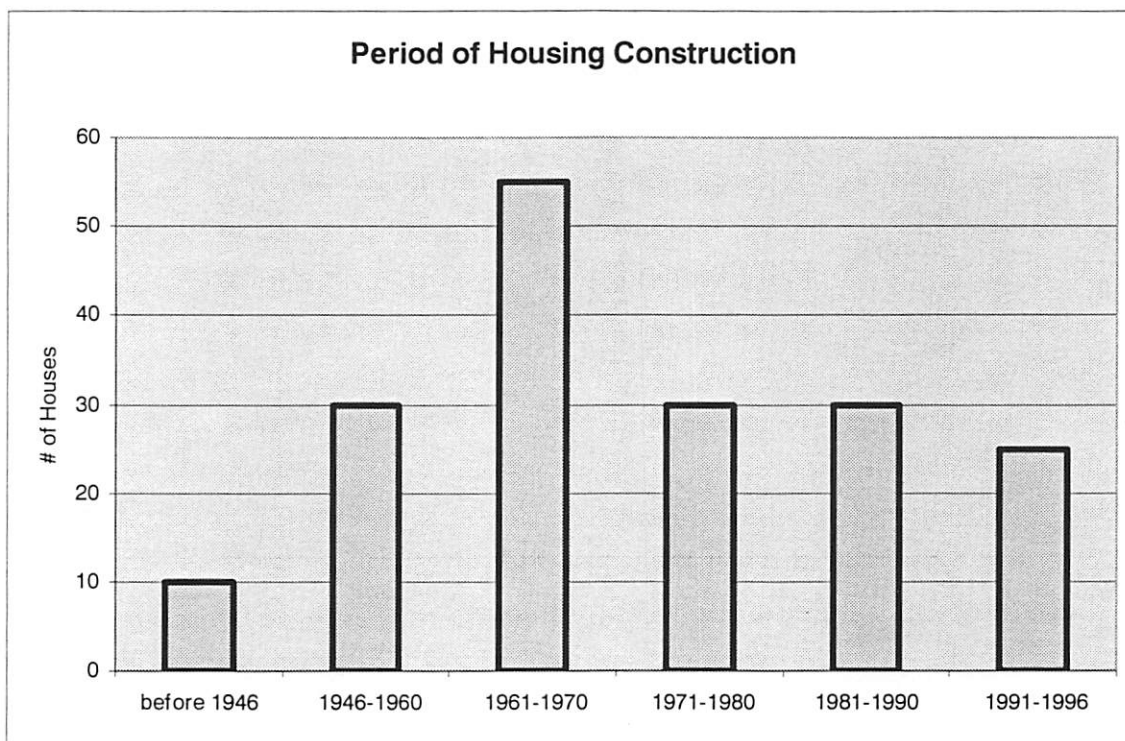
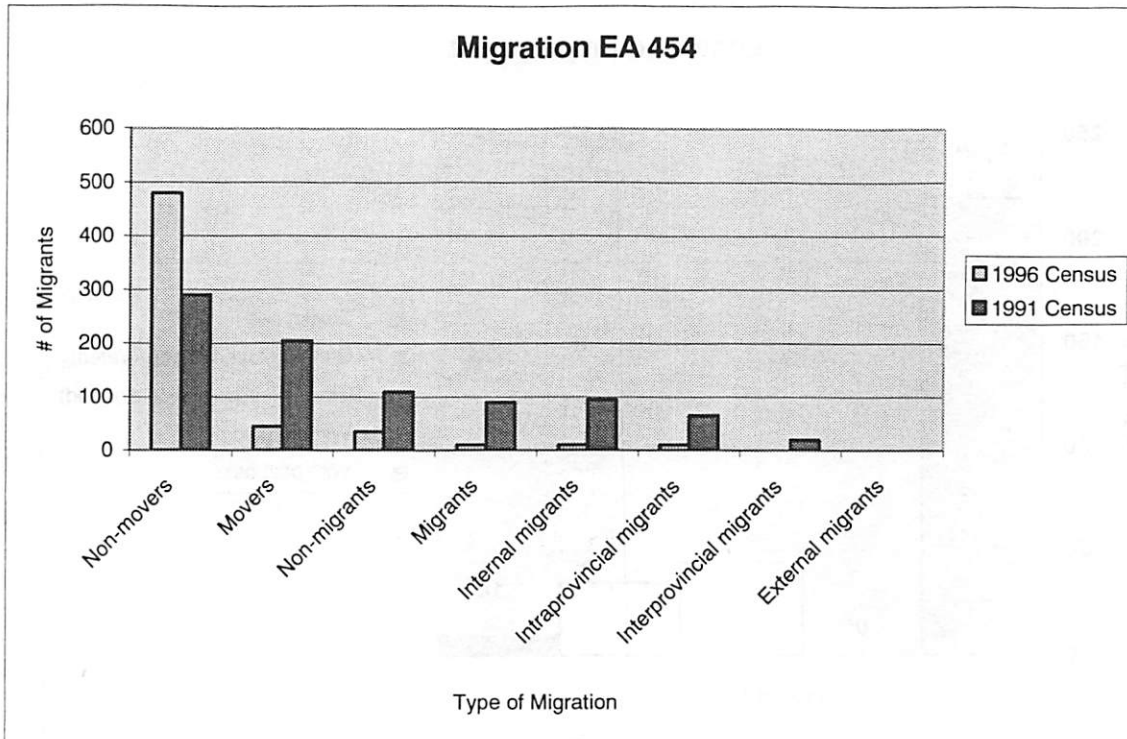
Sandy Lake Community Profile

Appendix 2 Census Figures

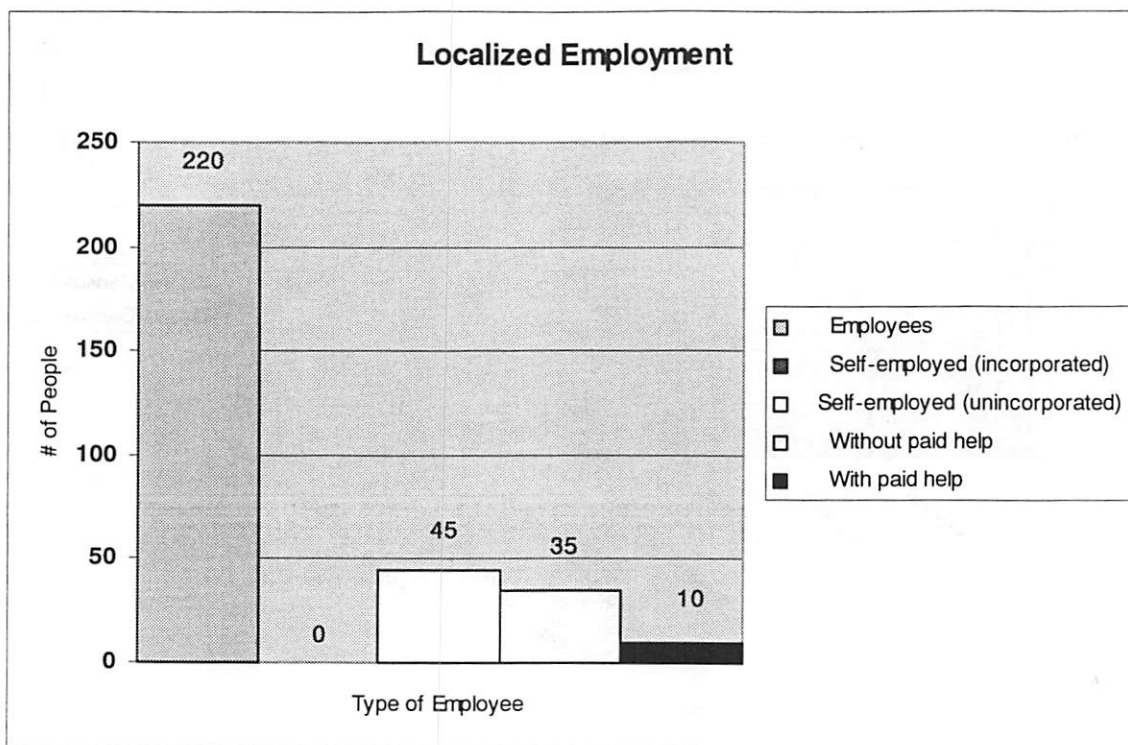
The following charts and graphs have been developed from census data collected from Enumeration Area 454. They are intended to give the reader a deeper understanding of the Sandy Lake Community.



Sandy Lake Community Profile



Sandy Lake Community Profile



Sandy Lake Community Profile

Appendix 3

Survey and Survey Results

The following information was obtained through door-to-door surveys. The information was divided into five different areas for analysing. Four areas around Sandy Lake (Sandy Lake, Kingswood, Peerless and Hammonds Plains Road) were analysed as well as those who live in outlying neighbourhoods ("other areas").



Sandy Lake Community Profile

NSCAD



DALHOUSIE
University

Resident Survey

1. What area of HRM do you live in (Street name)? _____

2. Are you familiar with:

(Big) Sandy Lake? Yes _____ No _____
Marsh Lake? Yes _____ No _____
Jack Lakes? Yes _____ No _____

3. How often do you visit the Sandy Lake area?

Never _____ Daily _____ Weekly _____ Monthly _____

4. If you visit the area, what do you do there? (check all that apply)

Walk/Hike _____ Boating _____ Fishing _____ Biking _____
Swimming _____ Dog-walking _____
Other: _____

5. Rank in order the uses you feel are suited to the Sandy Lake area?

(1 being most suited, 4 being least suited)

Industrial _____ Parkland _____ Commercial _____ Residential _____

6. Rank in order the uses you feel are suited to your neighbourhood?

(1 being most suited, 4 being least suited)

Industrial _____ Parkland _____ Commercial _____ Residential _____

7. Do you feel that your household will be affected by development in the Sandy Lake area? Yes _____ No _____

If yes, why do you feel this way? _____

8. How important is the Sandy Lake area to you?

Very important _____ Important _____ Somewhat important _____
Not important _____ No opinion _____

9. If you would like to participate further in this project, please provide your contact details below or call 860-1263 and leave a message.



Sandy Lake Community Profile

NSCAD



February 11, 2002

Dear Resident:

We are a group of students in the School of Planning at Dalhousie University and Environmental Planning at the Nova Scotia College of Art and Design (NSCAD) conducting research under the supervision of Professor Jill Grant on the future of the Sandy Lake area in Bedford. We are assisting the Sandy Lake Residents Association and the Halifax Regional Municipality to gather the opinions of residents who live near communities like Sandy Lake as they prepare for planning the future of the area. We hope that you will be able to help us.

We are leaving a short survey form and will return to your neighbourhood on February 18th and February 19th to pick up the surveys with your answers. Your involvement in this survey is entirely voluntary and there are no known or anticipated risks associated with your participation in this study. If you agree to participate, the survey should not take more than 5 minutes to complete. Although the questions are quite general, you may omit any question you prefer not to answer. All information you provide will be considered confidential and will be grouped with responses from other participants. Further, you will not be identified by name in any report or publication resulting from this study. The data collected through this study will be kept for a period of one year in a secure location.

If, after receiving this letter, you have any questions about this study, or would like additional information to assist you in reaching a decision about your participation, please feel free to contact Professor Jill Grant at 494-6586.

Thank you in advance for your interest and participation in this project.

Yours sincerely,

Sandy Lake Community Research Group
Dalhousie University
School of Planning & Environmental Planning



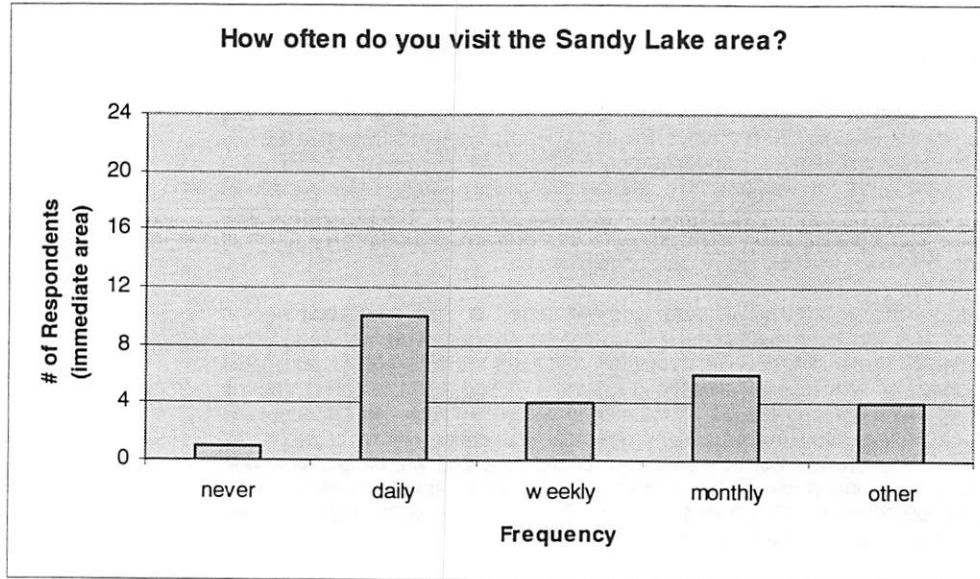
Sandy Lake Community Profile

Sandy Lake Area Results ("Immediate Area")

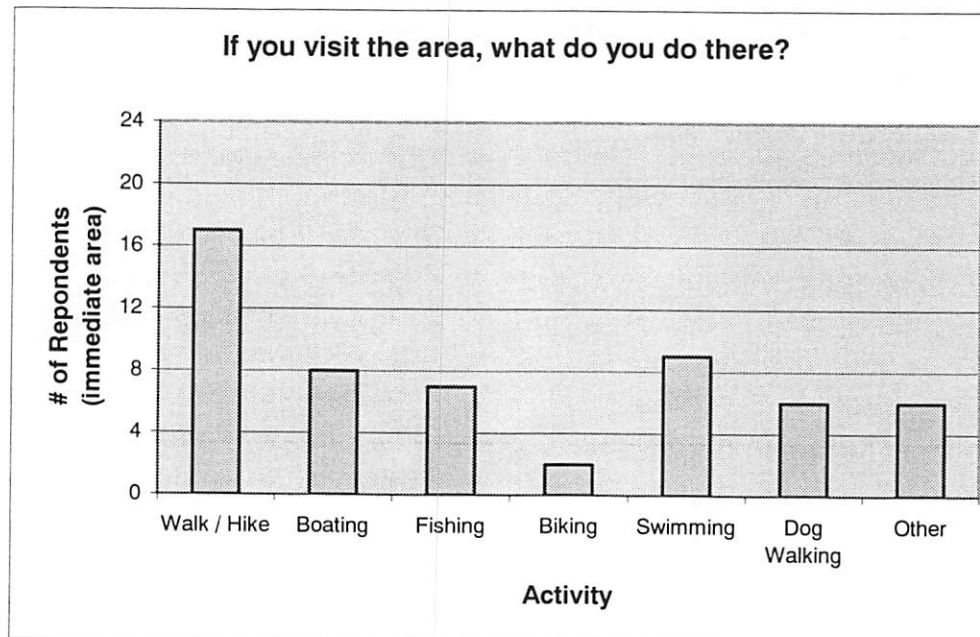
Q.1 Are you familiar with:

	Sandy Lake		Marsh Lake		Jack Lake	
	Yes	No	Yes	No	Yes	No
Total	22	2	13	8	17	3

Q. 2

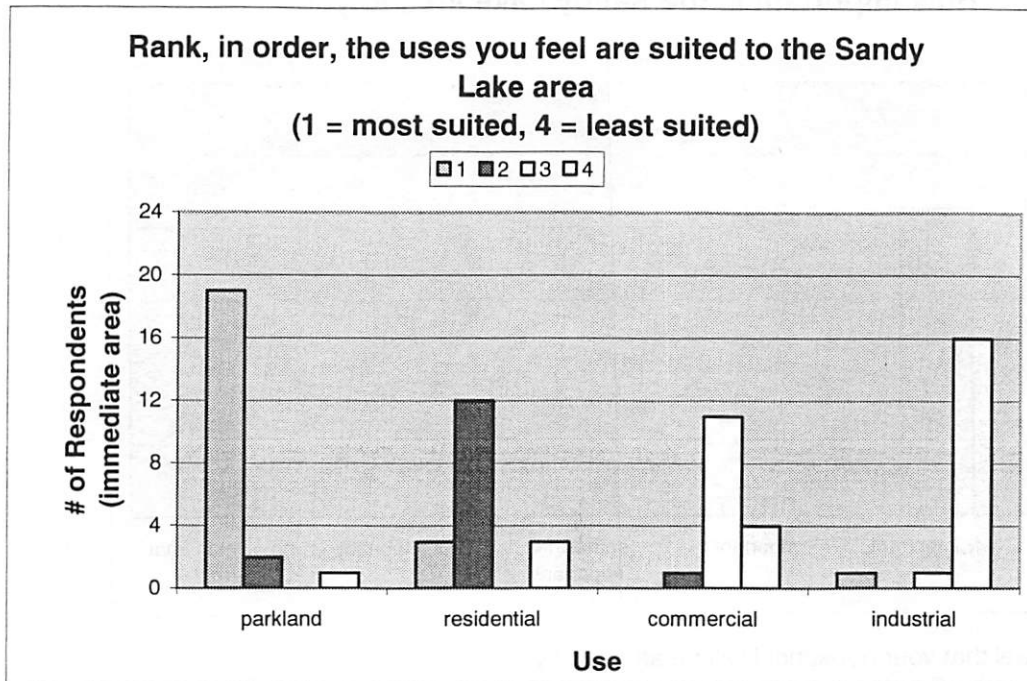


Q. 3

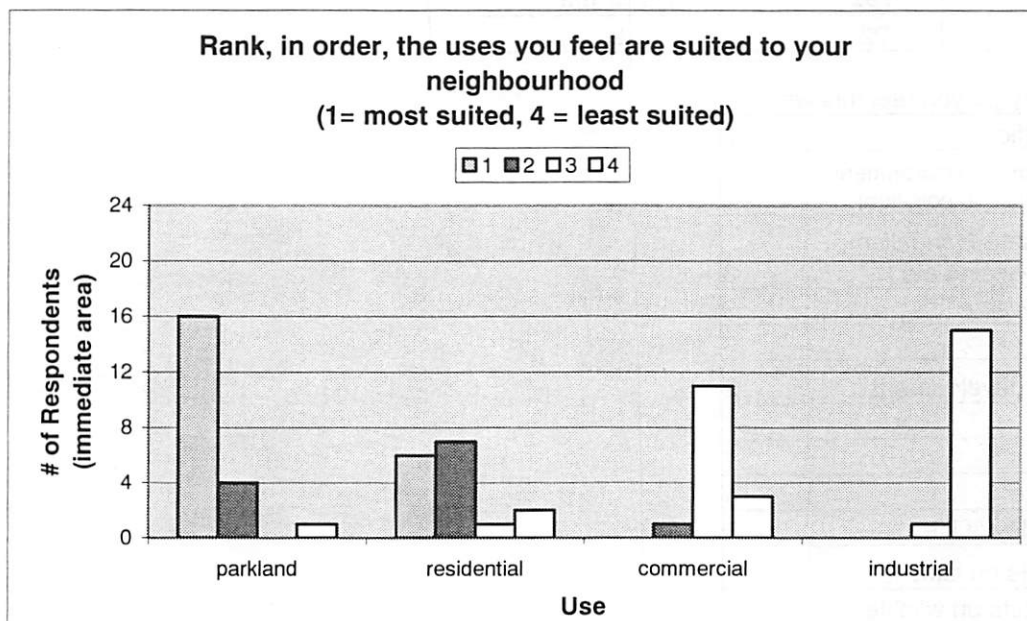


Sandy Lake Community Profile

Q.4

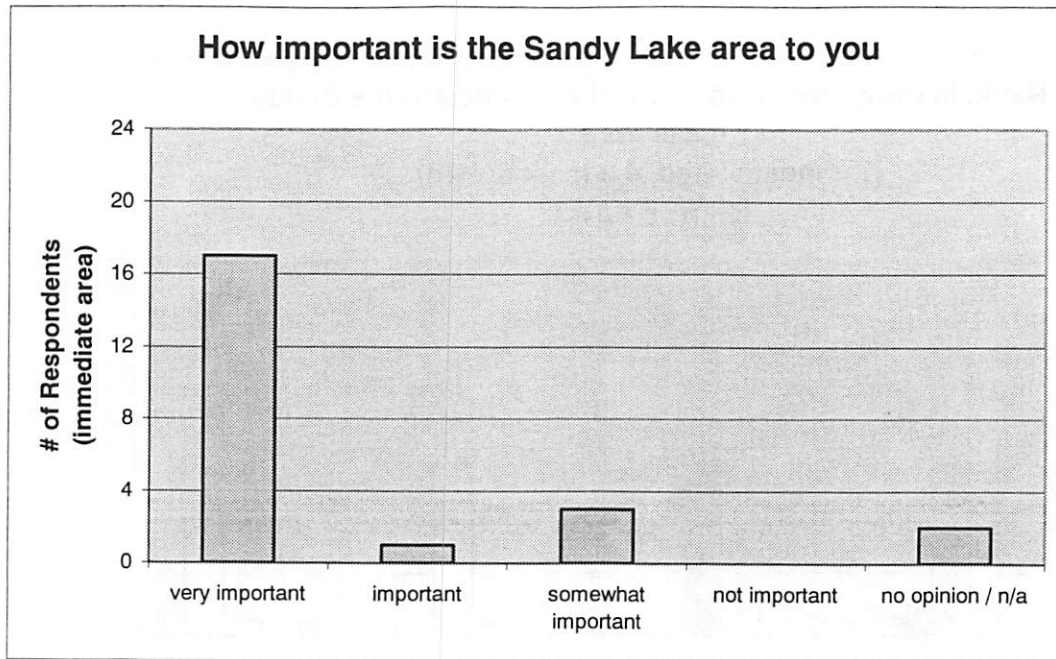


Q.5



Sandy Lake Community Profile

Q.6



Q.7 Do you feel that your household will be affected by development in the Sandy Lake area?

	Yes	No or n/a
Total #	22	2

Q.8 If yes, why do you feel this way?

increased traffic	12
negative impacts on environment (including increase in pollution)	3
increase in crime (vandalism, robbery, trespassing etc.)	3
invasion of privacy	3
noise	3
infrastructure development	2
not sure	1
sewer breaks	1
live on the lake	1
decrease quality of life	1
too many boats on lake	1
negative impacts on wildlife	1
increase property value	1
more people in the area	1



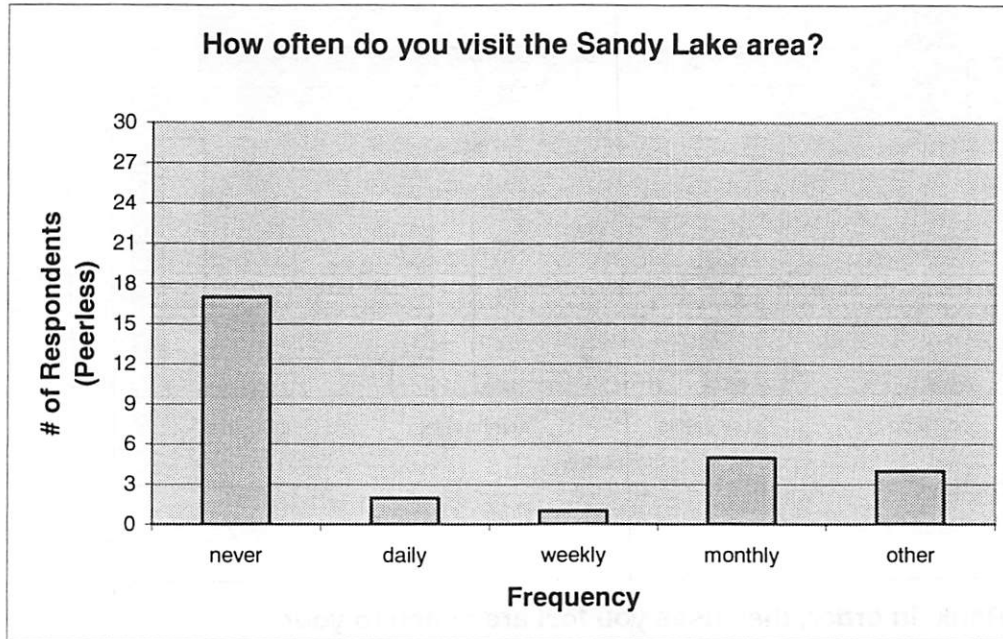
Sandy Lake Community Profile

Peerless Results

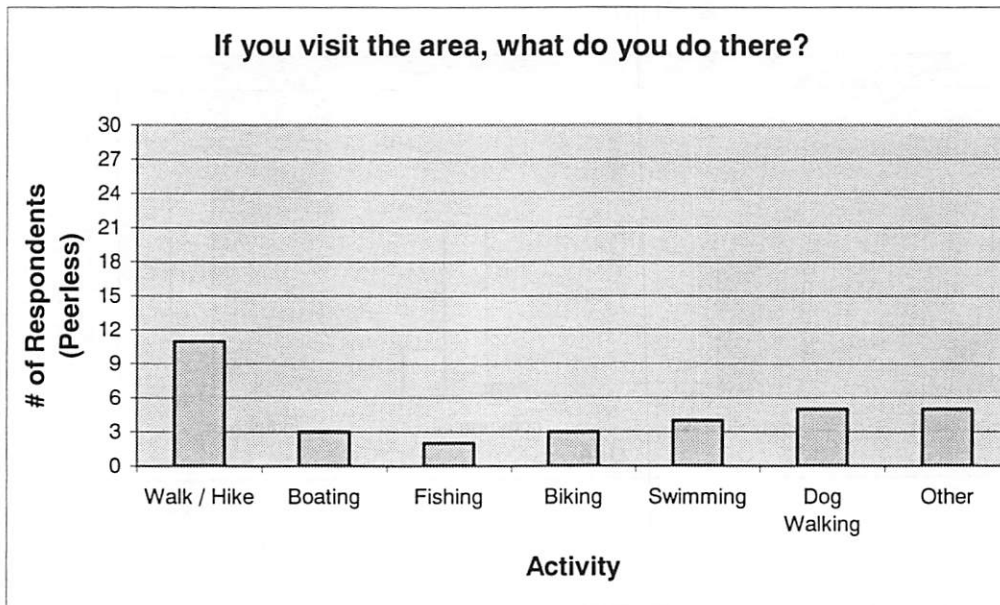
Q.1

	Sandy Lake		Marsh Lake		Jack Lake	
	Yes	No	Yes	No	Yes	No
Total #	25	4	7	18	14	13

Q.2

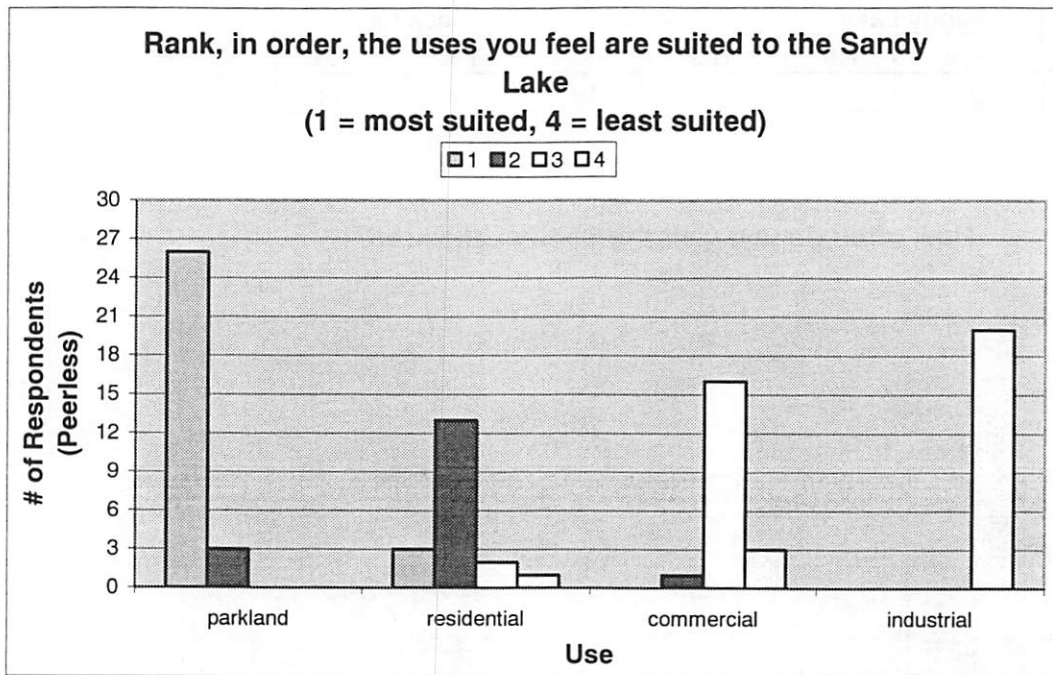


Q.3

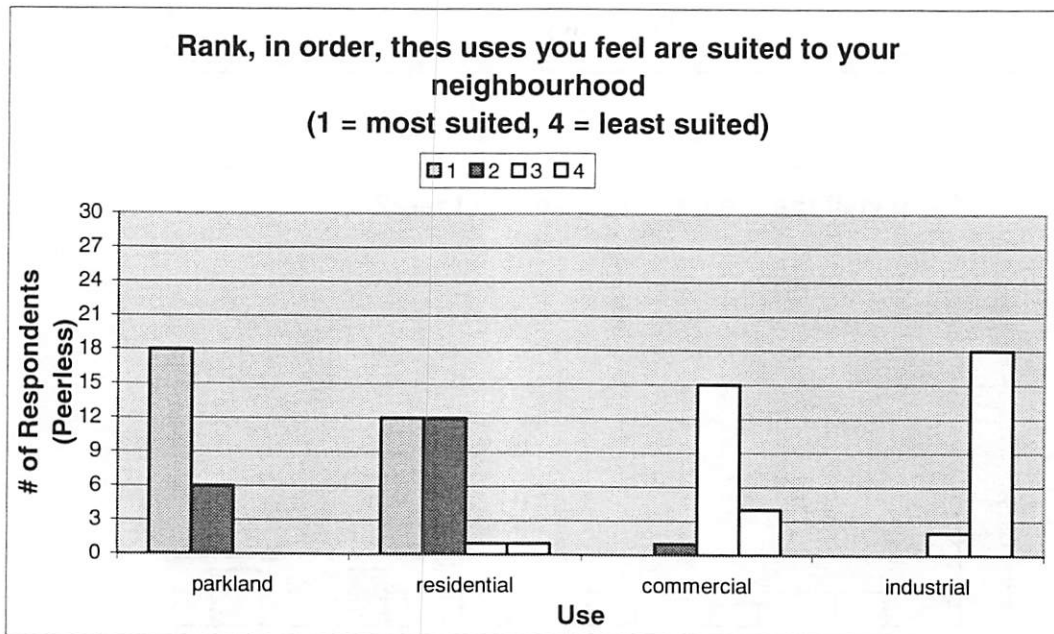


Sandy Lake Community Profile

Q.4

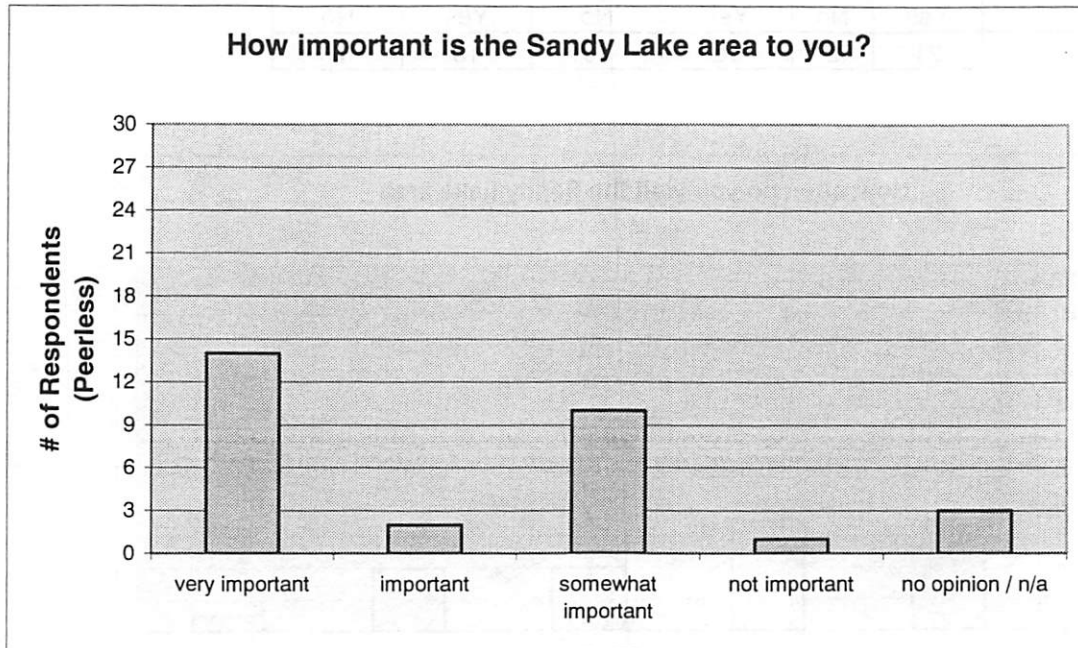


Q.5



Sandy Lake Community Profile

Q.6



Q.7 Do you feel that your household will be affected by development in the Sandy Lake area?

	Yes	No or n/a
Total #	24	6

Q.8 If yes, why?

traffic	9
negative impacts on environment (including increase in pollution)	3
increase property value	3
not enough parkland	2
negative impacts on wildlife	2
decrease safety	2
more people in the area	1
increase pressure on limited services	1
not enough bike paths	1
increase pressure on schools	1
pressure on infrastructure	1
depends on development	1
lose "our" recreation area	1



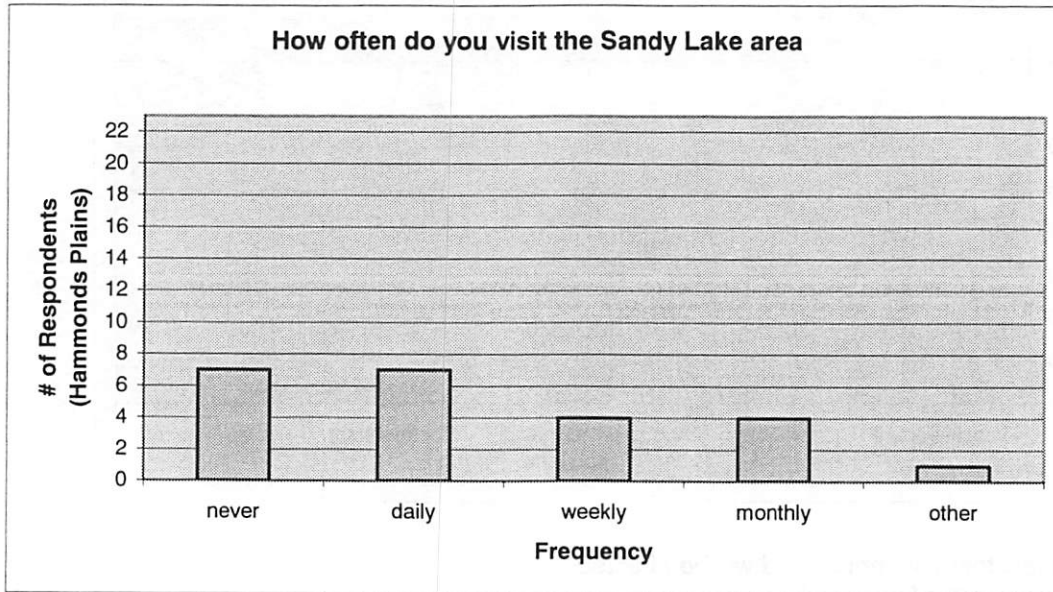
Sandy Lake Community Profile

Hammonds Plains Results

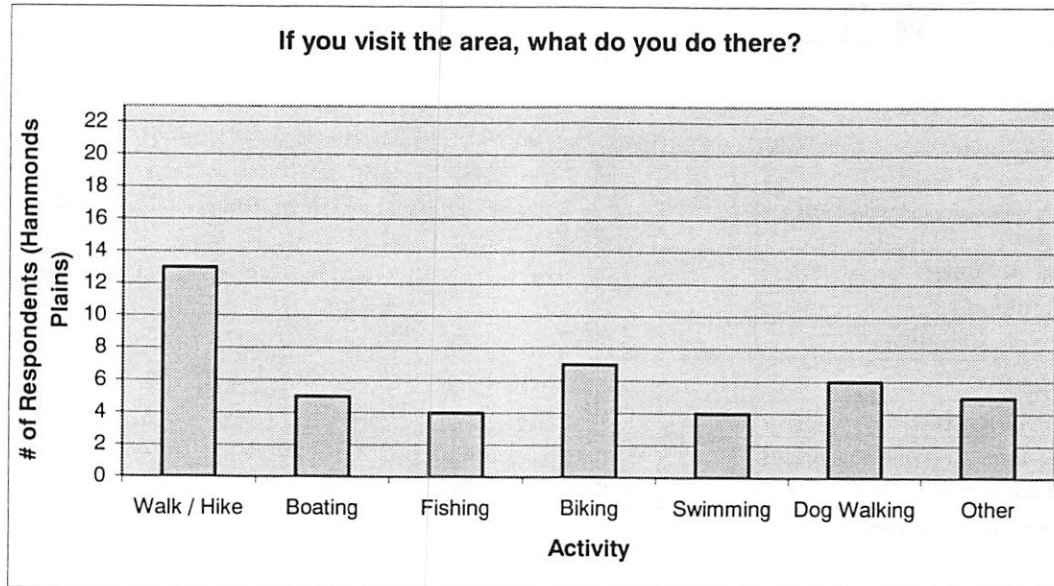
Q1. Are you familiar with:

	Sandy Lake		Marsh Lake		Jack Lake	
	Yes	No	Yes	No	Yes	No
Total #	21	2	10	10	16	6

Q.2

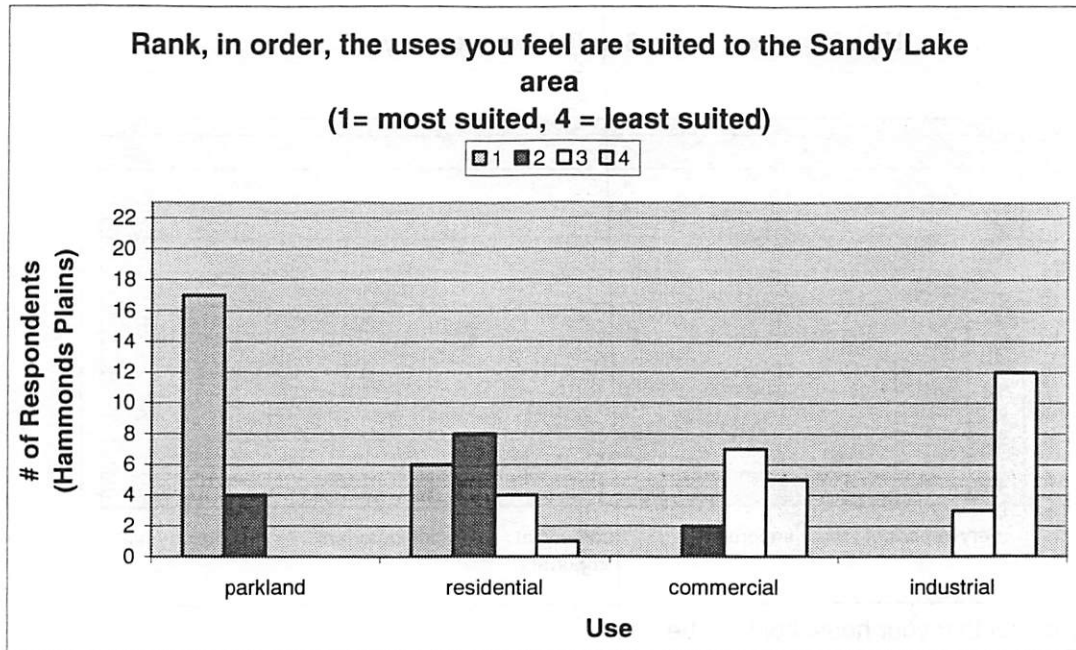


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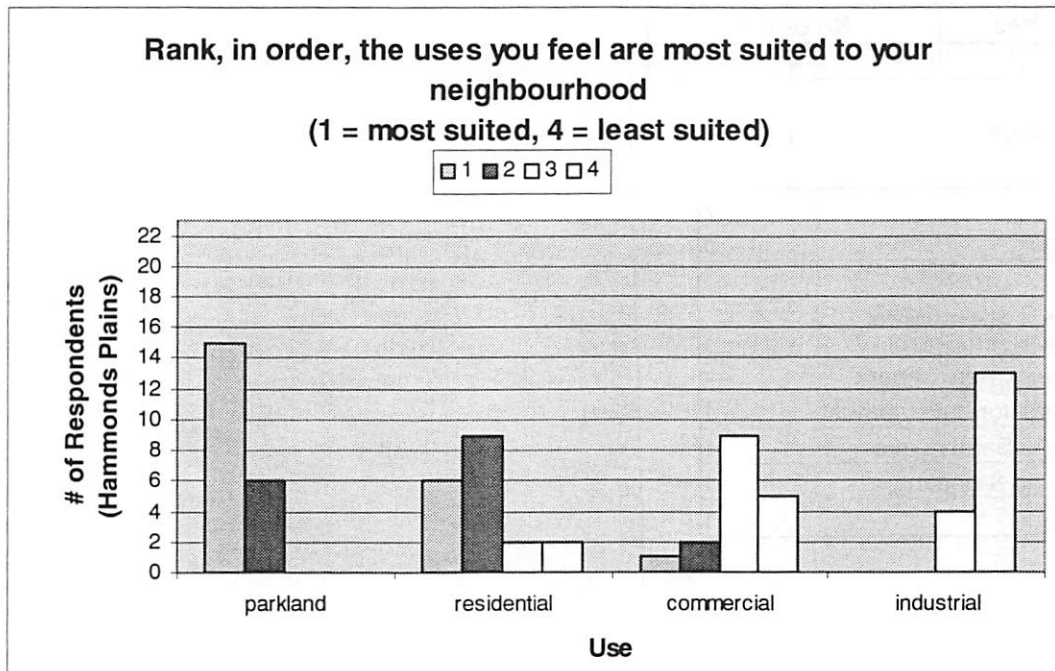


Sandy Lake Community Profile

Q.4

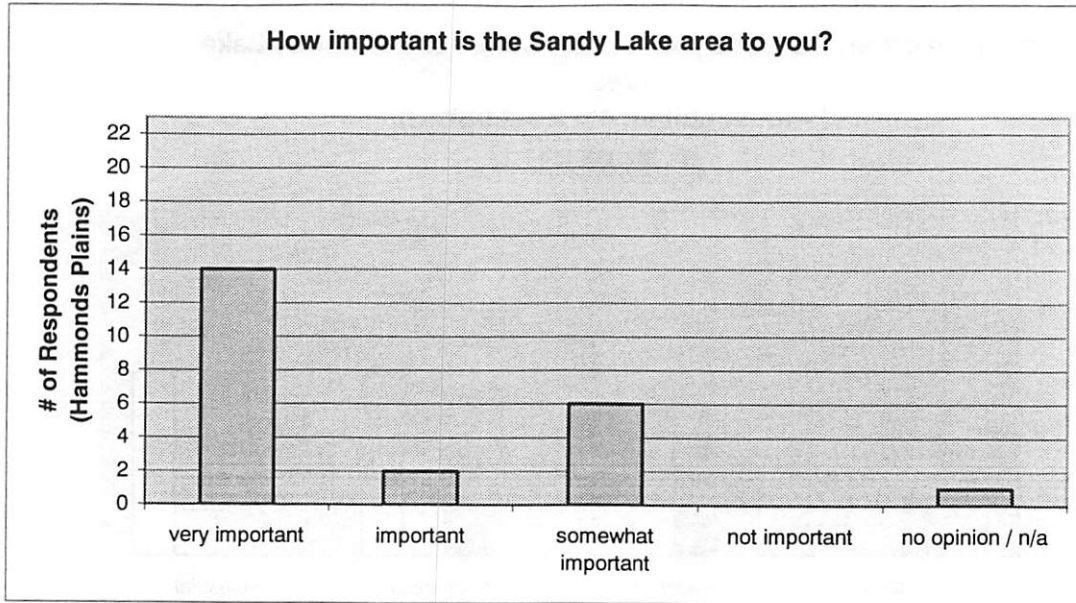


Q.5



Sandy Lake Community Profile

Q.6



Q.7 Do you feel that your household will be affected by development in the Sandy Lake area?

	Yes	No or n/a
Total #	19	4

Q.8 If yes, why?

traffic	8
live next door	1
negative impacts on environment (including increase in pollution)	1
positive - enjoyment of park	1
lake too small for development	1
children need Sandy Lake	1
access to lake & boating	1
need parkland	1



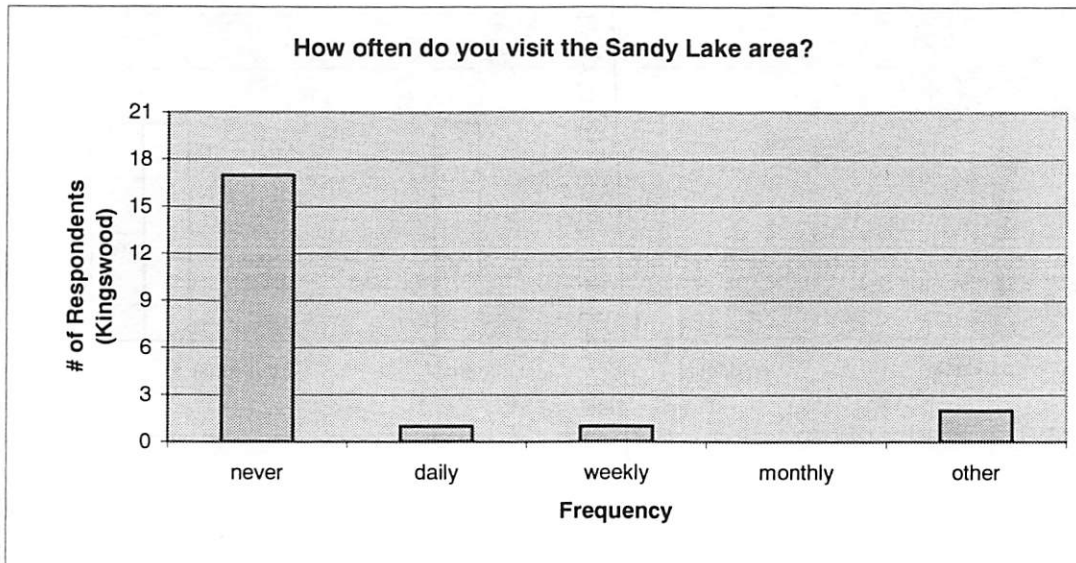
Sandy Lake Community Profile

Kingswood Results

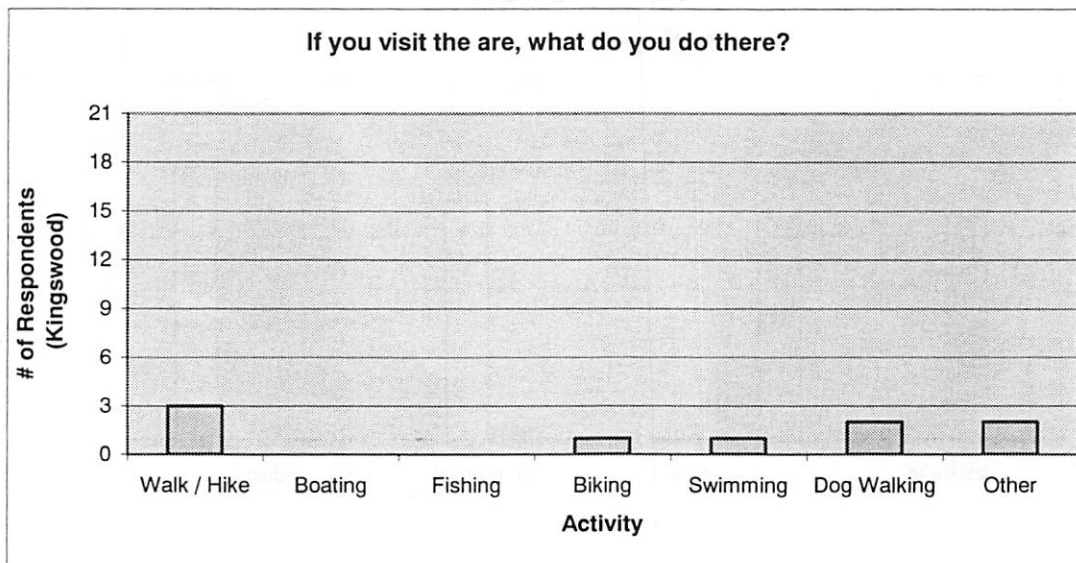
Q.1 Are you familiar with:

	Sandy Lake		Marsh Lake		Jack Lake	
	Yes	No	Yes	No	Yes	No
Total #	5	16	0	21	4	17

Q.2

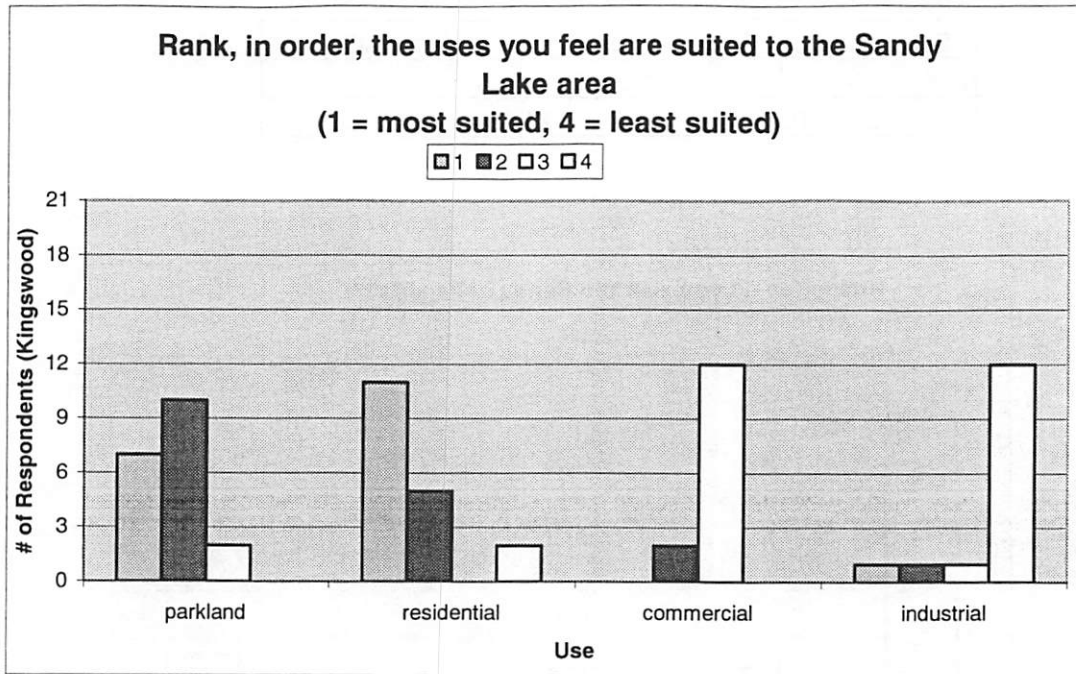


Q.3

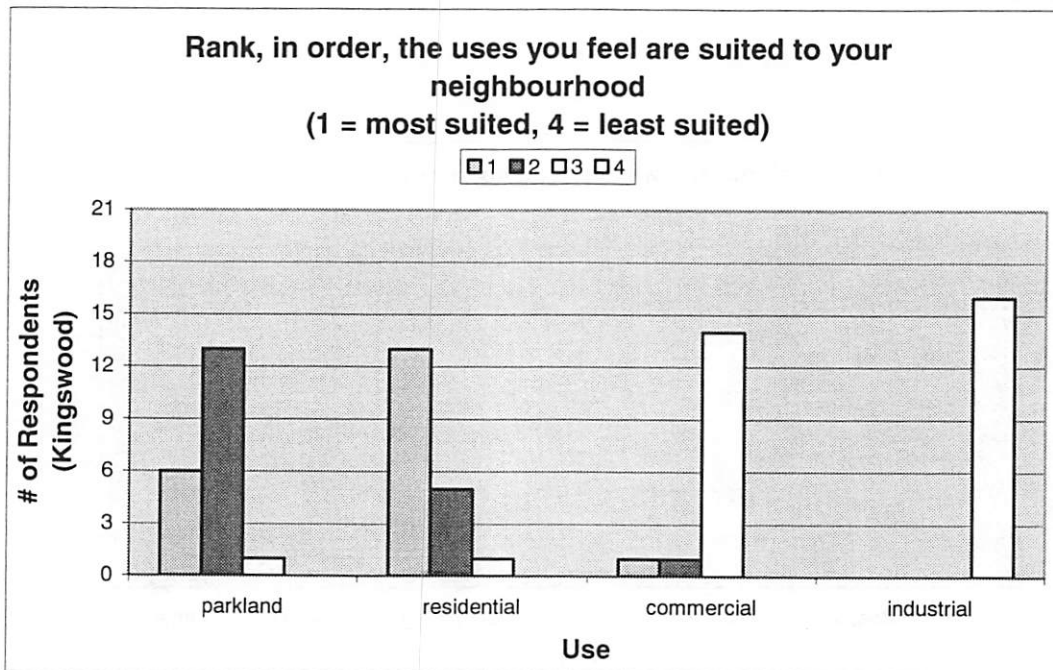


Sandy Lake Community Profile

Q.4

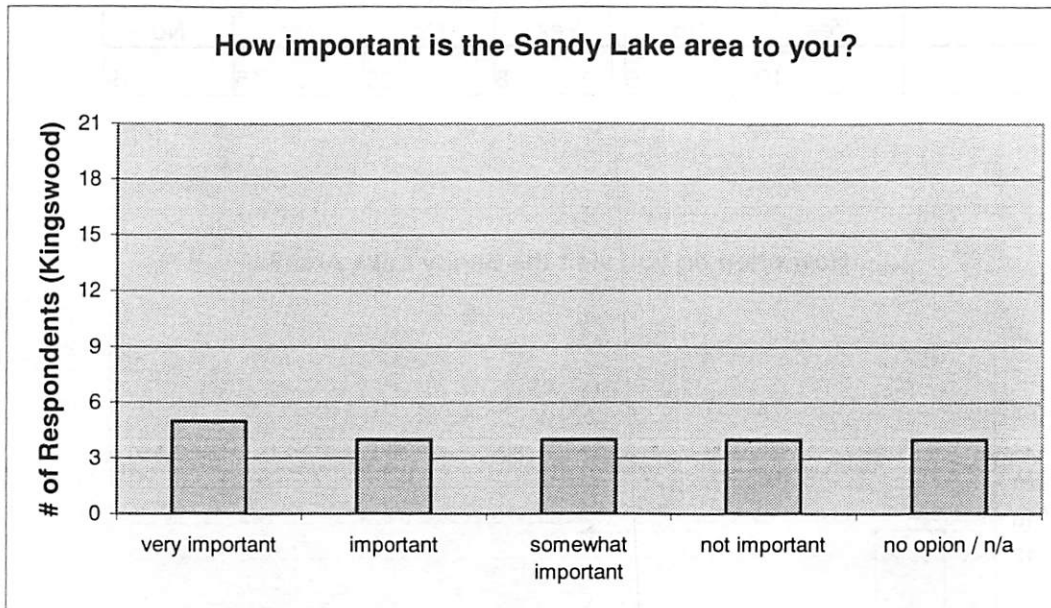


Q.5



Sandy Lake Community Profile

Q.6



Q.7 Do you feel that your household will be affected by development in the Sandy Lake area?

	Yes	No or n/a
Total #	12	9

Q.8 If yes, why?

traffic	7
negative impacts on environment (including increase in pollution)	3
increase property value	1
more people in the area	1
increased commercial activity	1
decrease property value	1

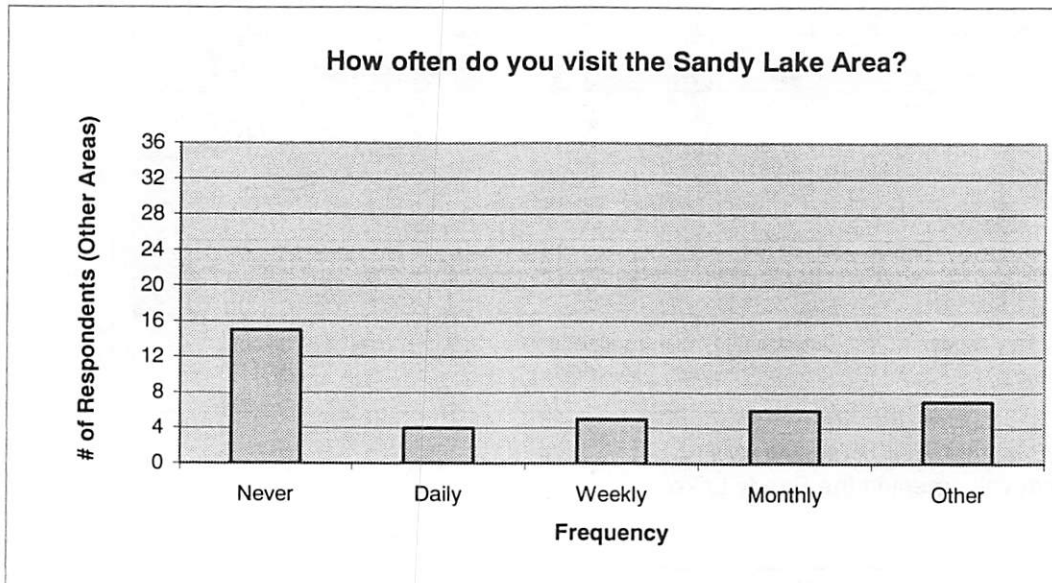
Sandy Lake Community Profile

Other Areas Results

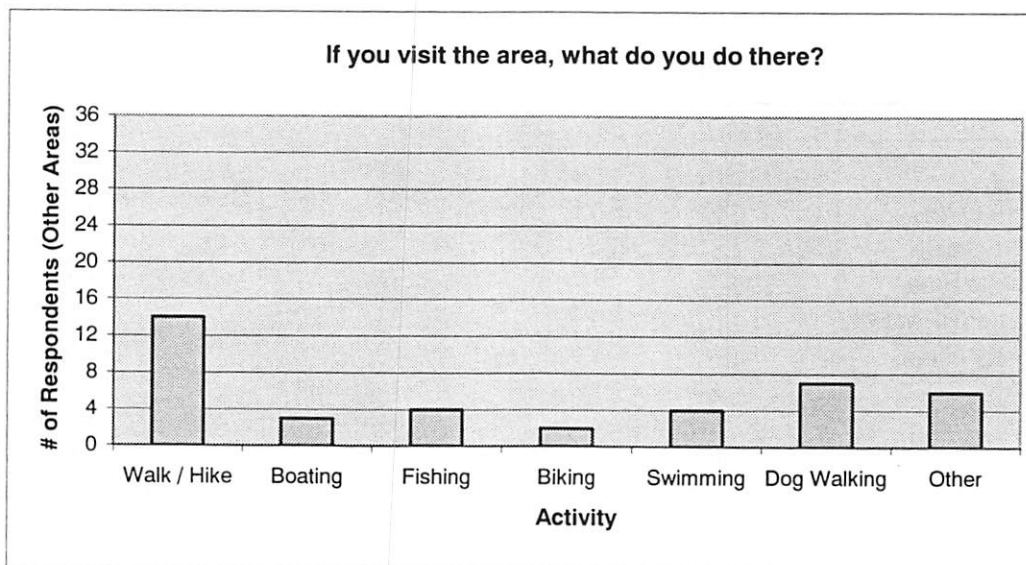
Q.1 Are you familiar with:

	Sandy Lake		Marsh Lake		Jack Lake	
	Yes	No	Yes	No	Yes	No
Total #	19	16	8	26	15	19

Q.2

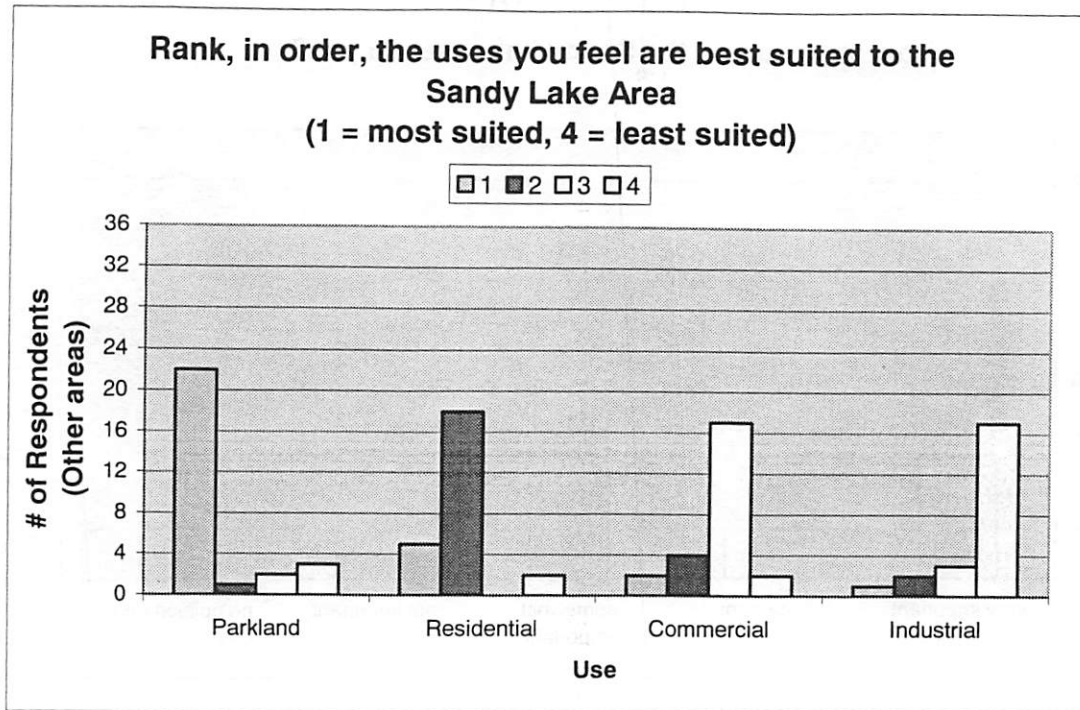


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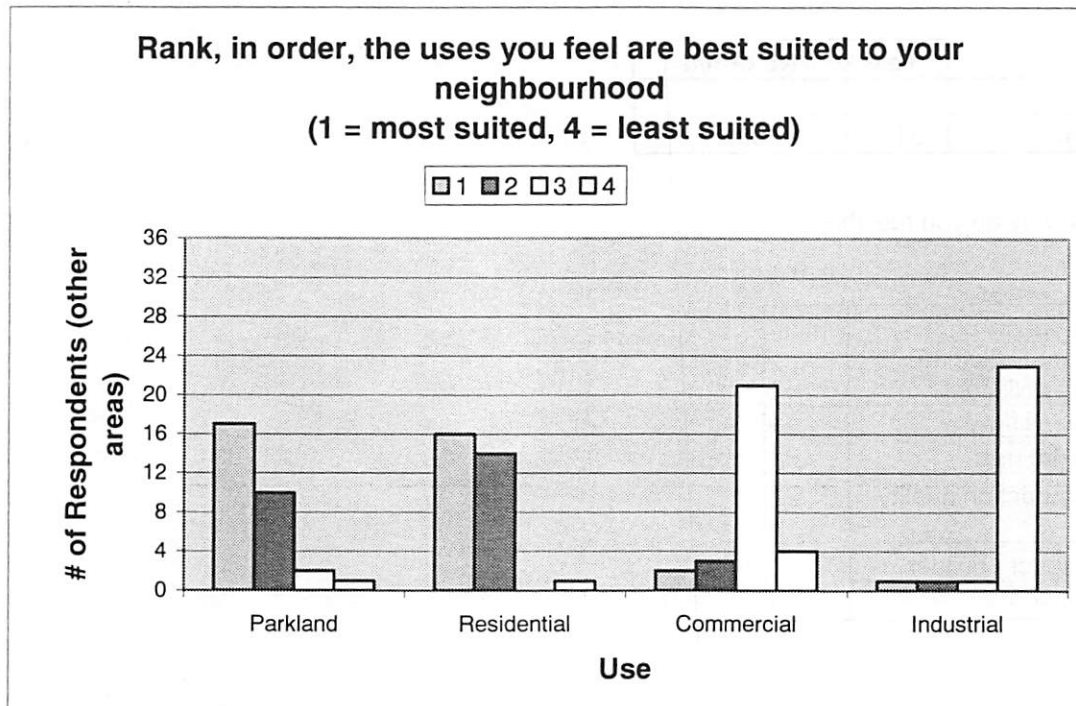


Sandy Lake Community Profile

Q.4

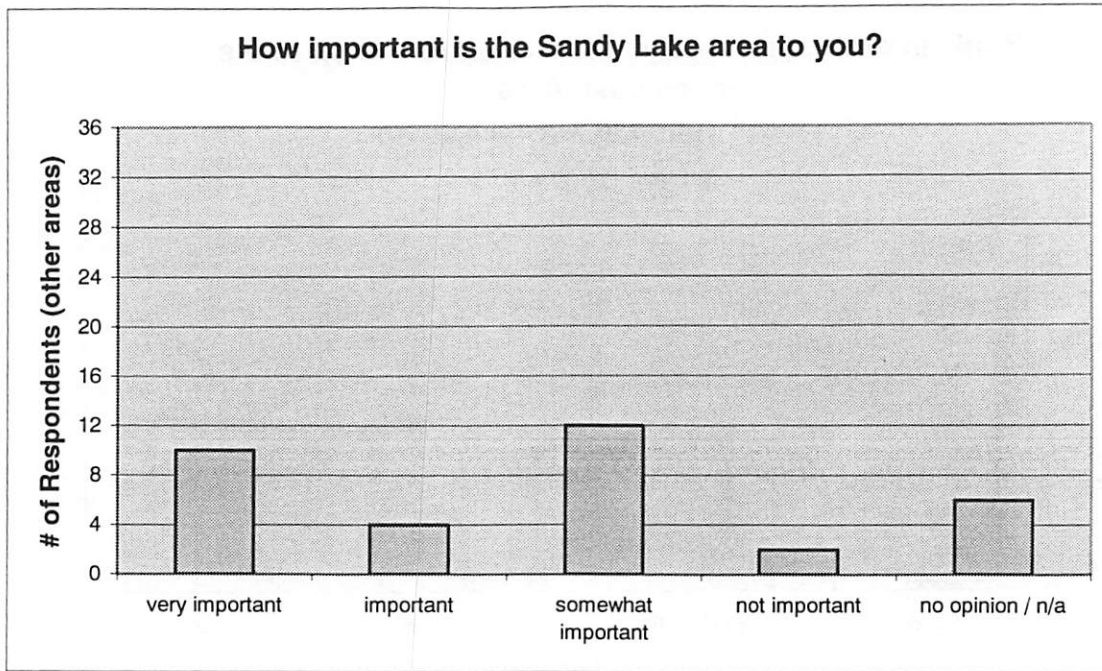


Q.5



Sandy Lake Community Profile

Q.6



Q.7 Do you feel that your household will be affected by development in the Sandy Lake area?

	Yes	No or n/a
Total #	11	25
% of Total	31%	69%

Q.8 If yes, why do you feel this way?

negative impacts on environment (including increase in pollution)	5
increase in traffic	4
increase lake use	1
negative impact on quality of life	1
positive impact - builder	1
schools fuller	1



Sandy Lake Community Profile

Appendix 4 **Historical Land Use Maps**

