April 20, 1999

TO: Big Lake Mayor and City Council

RE: Big Lake Comprehensive Plan Update - Tactics Report

FILE NO: 243.05 C

Ladies and Gentlemen:

This letter forwards the Planning Tactics Report, which summarizes the study that was undertaken as part of Phase One of the current Big Lake Comprehensive Plan update.

The purpose of the Tactics Study is to focus attention on the issues and objectives that the community wants addressed as part of the Comprehensive Plan update. In this regard, it is emphasized that the Tactics Study represents only an initial forum for City official and public input. Throughout the planning process, numerous additional opportunities will be provided for an ongoing dialogue.

We appreciate the opportunity to again assist the community of Big Lake with its progressive planning efforts and look forward to working with City officials, staff, residents and property owners on the work, which lies ahead.

Respectfully yours,

NORTHWEST ASSOCIATED CONSULTANTS, INC.

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In response to local needs the City of Big Lake has undertaken an update of its Comprehensive Plan. A critical aspect of the process is the initial identification of issues and concerns. In part, these considerations will serve to direct and focus the work effort.

As a means of accomplishing input and insight into local needs and opinions, a series of interviews were undertaken with key individuals. Beginning in January 1999, comments were pursued with community elected and appointed officials representing the City and Township of Big Lake and School District 727, local business people, as well as key City staff.

The interviews provided significant and valued perspectives on objectives and needs to be addressed in planning the future of Big Lake. This information is summarized in subsequent pages of this report. To be stressed however, is that this process of public participation does not end, but rather is a continuing theme of the current process.

Moreover, as plans are formulated, “draft” materials will be presented to the Big Lake Planning Commission and City Council prior to conducting formal and required public hearings. It is through this extensive participation process that assurances are provided to all concerned that all relevant matters will be considered and addressed.

Beyond the desires and needs of the local constituency and neighboring affected units of government, past local and regional plans set the stage for future actions and directions. Sherburne County has the ultimate authority to establish Urban Expansion Area Boundaries and a number of major transportation corridors within Big Lake including County Roads 81, 73, 5, 68 and 43. The State of Minnesota exerts authority over the use and development of shorelands, lakes, wetlands, and improvements to Highways 10 and 25. The State will also influence future transit decisions having the potential for significant impacts to the City. The relationship between Big Lake Township and the City is critical in terms of land use, transportation and the potential for joint ventures including the industrial park and a possible community center. The City is also influenced by regional impacts including the expansion of both the Twin Cities and St. Cloud Metropolitan Areas. This being the case, it is no longer possible for the City of Big Lake to exist and/or develop in a vacuum but rather, the community will need to plan according to its ever expanding role as part of a greater region.

The factors noted above serve to set the general parameters for the planning to be conducted by the City of Big Lake as part of its Comprehensive Plan update. This Tactics Study organizes these general factors, which influence the final products.

In the material that follows, a description of the current Big Lake Comprehensive Plan update process is provided first. Next, a discussion of local and regional planning history is presented. The major component of this report is dedicated to the comments, opinions, needs and issues which were identified through a series of interviews and open forums held to receive public input from community officials and residents. The report concludes with a summary of key issues and focus areas that will be further reviewed and refined during the Visioning process of the Comprehensive Plan update.

PLANNING PROCESS

Comprehensive planning is a broad base problem solving process. As such, the effort involves well-defined steps, which begin with problem and objective identification and progress to proposed solutions and actions. The diagram on the preceding page graphically illustrates the general series of stages, which are undertaken in planning for the community's future.

The general comprehensive planning process must, however, be specifically tailored and designed for the jurisdiction it is to address. In the case of Big Lake, the current comprehensive planning program has been divided into five phases with various sub-components intended to cover both micro and macro perspectives of the community. In this context, microelements of the Comprehensive Plan are matters, which relate to readily identifiable neighborhood and planning districts of the community. Citywide matters and those with regional and sub-regional impact constitute the macro scale concerns.

The first phase is the Tactics Study, which is intended to identify local concerns, and needs. Through the Tactics interviews, concerns were generally identified on a Citywide or macro scale. Interviews were conducted with community officials and key staff from the City and Township of Big Lake, School District 727 and public input received from two separate open forum meetings held by the Big Lake Planning Commission.

The second phase of the planning process involves the assembly of a citywide technical Inventory. The technical Inventory addresses social, environmental, and physical facts and trends of the community.

Phase three involves the formulation of a Policy Plan. Following the Inventory and Issues Analysis, the City will define desired community planning goals that it wishes to

accomplish over the next twenty years. Policies will be formulated to define actions for accomplishing the desired community goals.

Phase four involves the formulation of the Development Framework guide plan which provides specific plan recommendations for land use, natural environment, infrastructure, transportation and housing. These plans and recommendations will give attention both on a macro citywide scale and a more geographic specific micro planning district scale.

The fifth and final stage is Implementation, which will involve an analysis of the City's implementation tools (development regulations, capital improvement plans, housing programs) to insure that they will effectively serve to implement the Comprehensive Plan goals.

INSERT COMPREHENSIVE PLAN PROCESS GRAPHIC HERE

Time has been allocated at the forefront of the process to allow residents and property owners to voice their opinions on what is wanted for their respective areas and the City as a whole. Subsequently, as draft plans are formulated, informal neighborhood informational meetings will be held to review proposals following initial review by the Planning Commission, other affected City Committees and the City Council. Following this input from citizens and property owners, plans will be revised and formally processed through public hearings and adoption. The process will conclude with referral of plans to surrounding and affected units of government.

So as to insure that the City's Comprehensive Plan is truly reflective of the community's interests and objectives and is responsive to constituent concerns, the work must be directed from the outset by the views and opinions of officials, citizens, and property owners. As one of the initial phases of Big Lake's current Comprehensive Plan update, a broad cross-section of individuals were consulted to gain a portion of this local perspective and orientation. Additionally, comments from surrounding and affected units of government were also solicited. It is believed that these sources have provided the needed local insight and direction, which was being sought. This information, when combined with the pending technical community inventory, will establish the basis for plan formulation.

The following are the individuals who contributed their time and comments, which made this Planning Tactics, report possible:

COMMUNITY REPRESENTATIVES:

Mayor
Don Orrock

City Council

James Dickinson
Chuck Heitz
Duane Langsdorf
James Maas

Planning Commission

Tom Knaeble, Chair
Richard Cavegn
Marcia Goossen
Duane Langsdorf
Cheryl Moshier
Francis Patka

Economic Development Authority

James Dickinson
Robert K. Eddy
Robert Gardetto
Dave Gast
Jim Maas
Gary Meyer
Ewald Petersen
Jim Sanford
Jim Thares
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City Staff

Patrick Wussow, City Administrator
Jim Thares, Community Economic Development Coordinator
Matthew Brokl, City Attorney
Deb Garross, City Consulting Planner
Bruce Miller, City Consulting Engineer
Jenni Schwinn, Finance Director
Geven Rabe, Building Inspector
Shawn Redepenning, Fire Chief
Norman Gerlach, Police Chief
Michael Goebel, Public Works Director
Sandy Petrowski, Administrative Secretary

Surrounding and Affected Units of Government

Big Lake Township
Sherburne County
Independent School District 727
Minnesota Department of Transportation
Minnesota Department of Natural Resources

Public Forum Meeting Participants

PLANNING COMMISSION MEETING
OPEN FORUM
February 17, 1999

Rick Lewandowski, MM Home Builders

PLANNING COMMISSION MEETING
OPEN FORUM
March 17, 1999

Bob Lageson, School District 727, Superintendent

Other Participants: Jim Oveson, Joel Westrum, Kent Jardine, Trent Buness - Former Planning Commission Members
Bob Lageson, Superintendent - School District 727
Mark Kline - Big Lake Community Improvement Association
Mark Basiletti, Sherburne Soil and Water Conservation District
Curt Jacobsen and Steven Moore, former City Administration

Big Lake Township Board:
Ewald Petersen, Chairman
Larry Alfords
Robert Hofer
Laura Hayes
James Sanford
Pam Thomas

Kenneth Warneke

The City of Big Lake has a long and rich development history and commitment to community, recreation and transportation planning. The community heritage, population growth and development pattern has been heavily influenced by transportation systems and the recreational amenities offered by the rivers and many lakes within the area. Native Americans were drawn to the area due in part to its strategic location between the Mississippi and Elk Rivers. Waterways and adjacent riverbanks also provided strategic locations for military roads and trails linking the area to Fort Ripley and Fort Abercrombie. Early settlers followed the Red River Ox Trail (now Highway 10) to the area or were brought by riverboat.

The shores of Big Lake were first developed with hotels and inns, which served as resting places for pioneer travelers, trappers and fur traders. Later the St. Paul and Pacific railroad built a terminal in Big Lake, which provided a connection to the Cities of St. Paul and Minneapolis. In the recent past, transportation improvements including construction of Interstate 94 and Highway 10 have improved accessibility to Big Lake and the central region of the State. The transportation systems, prevalent hospitality industry and recreational development of area lakes and beach fronts, established Big Lake as a rest area for travelers and vacation destination point. Early location of the County Seat near Big Lake, along with development of trade and business, expanded employment opportunities for residents in addition to farming.

Big Lake was connected to the Twin Cities both as a vacation destination and trade route including the shipment of ice to Minneapolis and St. Paul. Transportation improvements to Interstate 94 and Highway 10 along with the expansion of area cities such as Elk River, Monticello and the Metropolitan Areas of St. Cloud and the Twin Cities made it possible for people to live in Big Lake and commute to other locations for employment. Today, the character of the community is proximate to that of a suburb providing a great living environment and support services for residents. The transportation improvements and shopping opportunities offered in nearby communities allow the majority of residents commute elsewhere to work and shop.

The community of Big Lake has historically sought to capitalize on features present in the community and improvements brought about by other government agencies or private sector companies. This tradition led to the development of a lakeshore-oriented community as evidenced by the location and pattern of residential neighborhoods and local businesses. The majority of early neighborhoods were developed in concentric ring patterns around the lakeshores. Business development has grown up adjacent to the railroad tracks and major roadways. This development pattern worked for many

years, while the City remained a remote community. Increased use of automobiles, advances in technology, growth of the St. Cloud and Twin Cities Metropolitan Areas and development of freeways have begun to take their toll on the community. Big Lake currently finds itself as a local stop for the commuting public both making its way to commercial/employment centers and other recreational areas throughout the region. Increased traffic and development pressures continue to impact the City making it difficult to retain its sense of community. The City finds it apparent that it must plan for and exert political pressure to ensure that future development occurs based on local preferences and objectives rather than as a result of outside forces.

The City of Big Lake took its first aggressive steps to control its destiny in 1975 with the development of a Zoning Ordinance. The City adopted its first Comprehensive Plan in 1987 and subsequently amended its zoning and subdivision controls. The 1987 Comprehensive Plan provided an inventory of the community and established plans for the extension of municipal sanitary sewer, water and storm water systems as well as a transportation, functional classification system. More importantly, the Comprehensive Plan established goals and policies, which outlined the type of living environment and community that Big Lake desired to become. The overall community goals of the 1987 Comprehensive Plan are identified as follows:

1. Maintain and improve the community character and identity.
2. Maintain the existing defined residential neighborhoods of the City.
3. Prevent and eliminate blight and resist deterioration of the environment.
4. Maintain and continue development of a strong economic base and create a favorable climate for the operation of responsible free enterprise systems.
5. Promote the development of permanent private sector employment opportunities in the City.
6. Encourage opportunities for a balanced population with respect to age and economic composition.
7. Provide adequate active and passive open space for the enjoyment of Big Lake residents.
8. Protect and maintain the natural ecological systems within the City.
9. Enable the convenient movement of persons and goods within the City, and to and from the surrounding region, in a safe manner.
10. Provide the services and facilities essential for the protection, operation, and use of public and private property in the City.
11. Attempt to increase the interaction and communication between citizens of all ages, cultural heritages, and income.
12. Provide the services and facilities required to protect the health, safety, and welfare of Big Lake citizens.

The City has diligently worked to accomplish the goals and objectives of the 1987 Comprehensive Plan by undertaking numerous planning efforts. These planning documents in addition to applicable studies prepared by other government entities having jurisdiction and/or affecting the City, will also provide an excellent foundation for this Comprehensive Plan update.

City of Big Lake - Planning Studies

1998 Big Lake City/Township Industrial Park Conceptual Design Study
1998 Treatment Options for Big Lake
1997 Facility Plan for Wastewater Treatment
1997 Water System Improvements
1995 Big Lake Housing Strategy Plan
1995 Lake Assessment Program for Big and Mitchell Lakes
1993 Big Lake Street Study
1992 Facilities Plan for Big Lake
1994 Water Tower Evaluation 2000,000 Gallon Elevated Water Storage Tank
1991 Big Lake Engineering Report on Municipal Water System Supply, Distribution, and Storage Facilities
1991 Shoreland Management Ordinance
1985 Comprehensive Drainage Plan

Sherburne County - Planning Studies

1998 Soil Survey of Sherburne County, Minnesota
1997 Sherburne County Transportation Plan
1996 Sherburne County Comprehensive Park, Trail and Open Space Plan
1994 Sherburne County Zoning Ordinance (Amended 12/3/98)
1992 Sherburne County Comprehensive Land Use Plan
1994 Sherburne County Comprehensive Water Plan
1979 Mississippi Scenic and Recreational Rivers Ordinance

In addition to the above, the Minnesota Department of Transportation (Mn/DOT) will also influence decisions and policies in this Comprehensive Plan. Highways 10 and 25 are the main access routes that connect the City to other parts of the region. The highways intersect at the center of the community and have a strong influence on local development patterns. As such, Mn/DOT must be recognized as a partner with regard to community planning and development. Highways 10 and 25 have, and will continue to play a significant role affecting growth and redevelopment efforts in the community.

The highways provide the attributes of access, exposure, and linkages between the community and the region. However, planning and management of the highways is necessary to control negative influences such as pollution, barriers within the community and traffic congestion. This Comprehensive Plan will serve as a basis for

communicating City objectives with Mn/DOT and developing goals, policies and plans for Highways 10 and 25 that attain objectives of the community and region. Mn/DOT Plans and policies will be discussed in detail in the Development Framework element of the Comprehensive Plan.

As a means to establish an initial framework of issues, needs, and objectives, which need to be covered in the Big Lake Comprehensive Plan update, a program of local contacts and interviews was undertaken. These groups, which comprised the Tactical Study, were Big Lake elected and appointed officials and key City staff; property owners; and neighboring and overlapping local government jurisdictions. The comments and suggestions received from these sources are summarized in the following paragraphs.

COMMUNITY OFFICIALS/STAFF:

During the winter of 1999, interviews were conducted with City officials and key staff. Without exception, all involved were highly positive about the community of Big Lake. Suggestions and comments, which were offered, were done within the context of improving upon and enhancing what is considered to be a “nice community in which to live.”

Not surprisingly, given the number of persons interviewed, an extremely wide variety of topics and issues were raised and covered as part of the discussions. Within this context, the comments, which were received, have been generalized so as not to credit any one individual with a particular statement or opinion. It should be noted however, that there was a strong degree of consensus among those interviewed on the issues and needs of the City. While such agreement is not totally uncommon, it does signal a very positive situation.

The identification of each and every issue raised as part of the interviews with community representatives is not attempted by this report. Such would be beyond the scope and purpose of this effort. The issues identified within the context of this report are presented under broad categories and are arranged by topic. Identifying and dealing with this more basic framework of concerns will facilitate the organization of responses and the preparation of plans dealing with specific and individualized community concerns.

Growth Philosophy

There was consensus among those interviewed that growth should be planned in a manner that will retain the small town atmosphere of the community as development continues. Growth in and of itself is viewed positively as an indicator of a viable community. However there is a difference of opinion regarding the rate at which growth within the City should occur, with some interviewees indicating a preference to slow

residential development. With respect to Sherburne County, there was a consensus to work with the County to control urban sprawl. There was also a consensus of opinion that it is essential to coordinate infrastructure and growth to accomplish a balance of residential plus commercial and industrial tax base. Interviewees indicated that there is a strong need to consider the area (City and Township) as one community and to work together on issues of mutual interest. There is a wide divergence of opinions concerning whether or not the City should annex additional lands from Big Lake Township. The opinions range from working with the Township to ensure compatible platting/zoning requirements to annexing large land areas and/or pursuing extending its borders to the Mississippi River to accommodate and control future development of the City. The common objective with respect to growth philosophy is to annex enough land to be able to provide a good transportation network and varied tax base for the City of Big Lake.

Big Lake Township

There are many issues and concerns associated with current development trends within Big Lake Township and how to address mutual planning and governance issues between the City and Town. The issues relate to land use and development, annexation, and compensation for services.

The primary concern cited by respondents is the rate of growth and subdivision/land use patterns that are occurring within Big Lake Township. The Township has a larger population than the City of Big Lake, which is considered by some to be an undesirable situation. There is concern that the market for large, high valued single family homes is being saturated by Big Lake Township and that the higher standards and costs associated with municipal utilities tends to discourage development of this type of housing within the City. In the future, the City will likely face difficulties, both politically and from an efficient infrastructure development position in providing municipal services to areas that may be annexed.

There is also concern that the City of Big Lake subsidizes development within the Township through its commercial/industrial centers, public services and transportation routes. Some interview participants suggest that the City should seek to gain more revenues from joint ventures with Big Lake Township. There is a feeling that the City tends to fund a greater share of joint projects such as the Library, for use by Township residents. Instead of subsidizing joint ventures, some feel that the City should consider instituting user fees for non-residents and/or levy higher taxes on adjacent jurisdictions.

With regard to annexation, some interviewees suggest that the City should only annex vacant land that can be planned consistent with City standards. Others feel that the City should work with Big Lake Township to investigate the plausibility of incorporating the Town and City into one entity. Despite the difference of opinions regarding Big Lake

Township, it is clear that people agree that no more annexation should occur until the Comprehensive Plan is completed and coordinated with Township and County. The majority of interviewees also feel that the City and Township of Big Lake should work together to develop compatible platting and land use requirements for lands adjacent to the City's corporate boundaries.

Community Center

There were several suggestions and support for developing a community center. Some people suggest that more activities and additional facilities should be provided at the existing center located by City Hall. Others suggested that the City review and determine where the best long-term location for a community center should be. Several people feel that the City should develop the park at Big Lake in a manner that will accommodate larger community events designed to bring neighbors together. The community center could contain a gazebo/band shell to provide for small weddings, community concerts, picnic tables, shelters, public rest rooms and shower facilities. A community center at this park could serve as the town-gathering place as the lake is the center of the community and become the symbol of community identity for Big Lake. Other interview participants feel that the City should develop a "first class" public facility that could also be leased to the public for weddings and special occasions.

Community Identity

The comments about community identity are very diverse and range from "there is no sense of community" to "Big Lake is known for the lake." Opinions about whether the community has a positive or negative image are also varied. Some interview participants feel that the U.S. Highway 10 Corridor provides the visual identity for Big Lake. As such, many people express concern that the community is known as a "congestion point" along the highway and that the existing streetscape is considered a detriment to the appearance of the community. Many interview participants indicate that the business areas adjacent to U.S. Highway 10 need a "facelift" to provide a feeling of a cozy town atmosphere instead of a strip mall appearance. A common theme is that there is a need to upgrade the appearance of the community to provide for a better "ambience" and to help to slow traffic through town, so that people can take notice of the Big Lake community. Some suggestions to upgrade the community's appearance include introducing curbs, unique lighting, coordinating signage, landscaping and/or adding street furniture, as well as better maintaining the exterior of buildings.

Big Lake offers many opportunities other than the lake and some people feel the City should seek to promote the other unique facets of the community. One interviewee suggests the City restore and promote the Big Lake School, located directly south of City Hall, as the only historic landmark within the community and make it a focal point.

The consensus of opinions is that the City should seek to promote development standards, practices and land use objectives to establish a cohesive community identity that all residents and businesses can relate to and embellish upon. Furthermore, neighborhoods should be viewed as part of the entire Big Lake community and not as separate or "exclusive" entities upon themselves.

Economic Development

A common objective cited by many interview participants concerning economic development, is that all sites should be connected to municipal sanitary sewer systems. There are concerns that land prices for commercial/industrial properties are high and that the City is loosing sales to other areas such as Monticello and Elk River. The interview participants feel that new people should pay for development costs. Also, the City Economic Development Authority should continue to attract new business and consider developing a web page. Some of the interview participants also suggested that a member of the Planning Commission should serve on the Economic Development Authority.

Environmental Protection/Natural Resources

The majority of interview participants feel the most important environmental amenity in Big Lake are the lakes, wetlands and waterways that exist within the community. Interview participants agree that a primary community objective should be to protect the water quality of area lakes and water bodies. Suggestions to improve local water bodies ranged from instituting more restrictive standards to protect wetlands to working with the Minnesota Department of Natural Resources (MnDNR) to stock Big Lake with native fish species. It is suggested that as part of the Comprehensive Plan update process, a review of existing conditions including location of natural features and soil conditions, be done to identify locations of future development that will have the least impact on the natural environment resources within Big Lake.

Some interview participants expressed concerns about flooding and associated structural problems resulting from a combination of high water table and high lake elevations. Particular attention to the relationship between ground water table and lake elevations should be addressed when considering development impacts. The use of wetlands for holding areas to maintain and/or improve water quality was suggested. The responsibility to take care of and manage the lakes should be that of the entire community, not just the lakeshore owners. Interview participants indicated the importance of recognizing that the lakes are public and as such, they should be accessible to all residents.

Land Use

There is consensus of opinion that the land use patterns of Big Lake are not organized and that there is a lack of transition from one type of land use to another. Big Lake is considered by many to be a bedroom community in that most people that live here do not work in the community. A number of interview participants cited the need to attract more business and industry to the community in order to provide higher paying jobs and expanded employment opportunities for residents. Several people feel that there is a great opportunity to develop commercial/industrial uses in conjunction with a possible future commuter train station, which, according to the Northstar Corridor Study, may be located in Big Lake. Big Lake Industrial Park East, located north of U.S. Highway 10, is viewed as a highly positive development deserving of strong community support. It is also evident that there is strong sentiment for the City to identify expansion areas for future commercial/industrial and business growth within the community.

With regard to residential land use, it is generally accepted that housing opportunities need to be expanded beyond entry level, single-family homes. The vast majority of interview participants indicated that the City should focus on increasing the supply of higher value single-family homes. Also, there is a feeling that lakeshore property redevelopment is critical although a limited number of people feel that construction restrictions on lakeshore sites are too restrictive. A majority of the respondents indicated that there is a need for market rate senior housing within the community. Many interview participants also indicated that additional multi-family and/or apartments are needed however, these types of units should be scattered throughout the community on small sites instead of being developed as large complexes.

Agriculture

The only opinion regarding agriculture is that the City should avoid prime agriculture lands for future development to the extent possible.

Institutional

Many of the interview participants cited the need for the City and School District 727 to work together for building sites and to balance enrollment.

Residential

It is apparent from comments received, that the key residential land use issue is the lack of housing diversity both in value and unit types, available in Big Lake. This sentiment

was expressed in nearly every interview conducted for this Tactics Report. The vast majority of interview participants feel that the City has done its share to provide for starter homes within the community and that it is time to direct attention toward attracting higher valued homes to provide more housing opportunities within Big Lake. Many respondents feel that the current zoning standards set the tone for lower valued homes. The perceived misuse of the Planned Unit Development platting option and the 12,000 square foot lot size standard were commonly mentioned Zoning Ordinance devices that people feel are responsible for continued development of "small" lots. Others cite the results of the 1995 Housing Strategy Plan, (which identified only two percent of the housing stock as being valued at or above $150,000), as rationale to concentrate on development of higher value homes. Suggestions to address this issue range from deleting the PUD section of the Zoning Ordinance to having the City develop residential plats to provide larger lots (and the respective amenities including street lighting and sidewalks), to attract higher valued homes.

The following bullet statements identify other residential land use issues interview participants feel should be addressed:

- There should be more duplex, townhome and/or apartment units located within walking distance of commercial areas.

- The existence of large rural tracts of land interspersed with developing properties may cause problems with extending future sanitary sewer, water and storm sewer services within Big Lake and to lands that are likely to be annexed to the City.

- Residential land uses should not be located along the Federal Highway 10 corridor.

- The City should limit the amount of subsidized housing in the community.

- Within the Mitchell Farms subdivision, some of the relatively new homes are already showing signs of deterioration, which is of major concern.

- One possible area for high-end housing would be in the vicinity of Thompson Lake where upscale housing is currently being developed.

- The City should seek to provide senior and multi-family housing opportunities that are dispersed throughout the community.

- The City should consider targeted redevelopment efforts for residential areas that contain deteriorating housing. For example, areas platted with long narrow lots could be identified for redevelopment of unique residential living environments where

homes would be placed closer to the street or alleys and garages would be located in the rear yard to accomplish more of a historic residential development pattern. Specialized redevelopment efforts such as this would also help to establish unique neighborhoods, which could be focal points for the community.

Commercial (Retail-Service)

The commercial (retail/service) land use topics addressed by interview participants concentrate primarily on where such uses should be located within the City, the type of businesses that the community should attract, and to a lesser extent, the exterior appearance of business sites. The following statements identify current opinions regarding location, type and exterior appearance of commercial sites:

- Commercial uses should be located on both sides of and along the U.S. Highway 10 corridor.

- Concentrate commercial land uses and expand the existing commercial district located by the grocery store, by removing the existing single-family homes in the area.

- The City should investigate the opportunity to develop commercial centers that incorporate and/or capitalize upon the unique recreational lake amenities within Big Lake and/or the Mississippi River. Examples may include a public pier with specialty retail shops located adjacent to a lake or businesses such as boat sales, marine equipment etc.

- The City should identify where a future train station for commuter traffic will be located and develop a theme commercial/convenience retail and restaurant center at the location. An idea would be to recreate an indoor train station with shops or a covered/enclosed train station to protect commuters from the weather. The facility could contain cafe's, specialty shops, convenience goods and possibly be combined with a park facility.

- The City should investigate the possibility of using the "sales tax" as a means to generate local revenues and promote Big Lake as a hub for regional retail uses.

- The City lacks retail and should seek to attract businesses where "big ticket" items can be purchased in Town.

- Higher standards for commercial uses are needed.

- The existing Commercial Strip should be redeveloped.

Industrial and Business Uses

The interview participants generally feel that there is a good opportunity for Big Lake to attract more industrial development in the future. The joint venture (Big Lake Industrial Park East) between the City and Township is viewed positively and provides a good opportunity to diversify the community's tax base. The City should continue to utilize and market its rail facilities to attract more industry and employment to Big Lake. Some interview participants feel that industrial uses should be located along the rail corridor instead of retail or other high traffic generators. Others feel that industrial development should be concentrated along the U.S. Highway 10 Corridor. Regardless of location, the majority of participants feel that the City should continue to study market factors and pursue all opportunities to attract industry to the City. Big Lake could also look to its neighbors like Elk River and Monticello to implement similar ideas geared to create a market for larger industrial/business users within the community.

Public Works

There were a limited number of responses concerning public works from the interview participants. The comments are summarized as follows:

- Utilities should be placed underground in order to assure continued service, eliminate interference with TV's, and to improve aesthetics and the general appearance of the community.

- The management of storm water is of critical concern for existing land uses as well as the future impacts new development will have on community lakes and waterways.

- There is a need for more storm water management ponds both as a means to control the rate of runoff as well as address water quality issues.

Parks/Trails/Recreation

The most popular discussion item for interview participants is parks and recreation. It is clear that park planning rates very high on the list of items that need to be accomplished as part of the Comprehensive Plan update process. A comprehensive park plan is viewed as necessary and of utmost importance. The concern is that the City needs to acquire parkland and build cash reserves for the development of park and recreation areas throughout the community, which coincide with current development. Some

interview participants feel that the City may need to go beyond its current borders to acquire adequate amounts of parkland.

The majority of people interviewed feel that the City lacks a sufficient number of community parks. People tend to agree that small, mini-parks are too expensive to maintain and that the City should concentrate on development of larger parks where community events can occur. Suggestions for community facilities include developing a community band shell, gazebo, and ice arena that can be used by the public and possibly as revenue generating facilities. Others suggested that additional community parks are needed other than the park along the shore of the lake of Big Lake. Some people feel that Big Lake could offer more recreation activities and services by developing a City marina and/or restaurant by the Lake. Other ideas include building a municipal golf course, perhaps close to U.S. Highway 10 and or developing an off-road motor cross-area, equestrian facility and/or shooting range. In any event, community park facilities should be used first as a means to bring residents and neighborhoods together and also, if possible, as revenue sources for the creation of future recreation facilities.

Another element of the park system includes access to local lakes and waterways by the public. Several interview participants spoke about the importance of identifying the areas adjacent to lakes as public so that residents recognize their rights to walk along and use the lakeshore. Many people feel that a percentage of every waterway should be reserved for and made accessible to the public. In addition, trails should be developed and/or introduced wherever possible adjacent to community lakes. Trails should also be available throughout the community connecting parks to residential areas. Several interview participants feel that there is a need to separate pedestrian and vehicle traffic to provide safer conditions for both. In addition to walking trails, many people feel that there is a need to also provide separate bicycle trails throughout the community. It is also suggested that the City investigate the possibility of re-routing vehicle traffic from Lake Street in order to provide more pedestrian/bicycle routes.

Transportation

The topic of transportation is secondary only to parks and recreation, among the participants of the Tactics interviews. The general consensus is that traffic is a problem in Big Lake and that it has to be addressed in the Comprehensive Plan update. Issues related to traffic flow, routes, road and intersection design, functional classification, access spacing guidelines, right-of-way vacation policies, road appearance, curb and gutter, as well as financing and jurisdictional issues are all topics of concern for those interviewed. People are concerned about truck traffic being routed through residential areas, inadequate roads and lack of pedestrian systems for safe use by residents and bicyclists. An overwhelming majority of interview participants agree that there is a need to analyze the existing transportation systems, identify problem areas, provide a plan to

manage future transportation facilities and to develop a funding/implementation schedule to complete specific projects. Several people mentioned the need to continually review transportation plans to insure current standards meet the needs of the community as it continues to grow. There is general agreement that the City needs to work with Sherburne County and other jurisdictions to develop a road system that addresses both regional and local traffic patterns, needs and standards.

Several specific recommendations forwarded by interview participants are identified as follows:

- The City should consider development of a bypass for County Road 5, to redirect regional traffic around instead of directly through the community.

- The City should actively plan for appropriate access and land uses adjacent to State Highway 25.

- There is a need to provide an east/west collector street to serve parts of the community located north of Lake Mitchell.

- New developments should not be allowed to connect to nor generate additional traffic on County Road 73 (Lake Shore Drive/Hiawatha Avenue).

- The City should investigate the possibility of re-routing vehicle traffic from Lake Street in order to provide more pedestrian/bicycle routes.

- There is a need to emphasize internal street improvements and solve problems, (for example, Lakeshore Drive).

U.S. Highway 10/ State Trunk Highway 25

- Issues concerning MnDOT's future plans for Highway 10 and 25 are critical to the community and must be addressed.

- There are too many access points to U.S. Highway 10/State Trunk Highway 25.

- A frontage road should be provided along both sides of U.S. Highway 10/State Trunk Highway 25 with access points separated by ½ mile or more.

- There is a need to separate the regional and local circulation functions of U.S. Highway 10 so that regional traffic is not stopped all the way through Big Lake.

- Regional traffic cuts through the middle of Town.

- Trucks cannot negotiate the turn at U.S. Highway 10 and are therefore routed through residential areas.

- Measures should be taken to discourage truck traffic through residential areas of the community.

Northstar Corridor

There is a consensus of support for the Northstar Corridor and that the City should actively pursue all measures to provide access from Big Lake and/or encourage construction of a train station within the community. It is essential that the City enlist the support of School District 727, Sherburne County and other applicable agencies to advocate this venture. A potential train station site has been identified located southwest of the intersection of County Road 43 and U.S. Highway 10. The City should consider developing a theme commercial/convenience retail and restaurant center at the location. It is possible that the introduction of commuter rail services could cause the community to grow at a faster rate in the future due to increased accessibility to employment centers. The City should also investigate the need for additional rail facilities to ensure that both commuter as well as freight lines can be accommodated. Many interview participants feel that a train station has the potential to create opportunities for employment and commercial/retail ventures in Big Lake. As such, the City should also seek to tie sidewalks, trails and other transit services such as park-and-ride facilities into an overall development plan with the train center.

Administration

The subject of administration is the most debated issue among interview participants. The purpose for including administration as an interview topic is to obtain feedback about the operations of City staff, Boards and Commissions and to gain an understanding of how plans and ordinances interact. There is a feeling among many interviewees that the City does not follow its own policies, ordinances or Comprehensive Plan in matters concerning development. Some feel that the existing codes and ordinances are written and/or interpreted in favor of builders, not the City. Possible remedies for the perceived inconsistencies offered by interview participants include updating the Comprehensive Plan and Ordinances more often to reflect current conditions and provide useful, meaningful objectives for the community. In any event, there is a need to stick by the Comprehensive Plan and make sure that codes are consistently interpreted and enforced.

Another topic of debate concerns defining the roles and expectations that the City Council has for various boards and commissions, especially the Planning Commission.

Several interviewees indicated that having a professional planner to advise the Planning Commission has provided better documentation for case files and therefore made the job of the Planning Commission easier than it has been in the past. However, several interview participants suggest for legitimacy and representation purposes, the Planning Commission and City Council should not contain the same members. If needed, a Council Member could serve as a liaison to the Planning Commission but should not have the ability to vote on issues at both levels. Another option is to have the City Council member serve as the Chair of the Planning Commission and have the ability to vote only in cases of a tie vote. Another area of contention is that the City should better define the procedures for filling vacant seats on the Planning Commission and City Council.

Zoning Ordinance

The Zoning Ordinance was discussed by a majority of the interview participants, many of who commented on the Planned Unit Development (PUD), lot size, density, nuisance and environmental requirements of the Ordinance. Many respondents feel that the PUD process has been too liberal and developers have gained more than the City by filing a PUD in place of the standard subdivision process. The following statements address issues raised by many interview participants concerning the PUD process:

- There is a need to develop guidelines and community objectives, which outline the circumstances under which a PUD can be, undertake.

- The PUD is used as a means to deal with problems instead of a vehicle to attain community objectives.

- Recent PUD's approved by the City contain too many small lots.

- The PUD Ordinance should not be a vehicle to reduce zoning standards below the minimum requirements of the Ordinance.

- There is no reason to allow the subdivision of substandard sized lots within new plats. The majority of the City's housing is built on small, substandard lots, which were platted years ago. If the PUD Ordinance is used at all, its objective should be to obtain larger lots with amenities designed to attract higher valued housing to the community.

- The City should not allow PUD development.

Other issues associated with various elements of the Zoning Ordinance and City Code include:

- The Comprehensive Plan and Zoning Ordinance should be changed to decrease development density and the amount of resulting impervious surface.

- The City should initiate extraterritorial zoning for lands located within two miles of the corporate boundaries of Big Lake.

- There is a need to implement a code compliance program to clean up yards, remove trash, and promote housing maintenance within the community.

- The City should re-evaluate commercial advertising signs and billboards and develop regulations to severely limit new signs and remove existing billboards.

- Zoning and design standards should be varied to promote development with characteristics unique to specific parts of the community. The standards should seek to accomplish unique neighborhood designs and possible redevelopment efforts to establish an individual sense of character appropriate to the neighborhood.

- City regulations in general, should be geared to provide incentive to accomplish the optimum level of development for the community rather than as punitive regulatory devices.

- The City should develop a program/ordinances to implement the tree preservation objectives of the 1987 Comprehensive Plan.

- The City should take a leadership role in promoting alternative sources of energy such as solar and wind energy.

Intergovernmental Relations

Several interview participants suggest that the City of Big Lake should work more closely with School District 727 to plan for and coordinate development and population impacts on school facilities.

PROPERTY OWNERS/RESIDENTS ISSUES:

The Planning Commission held open house forums on February 17 and March 17, 1999. Newspaper articles were published prior to the meetings inviting the public to attend and express any and all opinions and concerns about the Comprehensive Plan and future planning issues that should be addressed as part of the update.

One person attended the February 17, 1999 Open Forum to address Comprehensive Plan update issues. This individual suggested that the City keep the plan and zoning as is and continue the “common sense” attitude toward development.

School District 727 Superintendent, Bob Lageson attended the open house forum held on March 17, 1999 and suggested possible areas where the City and School District could work together. Mr. Lageson has been in the community for over fourteen years and has seen many changes, mostly attributed to the growth of the area. The influx of students into the District combined with rapid growth make planning school facilities, staff and services difficult. The District is facing financial difficulties due in part to failed referendum attempts, the disproportionate share of financial support from the State of Minnesota and population growth within the Big Lake area. In the past, School Districts and other government entities tended to operate on their own however, that trend is changing and the District is willing to work with the City on joint, cooperative efforts that will benefit both entities as well as local residents.

During the Comprehensive Plan update process, the City has been contacted by individuals that own property within Big Lake Township and who are interested in developing with City utility services. The land areas and concepts for development of these properties will be identified and further explored in the Development Framework component of the Comprehensive Plan.

Big Lake Township

A meeting was held with the Big Lake Township Board on February 10, 1999 wherein the Board Members were requested to provide comments, opinions, concerns and identify issues that should be addressed as part of the Comprehensive Plan update for the City of Big Lake. A number of issues and ideas were offered both by the Board and also from the general public. School District 727 Superintendent Bob Lageson attended the meeting and provided insight concerning planning issues affecting the District.

The topics of discussion were varied and ranged from planning future urban expansion districts, transportation issues associated with U.S. Highway 10 and Minnesota State Highway 25, land use, and residential home valuation to the impacts growth have on School District 727.

Future Urban Expansion

It is clear that the extent to which the future Urban Expansion District encroaches into the Township is of critical concern to the Big Lake Town Board. Several individuals expressed their vehement objections to expanding the district to a two-mile radius around the City of Big Lake. People feel that the existing Urban Expansion District is sufficient to accommodate future growth and that any additional area should be limited

to a maximum of one eighth to one quarter of a mile around the City. The Township has not changed its position and continues to believe that expansion will occur on the north side of the City of Big Lake, which is also land area that is not conducive to farming. The Town Board does not want to see any additional urban expansion of the City to the south, because they want to maintain the long range agricultural uses in this area of the Township. Big Lake Township Officials do not believe that there is a threat from the City of Monticello to expand their corporate boundaries further to the north, and across the Mississippi River. It is their belief that the River is a barrier to Monticello's ability to extend sewer services into Big Lake Township.

Transportation

Two primary concerns were raised regarding transportation including that there is a need for an east/west road to get people from one side of the City to the other and planning for the corridors along U.S. Highway 10 and Minnesota State Highway 25. The biggest problem associated with the highways, according to Town Board Members, is that MnDOT has not yet determined a plan or implementation schedule for either route. The Township would like to see the highway corridors developed with only commercial and industrial uses. It is their feeling that residential development is not suitable along the highways because of the associated noise, pollution and other environmental impacts that are associated with the thoroughfares.

Land Use

The land use discussions concentrated on the desire of the Township to retain the Long-term Agricultural area, located south of the City. It is the position of the Town Board that this area contains large, contiguous parcels of land with suitable soil characteristics (when enhanced by irrigation and fertilizers) that provide a profitable economic base for farmers and the Township as a whole. This sentiment was strongly supported by both the Board and residents who were in attendance at the meeting. The final comment concerning this issue was that the Township is "prepared to go to the death" to protect agricultural land.

Other land use topics raised by meeting attendees suggest that the Township is comfortable operating under the existing Sherburne County Zoning Ordinance. Also, the Township feels that the joint Big Lake Industrial Park will provide enough land for development for several years into the future, citing that the park has been owned for three years and as of yet, there are no tenants.

Residential Home Valuations

It is felt that the City specializes in developing and providing low-income housing for first time homebuyers. Some members of the audience stated that single-family homes valued at less than $160,000 do not generate enough taxes to pay for themselves. The Township is able to offer larger lots without all of the costs associated with municipal

utilities. The result is that larger homes are constructed that generate higher tax revenues than construction on a City lot would allow. At least one member of the audience identified himself as a builder and stated that the density required recouping costs (for municipal utilities) forces a developer to build more units and/or subdivide smaller lots in the City. It was his belief that the rural setting, large lot sizes, and decreased development costs associated with rural property are reasons that higher value homes are constructed in the Township versus the City.

School District 727

Much of the discussion centered around the impacts of growth on School District 727 and the need to coordinate planning efforts between the City and School District. The consensus of opinion is that the School District is not able to provide programs and facilities to keep up with the rate of growth. Several people commented on the recent school referendums that voters turned down. Superintendent Lageson indicated that there are one hundred new students entering into the District each year. It is anticipated that programs and/or staff cuts as well as possible fee increases for athletic and other programs may occur in the future to accommodate the increasing enrollment. It was suggested by some people that the City's current development standards, which, in their opinion are responsible for an oversupply of lower valued homes, should be changed. The rationale given was that lower value homes often attract families with children which in turn, adds students the local school system. It was suggested that higher development standards such as increased lot size requirements, would result in higher value housing which in turn would generate more taxes to the School District.

The extent and scope of comments and discussions offered by individual City, Township and School District 727 official and staff interviews as well as those of the general public, speak positively for the community and attention given to many desired improvements. There is an evident appreciation for the problems, which Big Lake confronts. There also appears to be a commitment to resolving issues and preparing for an improved future. However, there are also issues which lack a consensus of opinion which are summarized as follows:

Future Growth Boundaries of the City:
Throughout the Comprehensive Plan process, it will be important for the City to develop a consensus with respect to the future size of the community and the extent to which its corporate boundaries will ultimately be established. The City will need to provide direction concerning the extent, timing and conditions under which it will extend its borders. This issue will require cooperation and negotiation with Big Lake Township and Sherburne County as well.

A second component of this issue concerns the degree to which the City supports working with Big Lake Township to consolidate into one government jurisdiction. There were several interview participants that spoke of the potential benefits of such a consolidation. This issue deserves further study and research to provide the City with information to make such a determination. However, because many of the interview participants did not discuss the topic, it is prudent that the City provide further direction on this issue before undertaking its study as part of the Comprehensive Plan update.

City/Township Joint Development Ventures:
The City will need to develop a consensus of opinion concerning the degree to which it desires to develop and provide services on its own versus joint ventures with Big Lake Township. At issue is the degree to which the City will support future commercial/industrial and public facilities expansion on its own. This issue presented itself in discussions concerning development of a community center, economic development, and providing public services such as the library and recreational amenities. A determination must be made of whether the community will provide its own tax base or continue to share the costs and revenues with Big Lake Township.

Community Identity:
The majority of interview participants feel the community is best known for the area lakes and environmental resources. However, there is concern that the congestion along Highway 10 and the appearance of business and industrial uses along this corridor give a poor impression of the community. A consensus of opinion concerning how best to improve the appearance of the community from key entry locations and

along major road corridors such as Highway 10, will be needed to further address this issue.

Land Use:

The primary issue associated with land use concerns how to diversify the type and value of residential units within the City. The means to accomplish housing diversification will require further exploration with the City including review and consensus about the location and type of units that should be provided throughout the community.

The potential location of a future commuter rail station within the City is viewed positively and as a means to spur economic development and provide additional employment opportunities. The means to promote and capitalize on the potential future development of a commuter train station will need to be further explored and agreed upon by the City.

Parks/Trails/Recreation:

This topic was the most popular discussion item for interview participants. The development of a Park Plan is viewed as necessary and of utmost importance. At issue are the number of parks, acquisition methods, financing and maintenance level and responsibilities for such lands. A critical issue that arose during discussions of this topic was a feeling by many that the City is not following the intent of the current Comprehensive Plan with respect to the parkland ratios that apply to new subdivision activity. There appears to be a sharp division regarding the interpretation and application of goals, objectives and existing regulations concerning parkland dedication and development. The City must develop a consensus of opinion regarding this issue and develop consistent criteria and implementation mechanisms for park and trail dedication, development and maintenance.

Transportation:

The topic of transportation is second only to parks and recreation, among the participants of the Tactics interviews. An overwhelming majority of people agree that there is a need to analyze the existing systems, identify problem areas and provide a management plan and implementation schedule to fund future projects. The need to provide an east/west collector street to serve the northern part of the City, reduce the number of access points to Highways 10 and 25, discourage truck traffic through residential areas and to separate vehicle and pedestrian traffic along Lake Street are viewed as important issues. The City will need to provide direction on these various issues and work closely with Mn/DOT and Sherburne County to develop a functional transportation plan to meet community and regional needs.

Administration:

Perhaps the most contentious issues among interview participants concerned administration related topics. There is a feeling among many interviewees that the City does not follow its own policies, ordinances or Comprehensive Plan in matters concerning development. There is a divergence of opinion wherein some feel that existing codes and ordinances are written and/or interpreted in favor of builders or other special interest groups. Another topic of debate concerns defining the roles and expectations that the City Council has for various boards and commissions, especially the Planning Commission. The divisiveness is not limited to internal operations but is also exhibited in relations between the City and School District as well as Big Lake Township. It is not the purpose of this report or Comprehensive Plan to incite further discord among individuals and/or groups. The divisiveness is brought forth as a problem that must be addressed and overcome in order to accomplish a meaningful plan for community development.

The Comprehensive Plan is a guide for future development and a tool for both the public and private sectors to make investment and land use decisions. A Comprehensive Plan must be credible and supported by the entire community if it is to accomplish cohesive, meaningful, and attainable community development. In order to provide clear and consistent guidance for future development, it is essential that general agreement be obtained on the issues identified herein.

This Report provides a partial basis and background for the Big Lake, Year 2020 Comprehensive Plan update effort. It is extremely beneficial to understand the insights and objectives summarized herein at the beginning of the planning process. The views and opinions of community officials, residents, and property owners partially define the issues that need to be addressed during the update process. This information, combined with the plans of neighboring and affected units of government partially identify the general study parameters of the Plan. In addition to community views, technical and factual background as well as community and regional trends are needed to provide a basis for decision makers to begin formulating policies. The technical and factual data will be identified during phase two of the process with the development of the Planning Inventory. The combination of the Tactics and Planning Inventory Reports will provide the sound foundation upon which policies; physical plans and action programs of the Comprehensive Plan will be formulated.

July 28, 1999

TO: Big Lake Mayor and City Council

RE: Big Lake Comprehensive Plan Update: Inventory

FILE NO: 243.05 B

Representing a second phase of preparation in the update of the Big Lake Comprehensive Plan, we are pleased to submit the Comprehensive Plan Inventory. This document constitutes the assembly of technical information on Big Lake's development history and current, as well as projected, status. When combined with the policy-oriented information identified in the Big Lake Tactics Report, the basis for issue analysis and plan formation is established.

Beyond its use as support information in the Comprehensive Plan update, the Comprehensive Plan Inventory provides data and statistical information, which is relevant for day-to-day projects and decision-making, which the City and its officials confront. It is anticipated therefore, that the Comprehensive Plan Inventory will be a continuing and constant information source and reference.

It has been NAC's pleasure to assist the City with the preparation of this material. Additionally, we look forward to the challenges, which lie ahead in the formulation of the plan, which will guide Big Lake into the future.

Respectfully yours,

NORTHWEST ASSOCIATED CONSULTANTS, INC.

David R. Licht, AICP
Associate

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Senior Planner

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The City of Big Lake has recognized a need to update its current Comprehensive Plan to address development pressures facing the community. Since the 1987 Comprehensive Plan, the community has continued to develop and has annexed lands from Big Lake Township. The issues and opportunities faced by Big Lake today differ from those in 1987.

The purpose of the Big Lake Inventory is to identify the type, amount and pattern of growth

that has taken place within the City and its environs. Because there are a number of parcels for which orderly annexation agreements exist and/or properties located within Urban Expansion Districts, the study area for the Inventory also encompasses the lands outside of the City of Big Lake. A boundary needed to be made as to the extent of the study area. For the preparation of this report, a study area boundary of about two miles beyond the current corporate boundaries of the City has been established. The study area does not reflect any plans on the part of the City to extend its corporate borders. The study area instead, allows for the gathering of detailed information needed to plan for sub-regional systems including roads and/or trails and the future expansion district.

This report provides a thorough inventory of existing conditions present within the City and within two miles of the corporate limits of Big Lake. This Inventory encompasses five general categories of information: Community Facilities, Social Profile, Natural Environment, Land Use, and Transportation. Together, these categories that make up the Big Lake Inventory provide an informational basis, which will be used to identify issues and set up a hierarchy of planning policies. These policies will help the community deal with a broad base of land use and development issues. With the help of a solid information and policy base, decision-makers can evaluate and guide proposals in the short term to benefit the residents of Big Lake and the surrounding areas, while fulfilling the City's long term goals and objectives.

Community Location

The City of Big Lake is a municipality approximately 4 square miles in size and is located in southern Sherburne County, approximately 35 miles northwest of Minneapolis and 28 miles southeast of St. Cloud. According to the Minnesota State Demographer's Office, the community's April 1, 1999 estimated population was 5,190 with 1,875 housing units. The community is experiencing growth in residential and business development commensurate with the growth occurring within Sherburne County.

The map on the following page illustrates the location of the City of Big Lake within the State of Minnesota and Sherburne County.

INSERT BIG LAKE COMMUNITY LOCATION MAP

The social profile element of the inventory outlines the level of community development activity, population, and household growth trends and projections, community demographics and other data describing the social characteristics of Big Lake.

SUMMARY POINTS:

X According to the Minnesota State Demographer, Sherburne County is the fastest growing county within the State of Minnesota. The growth that has occurred within

the County has been through in-migration of young families who have relocated in the area. The 1990 Census shows that Sherburne County has the third youngest average resident age in the State. In 1990 there were 10,759 total family Households in Sherburne County. Of these households, 59% had children less than 18 years. This represents the highest percentage in the state.

X The demographic profile of the new households entering Sherburne County suggests that the County will continue to attract young families with children.[1] These residents have been attracted by Sherburne County's natural amenities, low cost housing and land availability, employment opportunities, commuter distance to the Twin Cities Metropolitan Area, and low taxes.[2] Sherburne County growth since 1990 has occurred with relative equal distribution in both the cities and certain townships. From 1990 through 1994, 1,845 new dwelling units were constructed in Elk River, Becker, Big Lake, Clear Lake, and Zimmerman. Just 200 fewer housing units were constructed within the townships.[3]

X Big Lake has experienced a growing population since 1970. The rate of growth was most rapid during the 1970's when Big Lake grew at a rate of 120 individuals per year, or just over 117 percent for the entire decade. During the 1980's, the City added 361 households and 903 residents with a growth rate that approximated 41 percent. The community's growth rate for the years between 1990 and 1999 was approximately 67 percent where the population grew from 3,113 in 1990 to an estimated 5,190[4] in 1999. This trend is reflective of the development activity occurring in Sherburne County and other Cities such as Elk River and Zimmerman.

X The population of Big Lake is relatively young. Big Lake's median age (28.8) is comparable to other communities in the region and Sherburne County. Big Lake's average household size evidences a continuing trend toward smaller families. Young married couples are waiting longer to have children and having fewer children than was typical in the past. Big Lake's 1998[5] estimated household size average of 2.76 is lower than that of general Sherburne County, which is 3.02.

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[1]Ibid., p. 7.

[2]Ibid., p. 7.

[3]Sherburne County, Comprehensive Park, Trail & Open Space Plan, 1996, p. 7.

[4]Minnesota State Demographer, April 1, 1999 Estimate of Population and Households.

[5]Minnesota State Demographer, April 1, 1998 Estimate of Population and Households

- Within the City, the labor force age group (age 20-64) is by far the largest representing 57.3 percent of the population, followed by the school age group (age 0-19), which represents 33.9 percent of the total population. The retired age group (age 65+) comprises the smallest percentage of Big Lake's population representing 8.8 percent.

- Big Lake's age characteristics and trends are important considerations in planning for the community due to the demands these various age groups have for services. The largest number of children in the school age group is between the ages of 0 to 4 (360), who are just entering into the education system at the elementary level. This age group represents 11.8 percent of all school age children. This, along with (243) children aged 5 to 9, suggests that the planning for future parks, trails, recreation programs and schools is critical. The increase in children will likely have a significant impact on the schools within the Big Lake Independent School District 727.

- According to the 1990 Census, 41.7 percent of Big Lake residents have attained a high school diploma and 11.7 percent have obtained a college bachelors degree or higher. Big Lake's labor force is fairly evenly divided between occupational categories with just over 42.6 percent of the City's labor force being employed in managerial and professional occupations and 45.8 being employed in manufacturing and labor occupations. Big Lake is a bedroom community, with over 56.6 percent of its residents traveling over 15 minutes to work each day.

- Big Lake's 1990 per capita and median family incomes ($11,888 and $34,297) are respectively, the second and third lowest of the communities in the region. The 1990 per capita income for Big Lake is 11 percent lower than that of Sherburne County. The Big Lake median family income is also lower than that of Sherburne County by 15 percent. These income levels may be attributed to the younger age of Big Lake's residents, who are just entering the work force and becoming established. The predominance of service and/or labor occupations as well as a housing stock of low to moderately priced units, including manufactured housing may also be factors.

- The percentage of Big Lake residents (7.3 percent) determined to be below the 1989 poverty threshold was significantly higher than that of Big Lake Township (3.6 percent). However, Big Lake compared favorably to the Cities of Monticello and Zimmerman, which had 10.9 and 8.0 percent of their respective populations below the poverty threshold. Sherburne County also had more individuals (7.7 percent) below the poverty threshold than the City of Big Lake.

Building Permit Activity

The level of building activity within the City has shown marked increases during the decade of the 1990's. The following table illustrates the level of building permit activity, which has occurred in Big Lake from 1990 to December 1999.

CITY OF BIG LAKE - BUILDING PERMITS BY TYPE OF UNIT												
TYPE	1990 Census	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	Total Units
SF	880	21	26	44	56	68	92	138	86	155	296	1,862
Duplex 2 units	40		2	4	0	0	0	32	0	0	*	78
MF 3+ units	208	0	30	0	0	0	0	0	*	*	*	238
Mobile Home	131	*	*	*	*	*	*	*	*	*	*	131
Other	5	*	*	*	*	*	*	*	*	*	*	5
Total	1,264	21	58	48	56	68	92	170	86	155	296	2,314

* Building Permit Records did not contain enough information to cite specific unit counts.
Source: U.S. Census, 1990; Big Lake Building Permit Records

Subdivision Activity

The City has experienced increased development pressure over the past five years, which is not only apparent by the table above but also by the number of residential subdivisions, which have been platted. All of the subdivisions listed on the following table have been platted within the past five years.

CURRENT AND FUTURE SUBDIVISION ACTIVITY					
Development Name	# Lots Preliminary Plat	# Lots Final Plat Approved	# Vacant Lots	Lots to be Developed in Future Phases	Density (du/acre)
Big Lake Senior Apts. (1)	18 Duplex Units	18	18	25 Apt. Units	6.67
DuChien Estates	2	2	0	0	1.25
McDowall Oaks	282	91	86	172	1.31
Mitchell Farms	158	158	4	0	1.52
Mitchell Lake Ridge	170	170	12	0	2.11
Schultz Minor Sub.	2	2	0	0	3.2
Shadow Wood Village II	14 Duplex Units	14	10	0	2.8
Shores of Lake Mitchell	332	315	167	0	1.17

Total	978	602	297	191	

(1) Big Lake Sr. Apartments included 18 Duplex Units and 86 Apartment Units with an additional 25 apartment units planned for a future phase of development (for a total of 101 apartment units).

Source; City of Big Lake; NAC

HOUSEHOLD GROWTH

HOUSEHOLD GROWTH 1970 TO 2000 Est.			
	Population	Households	Household Size
1970	1,215	310	3.92
1980	2,210	774	2.86
1990	3,113	1,264	2.74
2000 Est. (1)	5,943	2,185	2.72

1 Estimate based upon Building Permits through 12-31-99.

* Estimated for State of Minnesota projected persons per household
Source: U.S. Census 1990, 1980, 1970; Minnesota State Demographer; 1995 Housing Strategy Plan, Community Partners, Inc.

POPULATION GROWTH

According to the U.S. Census, the population of Big Lake grew from 1,015 to 3,113, or 206 percent, between the years 1970 and 1990. Of the 2,098 individuals added over this 20-year period, a significant number of people (1,195 or 117 percent), came to Big Lake during the 1970's. The growth increase is more dramatic than that of Sherburne County , which grew 63 percent during the same period. Only the Cities of Zimmerman and Elk River grew faster (244 and 211 percent respectively) than Big Lake during the same time period. The population of Big Lake has increased an average of 1,391 persons per decade since 1970. The population has more than doubled since 1980, to an estimated 1999[6] population of 5,190. The population of Big Lake Township is larger than that of the City with a 1999 estimated population of 6,556. The statistics displayed in the following table, illustrate the population growth trends within the City of Big Lake as compared to Sherburne County, Big Lake Township and other cities.

POPULATION GROWTH - 1970 - 2000 ESTIMATE*							
Year	Big Lake	Big Lake Township	Sherburne County	Monticello	Elk River	Zimmerman	Albertville
1970	1,015	1,708	18,344	1,636	2,179	495	451

[6]Minnesota State Demographer, April 1, 1999 Estimate of Population and Households.

1980	2,210	2,679	29,908	2,830	6,785[7]	1,704	654
1990	3,113	4,452	41,945	4,941	11,143	1,350	1,251
2000 Est.	5,943	6,137	59,945	7,079	15,714	2,420	2,893
Average Annual Growth							
1970-80	120	97	1,156	119	461	121	20
1980-90	90	177	1,204	211	436	-35	60
1990-99 Est.	230	211	2,250	267	571	134	205
Percentage Growth							
1970-80	117.7	56.8	63	72.7	211.6	244.4	45.0
1980-90	41.7	66.1	40.3	74.6	64.3	-20.5	91.3
1990-99 Est.	66.7	37.8	42.9	43.2	41.0	79.2	131.2
Effective Compounded Growth							
1970-80	8.09	4.60	5.00	5.63	12.02	13.15	2.26
1980-90	3.48	5.21	3.44	5.73	5.08	-2.30	8.29
1990-99 Est.	5.84	3.63	4.04	3.66	3.49	6.01	8.74

*Estimates for all jurisdictions other than the City of Big Lake are April 1, 1998 Estimate of Population and Households (Minnesota State Demographer). Estimates for the City of Big Lake were prepared by NAC.

Source: U.S. Census 1970, 1980, 1990; Minnesota State Demographer; Sherburne County; Big Lake 1995 Housing Strategy Plan, Community Partners, Inc.; Northwest Associated Consultants, Inc.

POPULATION AND HOUSEHOLD PROJECTIONS

The transformation of basic population counts into average annual increases, percentage changes and rates facilitates the understanding of both the scale and direction of population growth. Big Lake has demonstrated the ability to plat and develop large tracts of land within a relatively short period of time. The rate of growth is largely dependent upon market conditions, the supply of vacant land and the willingness of property owners to develop. The past five years of building activity within the City are testimony to this fact. To address current market conditions and historic land development trends within Big Lake, both moderate and high community growth scenarios have been incorporated herein.

Moderate Growth Scenario

[7] Note: Elk River annexed Elk River Township January 1, 1978

The moderate growth scenario is based upon utilization of straight-line projection methods (based upon historical development trends within the City). According to the Minnesota State Demographer, the community's April 1, 1999 population has been estimated to be 5,190. This estimate is reflective of the 2,064 total housing units constructed in Big Lake between 1970 and December 1999 and retention of its household size of 2.74 persons per household (1990). The moderate growth scenario assumes that while the City is expected to continue to experience an increase in population through the year 2020, the speed at which the growth occurs will decline.

Under the moderate growth scenario, it is assumed that Big Lake should be able to maintain an annual average minimum development rate of 105 dwelling units per year through the year 2020 . This development rate should result in a year 2020 population of approximately 10,375 residents.

The tables on the following page illustrate the moderate growth scenario, population and household forecasts as well as projected population and unit additions through the year 2020.

Moderate Growth Scenario

POPULATION FORECASTS (Moderate Growth Scenario)						
				---------- Estimated ----------		
	1970	1980	1990	2000	2010	2020
Population	1,015	2,210	3,113	5,943	8,180	10,375
Households[1]	310	774	1,135	2,185	3,145	4,150
Household Size	3.27	2.86	2.74	2.72	2.60	2.50

1. 1970, 1980, 1990 estimates are from the U.S. Census.
2. The year 2000 estimate is based on the residential building permits for new dwelling construction 1990 through December 1999.
3. Consistent with local historical trends and National trends, the household size forecasts show a reduction of people per household through the year 2020.
4. The 2010 and 2020 household forecasts are based on the assumption that Big Lake will grow approximately 105 units per year. This growth rate is reflective of the City growth between 1990 and 2000.

Source: U.S. Census 1990; NAC Inc.

PROJECTED POPULATION AND HOUSEHOLD UNIT ADDITIONS (Moderate Growth Scenario)					
Unit Additions	1970-80	1980-90	1990-00	2000-10	2010-20
Population	1,195	903	2,705	2,362	2,195
Households	464	361	1,004	1,005	1,005
Gross Percentage Changes					
Population	117.7%	41.7%	86.9%	40.6%	26.3%
Households	149.6%	46.6%	88.5%	47.0%	31.9%
Effective (Compounded Annual Percentage Growth Rate)					
Population	8.09	3.48	6.45	3.46	2.41
Households	9.58	3.90	6.54	3.93	2.81
Source: Northwest Associated Consultants, Inc.; U.S. Census					

Strong Growth Scenario

Under the strong growth scenario, it is assumed that Big Lake will maintain an annual average minimum development rate of 150 dwelling units per year through the year 2020. This development rate should result in a year 2020 population of approximately 12,850 residents.

POPULATION FORECASTS (Strong Growth Scenario)						
				---------- Estimated ----------		
	1970	1980	1990[2]	2000	2010	2020
Population [3]	1,015	2,210	3,113	5,943	9,465	12,850
Households [1]	310	774	1,135	2,185	3,640	5,140
Household Size	3.27	2.86	2.74	2.72	2.60	2.50

1. 1970, 1980, 1990 estimates are from the U.S. Census.
2. The year 2000 estimate is based on the residential building permits for new dwelling construction 1990 through September 1999.
3. Consistent with local historical trends and National trends, the household size forecasts show a reduction of people per household through the year 2020.
4. The 2010 and 2020 household forecasts assume an average annual growth rate of 150 units per year based on the growth rate, which has occurred within the City between 1995 and 1999.

Source: U.S. Census 1990; NAC Inc.

PROJECTED POPULATION AND HOUSEHOLD UNIT ADDITIONS (Strong Growth Scenario)					
Unit Additions	1970-80	1980-90	1990-00	2000 - 10	2010-20
Population	1,195	903	2,705	3,647	3,385
Households	464	361	1,004	1,500	1,500
Gross Percentage Changes					
Population	117.7%	41.7%	86.9%	62.6%	35.8%
Households	149.6%	46.6%	88.5%	70.1%	41.2%
Effective (Compounded Annual Percentage Growth Rate)					
Population	8.09	3.48	6.45	4.99	3.10
Households	9.58	3.90	6.54	5.46	3.51
Source: Northwest Associated Consultants, Inc.; U.S. Census					

In the development of its Comprehensive Plan, City Officials felt that the future growth potential of the community is much higher than the moderate growth scenario and as such, felt that a future growth projection should be based upon development rates experienced within the past five years. The high community growth projections identified on the previous page, are intended to identify the ultimate growth potential of the community based upon continuation of current market conditions and development rates similar to that of the past five years. The high growth scenario is based upon utilizing the average number of single family building permits issued from 1990 through 1999 (approximately 155), as a basis for future growth projections.

It is possible, that a greater increase may occur given the growth trend, which has been evidenced, by the number of building permits issued during the past couple of years and development trends within Sherburne County. Additionally, the land availability within Big Lake and the community's proximity to an expanding employment base in the western Twin Cities Metropolitan suburbs provides an attractive incentive for continued population and household growth.

The Big Lake high growth scenario projections are based on suburban development densities. As with the moderate growth scenario, it is likely that some redevelopment strategies will have to be employed in conjunction with annexation of additional lands, to achieve the household and population projections. Factors including expansion of the Urban Expansion District, availability of public utilities, surge of residential platting, or the introduction of a major employer to the community could result in a faster growth and development rate. It is also plausible that the growth rate may be less than the projections due to factors such as increasing interest rates, changes in fuel prices, a downturn of the market or other unforeseen factors. It will be important for the City to continually monitor development and adjust the population and household forecasts accordingly.

Land demand and Absorption

As of April 1999, approximately 150 newly platted, single family lots were available for development within the City. This estimate does not include Habitat Addition or the scattered, vacant, single-family lots available in the older residential neighborhoods. The reason the aforementioned lots were excluded from the lot inventory count is that their future potential for development is questionable due to high water table conditions and/or the fact that the smaller lots are currently used as additional yard and/or for accessory garage/storage units.

The growth trends and projections identified earlier in this report along with previous platting and development trends provide some foundation for projecting land use demand for the next decade. The average density at which residential development has occurred (between 1995-1999) approximates 2.5 units per acre. Low-density residential development is the most predominant land use within the City and this development trend is projected to continue through the next two decades. Review of the existing land use within the City reveals that residential use comprises 840 acres or about 41% of the total area of the City. For the moderate growth scenario, the year 2020 land demand projection has been made assuming future growth will continue to follow the residential development patterns similar to that of the 1990's. The number of projected households has been divided by a gross density of 2.5 units per acre to determine residential land demand through the year 2020.
Under the moderate growth scenario, Big Lake is projected to add 2,011 new households, which will consume approximately 804 acres. Given the fact that all lots are not exactly the same size and in anticipation of any surge in growth above the household forecast, the acreage demand “overage” has been calculated. This statistic multiplies the minimum demand by 1.5, which results in land consumption of 1,206 acres for residential growth.

As of June 1999, the City had about 90 acres of vacant land available for development, which had not received preliminary plat or site plan approval. The amount of vacant land within the Urban Expansion District as of the same date was approximately 380 acres. Assuming that future growth will occur at a similar rate and density as that of the 1990's, it is estimated that the Urban Expansion District will need to be expanded by approximately 736 acres to accommodate growth expected to occur between now and 2020.

In the high growth scenario, Big Lake is projected to add 3,000 new households within the next two decades, which will consume approximately 1,200 acres. The same land overage statistic (1.5) used in the moderate growth scenario has been applied to the high growth scenario resulting in projected land consumption of 1,800 acres for residential growth. Under the high growth scenario, it is estimated that the Urban Expansion District will need to be expanded by approximately 1,330 acres to accommodate growth expected

to occur between now and 2020.

Calculating population and household projections is not an exact science due to the fact that there are so many unknown variables that can affect such projections. This being said, it is probable that the 2020 community population and household projections will likely fall between the moderate and high growth scenarios.

HOUSEHOLDS

The 1990 Census provides a demographic illustration of the households in Big Lake, as illustrated on the table on the following page. As shown on the table, Big Lake is a family-oriented community comprised largely of married couples and single parent households with children. In 1990, only 31 percent (346), of the households in Big Lake were non-family households.

HOUSEHOLD TYPE AND PRESENCE OF CHILDREN (UNDER 18 YEARS)						
	All Households		H.H. with Children		H.H. without Children	
	#	Total H.H.	#	Total H.H.	#	Total H.H.
Family - Married Couple	686	60.9%	427	85.2%	259	41.4%
Family - Male Householder	60	5.3%	51	10.2%	9	1.4%
Family - Female Householder	34	3.0%	23	4.6%	11	1.8%
Total Family Households	780	69.3%	501	100.0%	279	44.6%
Non-Family Households	346	30.7%	0	0	346	55.4%

TOTAL HOUSEHOLDS	1,126	100.0%	501	100.0%	625	100.0%
Source: U.S. Census 1990; Northwest Associated Consultants, Inc.						

AGE DEMOGRAPHICS

The 1990 Census includes age statistics for Big Lake and surrounding community residents. There is little difference between the median ages of residents within the communities cited. The variation between the lowest (Albertville 26.2) and highest (Elk River and Big Lake Township 28.9) median age reported is only 2.7 years. The 28.8 median age in Big Lake is comparable to other communities. represents the average of the community samples.

1990 MEDIAN AGE	
Big Lake	28.8
Big Lake Township	28.9
Sherburne County	28.6
Albertville	26.2
Elk River	28.9
Monticello	27.9
Zimmerman	27.1
Source: U.S. Census 1990	

The following table divides Big Lake's population by age group. The labor force age group (ages 20 to 64) is the largest age group within Big Lake, accounting for just over 57.4 percent of the 1990 population. The next largest age group is the school age group accounting for 34.0 percent of the 1990 population.

POPULATION ACCORDING TO AGE GROUP		
Age Group	1990	Percent
School Age		
0-4	360	11.8
5-9	243	7.9
10-14	193	6.3
15-19	242	7.9
Sub-Total	1,038	33.9
Labor Force		
20-24	251	8.2
25-34	698	22.8
35-44	403	13.2
45-54	257	8.4
55-64	145	4.7

Sub-Total	1,754	57.3
Retired		
65+	265	8.8
TOTAL	3,057	100.0
Source: U.S. Census 1990		

Big Lake's age characteristics and trends are important considerations in planning for the community due to the demands these various age groups have for services. As shown in the table above, the largest number of children in the school age group is between the ages of 0 to 4 (360), who are just entering into the education system at the elementary level. This, along with (243) children aged 5 to 9, suggests that the planning for future parks, trails, recreation programs and schools is critical.

The retirement age population comprises about nine percent of the Big Lake population. The relatively few retirement age persons in the community may be a result of retirees moving to the sunbelt areas, or to high and mid density residential living environments and care centers, where the specific needs of this age group can be accommodated. There are few facilities and/or services for the retired population in Big Lake. As such, Big Lake's retired age population will likely stabilize or continue to decline until such a time as housing opportunities, health and other services required by older residents become available.

EDUCATION

The current education levels of Big Lake residents age 18 and over are detailed in the following table. Approximately 79.3 percent of Big Lake's residents have attained a high school diploma or higher education and approximately 11.7 percent have attained a college bachelors degree or higher.

1990 EDUCATION LEVELS AGE 18 AND OVER				
Level Attained	Big Lake	Percent	Sherburne County	Percent
γ 9th Grade	163	7.8	1,401	4.9
9th to 12th (no diploma)	272	13.0	3,229	11.2
High School Graduate	871	41.7	11,346	39.4
Some College (no degree)	342	16.4	6,238	21.7
Associate Degree	198	9.5	2,301	8.0
Bachelors Degree	186	8.9	3,135	10.9
Graduate Degree	59	2.8	1,160	4.0
TOTAL	2,091	100.0	28,810	100.0

% High School Grad or Higher		79.3		84.0
% Bachelors Degree or Higher		11.7		14.9
Source: U.S. Census 1990				

OCCUPATION

Information from the 1990 Census regarding employment characteristics of Big Lake residents is provided as follows. The most common occupation types listed for Big Lake residents in the 1990 Census, were machine operators, assemblers, and inspectors. The second most common occupation types consisted of executive, managerial, professional and administrative support. Sales occupations were also prevalent among residents. Only .6 percent of the population registered private household as an occupation in 1990 indicating that the vast majority of residents work outside of the home.

OCCUPATIONS - 1990		
	Number	Percent
Executive, Administration and Managerial	103	6.9
Professional	191	12.8
Technical	58	3.9
Sales Occupation	159	10.6
Administrative Support	126	8.4
Private Household	9	.6
Protective Service	7	.5
Other	145	9.7
Farm, Forest, Fishing	12	.8
Precision Product, Craft and Repair	250	16.7
Machine Operators, Assemblers, Inspectors	272	18.2
Handlers, Equipment Cleaners, Helpers, Laborers	56	3.7

Transportation & Material Moving	108	7.2
TOTAL	1,496	100.0
Source: U.S. Census 1990		

Census profiles regarding travel to work statistics are provided in the following table. Such profiles suggest that Big Lake is a bedroom community, meaning that residents are likely to commute to jobs in the Twin Cities and/or St. Cloud from their homes in Big Lake. According to the 1990 Census, over 41 percent of Big Lake's population commuted 30 minutes or more to work.

TRAVEL TIME TO WORK		
Time Traveled	Number	Percent
Less than 5 minutes	90	6.2
5 to 9 minutes	237	16.4
10 to 14 minutes	216	15.0
15 to 19 minutes	131	9.1
20 to 29 minutes	174	12.1
30 to 39 minutes	128	8.9
40 to 59 minutes	232	16.1
60 to 89 minutes	142	9.8
90+ minutes	8	.6
Worked at Home	84	5.8
TOTAL	1,442	100.0
Source: U.S. Census 1990		

INCOME

Census information regarding income statistics of Big Lake and surrounding communities is illustrated in the following table.

1990 INCOME		
	Per Capita Income	Median Family Income
Big Lake	11,888	34,297
Big Lake Township	14,543	42,100
Sherburne County	13,147	39,261
Albertville	12,350	40,202
Elk River	14,616	43,057
Monticello	11,907	33,202
Zimmerman	10,225	33,804
Source: U.S. Census 1990		

As noted above, Big Lake's 1990 per capita and median family incomes ($11,888 and $34,297) are respectively, the second and third lowest of the communities in the region. The 1990 per capita income for Big Lake is 11 percent lower than that of Sherburne County. The Big Lake median family income is also lower than that of Sherburne County by 15 percent. These income levels may be attributed to the younger age of Big Lake's residents, who are just entering the work force and becoming established. The predominance of service and/or labor occupations as well as a housing stock of low to moderately priced units, including manufactured housing may also be factors.

BIG LAKE HOUSEHOLD INCOMES		
Income Levels	Number of Households	
Under 10,000	206	(14%)
10,000-19,999	193	13%
20,000-29,999	309	21%
30,000-39,999	294	20%
40,000-49,999	236	16%
50,000-59,000	117	8%
60,000-74,999	74	5%
75,000-99,999	29	2%
100,000-124,999	2	1%
125,000-149,999	11	.8%
150,000 or more	1	.1%
Source: U.S. Census 1990; Community Partner's Inc. Research 1995		

The numbers and percentages of individuals and families for whom poverty status was determined in 1990 are illustrated on the following table. The average poverty threshold determined by the Federal Government in 1989, for unrelated individuals was $6,310 and $12,674 for a family of four. These persons may require public assistance in order to meet

their housing needs. As such, they are an important consideration in the Comprehensive Planning process. The percentage of Big Lake residents determined to be below the 1989 threshold was significantly higher than that of Big Lake Township. However, the percentage of Big Lake residents below the average poverty threshold compared favorably to the cities of Monticello, Zimmerman and Sherburne County, which had 10.9, 8.0 and 7.7 percent of their respective populations below the average poverty threshold.

1990 LOW INCOME POPULATION				
	Individuals	Percent	Families	Percent
Big Lake	222	7.3	43	5.5
Big Lake Township	158	3.6	37	3.0
Sherburne County	3,213	7.7	553	5.1
Albertville	35	2.8	5	1.6
Elk River	770	6.9	184	6.1
Monticello	537	10.9	126	9.9
Zimmerman	108	8.0	22	6.5
Source: U.S. Census 1990				

SUMMARY POINTS:

X The topographical character of the lands in and around Big Lake is considered to be flat to gently rolling. There are no areas of steep slopes within the City or vicinity located within two miles of the corporate limits of Big Lake.

X There are a multitude of lakes, rivers and wetlands in the City and study area. The majority of wetlands are located in the northern part of the study area adjacent to the Elk, Snake and St. Francis Rivers. A large wetland complex exists in the northwest part of the Study Area in the vicinity of Thompson, Wood, Hidden, Eagle and Landis Lakes.

X The areas within the Elk River Watershed are identified as high priority wetland restoration areas due to the flood damage and high amount of sediment load that occurs within the River.

X Big and Mitchell Lakes are the largest water bodies within the study area and have been classified as Mesotrophic and Eutrophic in terms of their respective water quality. The water quality of Big Lake is relatively clear but is subject to change in its trophic status with relatively minor increases in nutrient loading. Mitchell Lake has a higher concentration of nutrients and is therefore more subject to algae blooms than Big Lake.

X The channel located between Big and Mitchell Lakes is man-made and was dug by hand during the 1930's. The lakes were land-locked water bodies until 1987 when an outlet structure was constructed which drains water from Big and Mitchell Lakes through Beaudry Lake and ultimately out to the Elk River.

X Big and Mitchell Lakes have a relatively small watershed however, there are currently twenty storm sewer inlets which carry storm water from adjacent development into the lakes. Both lakes are considered to be “seepage lakes,” which are very sensitive to change in trophic status with minor increases in nutrient loading and therefore tend to retain the majority of phosphorus, which enters them.

X Ground water within the study area is considered to be very hard and contains high concentrations of dissolved iron. The Sherburne County Comprehensive Water Plan identifies the soils within the study area as extremely vulnerable to water soluble contaminants including nitrates. The agricultural lands located south of the

City are some of the most heavily irrigated areas within Sherburne County. The combination of urban development, intensive irrigation and sandy, permeable soils has the potential to introduce pollutants such as phosphorus and nitrates into the aquifers, potentially affecting drinking water quality. Virtually the entire study area is identified in the Water Plan as having high to very high geologic sensitivity of the uppermost aquifer to pollution.

X The soils within the study area are generally characterized as sandy, highly erodible soils, which contain large deposits of sand, gravel and glacial till. The soil suitability for buildings and development is generally good to fair across most of the study area although pockets of poor (undevelopable) soils are present where wetlands exist and in association with other topographical depressions. There are also areas of the City, which have a high water table (the vicinity of Habitat Addition) where development potential is restricted.

X Due to the predominance of erodible soils within the study area, both agricultural and urban construction practices have the potential to negatively effect surface and ground water quality. Erosion control, surface water drainage and fertilizer practices must be carefully conducted within the study area to minimize ground and surface water degradation.

X Vast areas containing severe to moderate soil limitations for urban level development are located within the northern of the study area. These areas generally are located adjacent to the Snake, Elk and St. Francis Rivers and along the chain of lakes/wetlands that surround Thompson, Wood, and Hidden Lakes.

X The Sherburne County Biological Survey identifies four locations within the study area, which contain unique wildlife habitat. All of the unique wildlife habitat is identified within Big Lake Township. The major habitat areas are located in the vicinity of Thompson Lake; Eagle Lake, and along the Elk and Mississippi Rivers.

GEOLOGICAL SETTING AND TOPOGRAPHY

In Sherburne County, the present understanding is that the most extensive source of material making up the surficial-drift overlaying the bedrock was deposited during the Wisconsin stage (the last major glacial stage), specifically from the Superior Lake and then the Grantsburg sublobe. After the Grantsburg sublobe receded and its melt water drained,

the areas around Big Lake were left with parts of two major land forms: The Mississippi River Terraces and Anoka Sandplain.[1]

Mississippi River Terraces are level plains formed from sand deposited by streams that originated from the melting Grantsburg sublobe. At first, these streams shifted over the land along the present Mississippi River Valley, depositing plains of sand and gravel. However, after the sublobe had melted back from the region, the largest of these streams formed a well-defined channel between St. Cloud and Minneapolis and became the Mississippi River. Afterward, glacial melt water deepened the channel of the river and the existing flood plains of the river were left dry, forming broad and level river terraces.[2]

The Anoka Sand Plain was formed by large sand laden streams that formed as the Grantsburg sublobe melted. These streams deposited sand and gravel in broad, level plains. These sands generally covered till laid down earlier by the Superior lobe and the Grantsburg sublobe. The outwash plain ordinarily has a smooth relief, but there are a few ice block lakes, depressions, peat bogs and sand dunes.[3] Big and Mitchell Lakes are both considered to be ice block lakes.

The landforms in and around Big Lake are considered to be flat to gently rolling. There are no areas of steep slopes within the City or vicinity located within two miles of the corporate limits of Big Lake. With the exception of the northeast quadrant of the study area, the topography generally slopes from an elevation of 950 in the northwest (in the vicinity northwest of Hidden Lake) to 900 near the shores of the Mississippi River. The northeast quadrant of the study area contains the highest point (elevation 960), located on a hill, which lies adjacent to the St. Francis River. This part of the study area flows generally from north to south with surface water flowing to the St. Francis and Elk Rivers following a series of wetland complexes.

[1]Sherburne County, Comprehensive Park, Trail & Open Space Plan, 1996, p. 9.

[2]Ibid., page 7.

[3]Ibid., page 11.

INSERT TOPOGRAPHY MAP HERE

WILDLIFE HABITAT

The Sherburne County Biological Survey identifies four locations within the study area with unique wildlife habitat. The general locations of these wildlife habitat areas are identified on the aerial photograph on the following page. The most diverse wildlife habitat area is located in the vicinity of Strand, Hidden, Thompson and Wood Lakes. The areas generally located between the lakes consist of a mixture of cattail marsh, wet meadows, oak forest, and rich fen. These areas support northern pin oak, bur and white oak as well as trembling aspen wooded areas.

Another large wildlife habitat area is located along that part of the St. Francis River located southeast of County Road 5, in the vicinity of Eagle Lake. The area contains large expanses of oak woodlands and forests supporting bur and northern pin oak as well as raspberry, smooth sumac and red cedar shrub layers.

A smaller wildlife habitat area containing willow swamp, Oak Woodland, flood plain forest and wet meadow is located northeast of the City along the Elk River. This area supports bur and northern pin oak, silver maple and green ash wooded areas. In addition to the above, a small area of oak woodland is identified along the Mississippi River west of the intersection of County Road 11 and S.T.H. 25. Oak Woodland supports bur and northern pin oak as well as red raspberry, smooth sumac, prickly ash and red cedar shrub growth.

Rare wildlife animal species are identified as being found in several areas generally located north of Big Lake in the vicinity of the Thompson Lake areas and along the St. Francis and Elk Rivers. The following rare bird species have been identified in the aforementioned areas, American bittern, Red-shouldered hawk, Common moorhen, Sandhill Crane, Bald Eagle and Loggerhead shrike. The Plains pocket mouse, Blanding's turtle, Western Hognose snake and Bull snake have also been identified as well as the Uncas skipper butterfly.

VEGETATION

Much of the study area is used for agricultural purposes and therefore does not contain woodland massings with the exception of windrows or trees planted close to residential areas of the farmstead. The older, established residential neighborhoods within the City contain large over story trees, which enhance neighborhood appearance and aesthetics. The larger wooded areas are located adjacent to the rivers and lake/wetland complexes within the northern part of the study area. For example, areas adjacent to Hidden, and Thompson Lakes and the Rivers contain large wooded parcels.

INSERT AERIAL PHOTO HERE

WETLANDS/LAKES & RIVERS

There are a multitude of lakes, rivers and wetlands in the City and within two miles of the corporate limits of Big Lake. The Sherburne County Water Plan (1994) specifies that there are 227 water basins with 151 identified as protected wetlands located in the County. Within the study area, there are 19 Mn/DNR protected water bodies, most of which are lakes. There are few wetlands located south of TH U.S. 10 with the exception of those surrounding Keller Lake, a series of small wetlands located south of Fair Meadows Drive and a wetland complex located in Sections 28 and 29, Township 33 North, Range 24 West. The vast majority of wetlands are located in the northern part of the study area adjacent to the Elk, Snake and St. Francis Rivers. A large wetland complex exists in the northwest part of the Study Area in the vicinity of Thompson, Wood, Hidden, Eagle and Landis Lakes. A somewhat smaller wetland complex is also located in the northeast part of the study area between County Road 83 and 211th Avenue NW.

The Sherburne County Comprehensive Water Plan (1994) identifies areas within the Elk River Watershed as high priority wetland restoration areas. The Elk River experiences the greatest sediment load and causes the greatest amount of flood damage and public concern. In order to mitigate these conditions, improve wildlife habitat, recharge the surficial aquifer and reduce the amount of sediment and nutrient loading to the River, wetland replacement is viewed as a high priority within this watershed.

Surface Water Quality

The Minnesota Pollution control Agency's (MPCA) Stream Water Quality Management Classification identifies the Mississippi River as an "outstanding resource water." The Mississippi River is fully navigable while portions of the Elk and St. Francis Rivers allow canoe use during high water levels. The Snake River is of a purity that permits the maintenance of trout although it is not likely that trout are present at this time. Trout prefer well-shaded areas and water temperatures not over 72 degrees in the summer. This stream would currently provide only a marginal existence for trout.[4]

One of the most useful measures of a lake's water quality is its trophic status. The trophic status of a lake refers to the level of nutrient concentrations within the lake, and to overall lake productivity. The four major trophic levels are Oligotrophic, Mesotrophic, Eutrophic and Hypereutrophic. An Oligotrophic lake has the lowest level of nutrients; it is clear and

[4] Sherburne County Comprehensive Water Plan, Sherburne County Soil and Water Conservation Service, 1994, p. 46.

deep, with very little algae. Mesotrophic lakes have higher nutrient concentrations than Oligotrophic lakes, but the water is still relatively clear. Algae are noticeable in a Mesotrophic lake. A Eutrophic lake has high nutrient concentrations and heavy algae growth. Hypereutrophic lakes display the highest nutrient concentrations and the most algae. The water from these lakes is often characterized as “green” and can have a strong “odor.” Of the 227 water basins identified by the Mn/DNR, only 15 lakes have enough water quality information to identify their trophic status. The following is a listing of the trophic status for the lakes within the study area, as found in the Sherburne County Water Plan:

TROPHIC STATUS OF LAKES			
Lake	**Watershed**	**Acres**	**Trophic Status**
Big Lake	Elk River	251	Mesotrophic
Eagle Lake	Elk River	426	Eutrophic
Mitchell Lake	Elk River	170	Eutrophic
Thompson Lake	Elk River	100	Mesotrophic
Source: Sherburne County Water Plan, 1994			

1995 Lake Assessment Program for Big and Mitchell Lakes

The Minnesota Pollution Control Agency (MPCA) Water Quality Division undertook a Lake Assessment Program (LAP) in 1995 for Big and Mitchell Lakes. The Mn/DNR, Sherburne County Soil and Water Conservation District and Big Lake Community Improvement Association (BLCIA) worked with the to undertake the study. The LAP is designed to assist lake associations and/or municipalities in the collection and analysis of baseline water quality data in order to assess the trophic status of their lakes. The general work plan involves Association participation in the Citizen Lake-Monitoring Program. The study was conducted at the request of the BLCIA, whose members are interested in identifying sources of pollution to the lakes, characterizing the quality of the lakes, and developing a program to assist in lake management.

Big and Mitchell Lakes are land-locked lakes formed from ice-blocks that melted during the most recent glacial period. The lakes have a small watershed consisting of approximately 938 acres. The primary inlets to Big and Mitchell Lakes are several storm sewers (10 on each lake), which capture runoff from the surrounding watershed. The lakes have a man-made outlet, which drains from Mitchell to Beaudry Lake, and ultimately out to the Elk River.

At the time of the study (1995) the Sherburne County SWCD, estimated that urban and residential land uses account for about 84% of the land use in the watershed of Big and Mitchell Lakes. In 1995, there were 219 homes located around Big and Mitchell Lakes. Forty of the homes were classified as seasonal with the remaining 179 being year-round residences. All of the units are hooked up to the municipal sanitary sewer system.

The DNR Fisheries Office located in Montrose, Minnesota in Wright County manages the fisheries of Big and Mitchell Lakes. A fisheries management plan was prepared in 1983 and revised following the 1994 lake survey. The long-range goal for both lakes was to provide northern pike populations, and largemouth bass with the average size of angler caught fish being 2.0 and 1.5 pounds respectively. The primary species for management were identified as northern pike and largemouth bass but it is recognized that pan fish, particularly sunfish, comprise the largest portion of the fishery. Throughout the late 1960's until 1994, the lakes were stocked with northern pike and walleye. The DNR decided to discontinue walleye stocking in pan fish type lakes in the mid 1990's. No stocking of northern pike or largemouth bass is planned because adequate natural reproduction of these species is occurring in the lakes.

The LAP found that the 1995 water quality of Big and Mitchell Lakes is good compared to other lakes in the ecoregion (areas of Minnesota defined by soils, land surface form, natural vegetation and current land use).[5] Data gathered from representative, minimally impacted (reference) lakes within each ecoregion serve as a basis for comparing the water quality characteristics of other lakes. Big and Mitchell Lakes are located in the Northern Central Hardwood Forests ecoregion.[6] Of significance however, is that although the water quality is good at present, both Big and Mitchell Lakes are "seepage lakes" which are very sensitive to change in trophic status with relatively minor increases in the nutrient loading rates from any watershed or in-lake sources. These lakes tend to retain the majority of phosphorus that enters them therefore; it is essential to minimize phosphorus loading associated with development activities. As such, the City must carefully consider storm water management practices and the impacts of storm water outflows (currently 10 each on Big and Mitchell Lakes) to the lakes.

The LAP recommendation is that a lake management plan be developed to protect the water quality of the lakes. Such a plan should be developed cooperatively by a committee

[5] Lake Assessment Program for Big and Mitchell Lakes, MPCA, 1995, p. 2.

[6] Ibid., p. 2.

consisting of representatives from state agencies such as the Mn/DNR, MPCA, Board of Water and Soil Resources, local units of government and the BLCIA. The following activities should be included in a lake management plan:

1. Continue participation in the Clean Lakes Management Program to collect and analyze water quality data.
2. Implement an educational program targeted at residents, which explains lawn maintenance, shoreline protection and methods of lawn fertilization designed to reduce phosphorus loading into the lakes.
3. Develop an urban storm water runoff system that treats water prior to discharging into the lakes.
4. Strictly enforce shoreland setback provisions and limit activities within the watershed that change drainage patterns or alter wetlands.
5. Undertake a detailed examination of land use practices in the watershed to identify possible nutrient sources such as agricultural runoff, lawn fertilizer, storm sewer pipes and the like.
6. Implement best management practices (BMP's) in the watershed, which are land management activities used to control non-point source pollution.
7. Wherever possible, restore or improve wetlands within the watershed to reduce the amount of nutrients and sediments, which reach the lakes.

1998 Study - Treatment Options for Big Lake

In 1998 the City of Big Lake initiated a study of treatment options for Big Lake that evaluated three basic strategies to improve water quality. The three strategies include:

1. Watershed Source Control. This strategy limits the amount of pollutants, which are available for export form the landscape. For example, use of non-phosphate fertilizer is a source control that seeks to minimize the amount of phosphorus applied to the landscape. Other watershed source controls include street sweeping and yard waste ordinances which are designed to limit the amount of matter (dumping leaf and grass clippings or sand/salt) which can be swept into the storm sewer system and delivered into the lakes.

   The effectiveness of watershed source controls is difficult to measure due to the human behavior component. Potential long-term pollutant reductions are possible with implementation of modified lawn care practices however it is difficult to regulate the amount of phosphorus placement on lawns.[7]

[7] Treatment Options for Big Lake, S.E.H., 1998, p. 2.

2. Storm Water Runoff Treatment. This strategy seeks to reduce the amount of pollutants in the runoff stream prior to entering the pond/wetland or lake. Several potential storm water treatment devices can be employed under this strategy including:

   A. Storm Water treatment basins (NURP Ponds) consists of an open water pond that provides settlement of the pollutants prior to discharging into the water body. The key to these systems is finding the land available for installation in areas with existing development. NURP Ponds work well in conjunction with wetlands to remove soluble pollutants.

   B. Manhole or Catch Basin Treatment Systems involve installation of structures within the storm sewer system that treat storm water underground. One system is designed to remove larger sediment particles; the other incorporates filters to remove soluble particles.

   C. In-Lake Treatment. This strategy seeks to mitigate the impact of pollutants once they have entered the water body. This strategy includes chemical treatments that are applied to the lakes to minimize algae blooms and/or treat weeds, and also lake aeration methods.

The logistics of this option make application of chemicals difficult and there are issues of toxicity to plankton and the possibility of fish kills. Costs associated with the application of various chemicals vary and the benefits are often only short-term.

Whole lake or hypolimnetic (bottom water) aeration has been used to reduce internal phosphorus loading to lakes and avoid fish winterkill. However hypolimnetic aeration systems are expensive to purchase, install and operate.

Regardless of which strategy is used, water quality monitoring should be done to evaluate the water quality of runoff from developed areas. Sampling units can be placed in existing manholes or special structures can be built.

Flood Plains

Each of the lakes, streams and wetlands within the study area have individual flood plain elevations, many of which are not know at this time. The smaller water bodies are reviewed at the time of development to determine the ordinary-high-water (OHW) and 100-

year flood elevations associated with the particular wetland. The Mn/DNR is responsible to identify the OHW and flood plain elevations for public waters such as the larger lakes and rivers within the County. For both planning and engineering purposes, it is essential to know the OHW and 100-year flood elevations in order to ensure that basement elevations, roadbeds, grading and filling operations are not subject to inundation.

The City of Big Lake and Sherburne County participate in the Federal Emergency Management Agency (FEMA) National Flood Insurance Program, which allows residents to purchase flood insurance if structures are located within the flood plains identified by the map on the following page. Federal flood insurance is only available to property owners if the local unit of government participates with the program and administers a flood plain ordinance. Flood insurance is only available for those areas identified as flood zones on the FEMA map. If the water body is not identified on the FEMA map, insurance coverage is not available.

The known Flood plains of the lakes, rivers and streams within the study area are illustrated on the map on the following page.

INSERT WATER BODIES AND FLOOD PLAIN MAP HERE

Ground Water Quality

Ground water in Sherburne County is of the Calcium Bicarbonate type and is suitable chemically for most uses. It is very hard and contains high concentrations of dissolved iron. In heavily irrigated, and in developed areas nitrate and chloride concentrations are

increasing in the surficial aquifer.[8] According to the Ground-Water Appraisal Sand Plains Study done between 1976 and 1979, several places between the Elk and Mississippi Rivers, where irrigation has been practiced since the 1960's, show nitrate concentrations exceeding the limit recommended by the Minnesota Department of Health for drinking water.[9] The aquifers most greatly affected by nitrates in Minnesota are the surficial sand aquifer, the upper carbonate aquifer, and the Prairie du Chien-Jordan. Because the soils in Sherburne County are generally sandy and allow water to move easily through the Anoka Sand Plain Aquifer, the aquifer is extremely vulnerable to water soluble contaminants (nitrates are one of the most frequently identified). The Sherburne County Comprehensive Water Plan identifies virtually the entire study area as having high to very high geologic sensitivity of the uppermost aquifer to pollution.[10]

Irrigation is commonly used on marginal soils needing supplemental moisture in Sherburne County. Big Lake Township is one of five Townships within Sherburne County that irrigates more than 1,000 acres of land. The land from U.S. 10 to the Mississippi River in Clear Lake, Becker and Big Lake Townships are the most heavily irrigated. Soils located in these irrigated acres have rapid permeability rates, which can carry contaminants to groundwater and are classified as geologically sensitive lands.[11]

The combination of growth pressure, sandy soils and high levels of irrigation have the potential for serious impacts on ground water quality within the study area. Soils in the area between U.S. 10 and the Mississippi River have rapid permeability rates, which can quickly carry contaminants to groundwater. Also, studies dating back to 1976 indicate that nitrate and chloride concentrations are increasing in the surficial aquifer. Nitrate sources are associated with intensive irrigation, malfunctioning or failing septic systems and urban growth. There is concern over municipal water supplies showing increases in water-soluble contaminants. Other sources of ground water pollution are abandoned wells that are either not or improperly sealed, underground and aboveground storage tanks (27 in the Big Lake area)[12], failing septic systems, feedlots, illegal dumping of demolition debris, and

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[8] Sherburne County Comprehensive Water Plan, Sherburne County Soil & Water Conservation Service, 1994, p. 22.

[9] Ibid., p. 22.

[10] Ibid., p. 177, Map 5-19.

[11] Ibid., p. 29.

[12] Sherburne County Comprehensive Water Plan, Sherburne County Soil & Water Conservation

industrial/hazardous waste users/producers. Research of the MPCA Leaking Underground Storage Tanks (LUST) list indicated seven program site locations within the study area. Five of the sites have been cleaned and the files closed since 1988. Two sites within the study area had leaks discovered since June of 1998 and are still in the process of mitigating site impacts. The two current sites are Petersons Amoco (Leak ID# 11954) located at 401 Jefferson Boulevard and Mitchell Farm (Leak ID# 11559) located near the County Road 5 Bridge. Both sites are currently filed with the MPCA and are in the process of bringing sites into compliance with State standards. There may be additional leaking storage tanks within the study area outside of the known sites described above. Unfortunately, the vast majority of leaking storage tanks go undetected and therefore it is difficult to accurately assess ground water impacts.

Lake/ Stream Levels & Ground Water Quantity

The protection of lake and stream levels is an important issue especially during periods of water shortages. Stream flow levels are monitored by the Mn/DNR, which also has approval authority for permits to withdraw water. When stream flow levels fall below protected levels, withdrawals are not permitted. The Elk River has been assigned protected flow levels by the DNR.

Most of the lakes within the County are water table lakes and their level is climate dependent. Surface water conflicts in Sherburne County occur between the Mn/DNR and irrigators during periods of low flow. With the growth pressures occurring in the County, there will be more demand for water and conflicts are likely to continue, if not intensify in the future. As water levels decrease, the potential for pollution problems increases due to the concentration of pollutants in the available water source.

Pollution problems also occur during high precipitation periods and as of the result of changes in topography associated with urban development. Non-point source pollution is associated with storm water runoff and wind erosion, which causes soil and other materials to be washed or blown into surface waters. The rains or snowmelt, wash sediment containing nutrients, pesticides, salt and other harmful chemicals into public waters. The rapid runoff from new residential developments has at times overloaded drainage ditch systems designed for agriculture purposes. This situation is currently present in the northwest Big Lake near the Mitchell Farms development. Unauthorized connections made to the ditch systems by farmers and or other land owners also causes malfunction of the system and can lead to pollution problems. The long term impacts that current development patterns (utilizing private wells and septic systems) have on water quality

Service, 1994, p. 32.

within the County and study area also need to further examination to avoid pollution problems.

SOILS

Sherburne County can be characterized by its sandy, highly erodible soils deposited from melt waters of the Keewatin Glacier. They contain many large deposits of sand, gravel and glacial till suitable for mining.[13] A Cambrian sedimentary sequence is predominantly sandstone and underlies the glacial drift in the Southwest, Eastern and Southeastern part of Sherburne County.[14]

The Soils Map on the following page shows the main soil associations for Big Lake and the surrounding study area. A soil association is a landscape that has a distinctive proportional pattern of soils and corresponds to the geographic and topographic influences mentioned, as well as man's influences upon the land.[15] The generalized soils map indicates that the majority of the study area is classified as containing Hubbard-Mosford Association soils. The areas generally north of the Elk River are classified as Zimmerman-Seelyville Association soils. Narrow areas of Elk River Association Soils are located in the southernmost part of the study area and adjacent to the Mississippi River.

The soil associations and their respective characteristics that are commonly found throughout the study area are described below.

Hubbard-Mosford Association

[13] Sherburne County Transportation Plan, 1998, p. 4.

[14] Sherburne County Comprehensive Water Plan, Soil & Water Conservation Service, 1994, p. 10.

[15] Sherburne County, Comprehensive Parks, Trails & Open Space Plan, 1996, Appendix.

This association occurs as a sand plain 1 - 10 miles along the Mississippi River. Most of the association is nearly level to gently rolling, but moderate slopes surround the depressions and lakes, and steep terrace breaks occur along the Mississippi River. Hubbard/Mosford Soils are generally characterized as excessively drained with a surface of dark sandy loam, and rapid permeability in the underlying material. The dominant soils in this association are suited to general farming, but all are droughty. This is particularly true of the coarse-textured Sandberg soil found in this association. These soils have low available moisture capacity. Hubbard and Sandberg soil have rapid permeability. Consequently, they are highly susceptible to groundwater contamination. The dominant soils in this association are suited to general farming but are also very susceptible to wind erosion when unprotected.[16] Most of this area is still cropland, with much of it irrigated. The Sherburne County Comprehensive Water Plan indicates that the area of Big Lake Township located between the southern City limits and the Mississippi River has one of the highest rates of irrigation within the County.

Zimmerman-Seelyville Association

This association occurs predominantly north of the Elk River. Most of it is nearly level to undulating, but parts are rolling and hilly. The soils in this association are generally suited to farming; however, wind erosion can be very severe. Zimmerman Soils are typically considered to be excessively drained and droughty. Seelyville Soils are generally considered to consist of fine sands, nearly level or depressional and poorly drained.[17]

Elk River Association

This association occurs in limited areas along the Mississippi River and is characterized as flood plains. The soils properties are generally well to somewhat poorly drained with a surface texture of fine sandy loam.

INSERT SOILS MAP HERE

[16] Sherburne County Comprehensive Water Plan, Sherburne Soil & Water Conservation Service, 1994, p. 12.

[17] Sherburne County, Comprehensive Parks, Trails & Open Space Plan, 1996, Appendix.

SUMMARY POINTS

X The original land use pattern for Big Lake consisted of residential and commercial/recreation uses including a public beach/bath house and hotels/inns, which were located along the shores of Big Lake and adjacent to the Red River Trail (current U.S. 10). Residential development continues to occur surrounding community lakes and large wetland complexes.

X There is an increasing trend to convert seasonal lakeshore cabins to year-round residences on area lakes and rivers. Along with the conversions there is a tendency for people owning lots adjacent to Lakeshore Drive and Hiawatha Avenue to privatize the lakeshore for individual use. Although much of the shoreline of Big and Mitchell Lakes is actually dedicated to the public there are numerous instances where dock, boat lift and beach facilities are posted for private use.

X The Big Lake Economic Development Authority (BLEDA) has targeted numerous properties for removal of deteriorated and/or blighted structures. Funding programs administered through the BLEDA are utilized for redevelopment efforts to clear structures and provide for the re-sale of residential properties for new housing development.

X The majority of residential lots surrounding Big and Mitchell Lakes and many of the older plats within the community contain a significant number of small, substandard lots of record. Many of the older plats were designed for cabin and resort development that did not contemplate year-round residences or the size of structures typically built today. The redevelopment and/or improvement of substandard lots and structures is further complicated by Shoreland Management provisions which affect the majority of properties in the community.

X Residential development is occurring throughout Big Lake Township at levels of intensity that will make the introduction of planned urban services costly and difficult in the future. There are relatively few large tracts of land within the study area that are unencumbered by existing residential or commercial development. The areas generally south of U.S. 10, within the Township are an exception in that the lands are currently designated for agricultural use and large, open tracts of land still remain in tact.

X The City growth pattern is becoming elongated due to the development of residential subdivisions in the northwest and continued commercial/industrial expansion along U.S. 10. The City does not actively seek annexation of lands to

the community. Rather, annexation occurs as interested property owners petition the City for public infrastructure services.

- Commercial and industrial development is predominantly located along U.S. 10 and S.T.H. 25 although this type of development has been allowed to occur within Big Lake Township adjacent to County Roads.

- The character of farming in Sherburne County including much of the study area has changed. Irrigated farming is taking the place of some of dry land operations such as dairy and subsistence farming and is changing to more specialty and cash crops. The small family farms are giving way to larger corporate farms.

- According to the Sherburne County Assessor, 1999 market values for homestead properties within the City range from approximately $20,000 to $362,700.

- The 1998 figure for housing that is considered to be affordable and life-cycle housing is $128,000 and below. As of May 1999, 1,110 units or 70% of the housing stock within the City of Big Lake is considered to be affordable and life cycle housing.

- Since 1995, the inventory of housing units valued at $100,000 dollars and higher has increased from 11% to 32% of the total housing units within the City. Approximately 3% (51 units) of the homes in the City are valued higher than $150,000.

- As of June 1999, there are approximately 90 acres of vacant land within the City limits that has not received preliminary plat or site plan approval. The majority of the vacant parcels available for development contain access limitations due to the existing railroad right-of-way, wetlands and/or high water table issues.

- As of June 1999, there are approximately 380 acres of vacant land within the Urban Expansion District that are available for development.

BACKGROUND

Historically, Big Lake development patterns focused growth along major transportation corridors (U.S. 10, S.T.H. 25 and the BNSF Railroad) and surrounding community lakes. The predominant natural features within the community originally attracted recreational development of cabins and resorts along Big and Mitchell Lakes. Local businesses, which primarily catered to visitors and local residents, developed south of Big Lake along what is currently U.S. 10 and the BNSF Railroad. The railroad spurred the tourist/resort trades within the community by bringing people into the City and also allowed local businesses access to the Minneapolis market place.

Although the tourist/resort industry has diminished over time, the residential development pattern continues to emphasize development around the lakes and natural areas of the community. The U.S. 10 corridor continues to be the primary focus area for commercial and industrial development, which is expanding, in a westerly direction along the highway. The railroad no longer carries people to the community but continues to play a major role in commercial and industrial development as well as providing for the transportation of regional agricultural products throughout the Midwest and beyond. The railroad will provide for resurgence in passenger transportation through the planned future introduction of commuter rail services between St. Cloud and Minneapolis.

Patterns of land use presently existing in Big Lake and uses still developing show the influence of several important factors. These factors include the continuing existence of agriculture crop production south of the community; extensive number of water bodies such as wetlands, lakes and rivers; major regional road systems and the railroad which divide the community; and further commercial/industrial expansion along U.S. 10. The intensive development occurring throughout Sherburne County and specifically within Big Lake Township, also heavily influences development patterns and markets forces within the City.

EXISTING CONDITIONS - City of Big Lake

Since the 1987 Comprehensive Plan, the City of Big Lake has continued to develop and expand its corporate boundaries. The original Comprehensive Plan noted the following land use patterns present in 1986:

- The City is predominantly single family residential, both north and south of U.S. 10.
- To the north of U.S. 10, most of the land is already developed, especially west of Eagle Lake Road.
- East of Eagle Lake Road, the land uses are more varied. In addition to single family residential, this area contains schools, commercial and industrial uses, apartments and several large parcels which are currently vacant or under agricultural

production.

- X Commercial areas are clustered along both sides of U.S. 10.
- X The areas south of U.S. 10 are only partially developed, with two large cultivated parcels and many large vacant areas remaining.

In April 1999, a second existing conditions survey of the community was conducted. It is apparent by comparing the 1987 and 1999 maps that the majority of City expansion is occurring in the northwest part of the community, predominantly to provide more single-family residential housing opportunities. Other trends, which have emerged since 1987 are as follows:

- X There has been a conversion of approximately 90 acres of vacant/agricultural property to public (ISD 727) land.
- X There has been an increase in the amount of land developed for medium and high-density housing.
- X The majority of parcels within the older neighborhoods of the City have been subdivided and developed with □infill□ developments.
- X A mobile home park has been established in the southeast part of the community.
- X Industrial land available within the community has almost doubled since 1987.
- X Commercial land uses have expanded over the past decade.
- X The land supply available for development is extremely limited within the current corporate boundaries of the City.
- X Lands within the Urban Expansion District and the study area, with exception to the agricultural lands located south of U.S. 10, are being developed with intensive residential and commercial/industrial land uses. The development occurring outside of the City limits within the Township will make the introduction of urban services difficult and costly due to the fact that few large tracts of unencumbered lands remain.

The following table illustrates the amount of land area within the City, by use type existing in 1987 and as of April 1999.

CITY OF BIG LAKE - EXISTING CONDITIONS		
	1987	**1999**

Land Use	Area in Acres	% Land Developed	% of Total Land	Area in Acres	% Land Developed	% of Total Land
Single Family	356.9	41.4%	27.9%	770	51.7%	37.2%
Multi-Family	19.6	2.3%	1.5%	70	4.7%	3.4%
Commercial	43.5	5.0%	3.4%	85	5.7%	4.1%
Industrial	11.6	1.3%	0.9%	105	7.1%	5.0%
Public	87.6	10.2%	6.8%	155	10.4%	7.5%
Semi-Public	14.8	1.7%	1.2%	5	0.3%	0.2%
Agriculture	92.6	10.7%	7.2%	0	0.0%	0.0%
Right-of-Way	236.3	27.4%	18.5%	300	20.1%	14.5%
Total Developed Land	862.9	100%	67.4%	1,490	100%	71.9%
Vacant	416.4		32.6%	580		28.1%
Total Land Area	1279.3		100.0%	2,070		100.0%
Lakes/Wetlands	503.8			645		
Total City	1783.1			2,715		
Source: 1987 Big Lake Comprehensive Plan, NAC Inc.						

***** Note: In some cases, minor wetlands are being used as tillable agricultural land. Since it is not possible to calculate the exact area represented in this manner given the amount and nature of the wetlands, which change yearly, quantities of land, may be duplicated in the above table. For example, in wet years the amount of tillable agricultural land may be slightly less than that indicated as wetland areas would retain water and be impassable by farm machines, but despite the wet or dry nature of a wetland the classification and protection of such by Federal and State authorities remains unchanged.

EXISTING CONDITIONS - Big Lake Township (within Study Area)

A windshield survey of the area of Big Lake Township within the study area was conducted in April 1999 along with review of aerial photos to identify existing land use patterns. In general, residential development has tended to occur adjacent to County Roads and Highways as well as adjacent to natural features areas including lakes, rivers and in wooded locations. Areas developed with parcels of 10 acres or less are concentrated in the northeastern part of the study area and within the Urban Expansion District. Commercial and industrial uses are located primarily along U.S. 10, County Roads 43 and 73. Large tracts of land used for agricultural production are located south of U.S. 10 and in the north central part of the study area.

The following map illustrates the existing conditions present in the City of Big Lake and within the study area (that part of Big Lake Township located within about two miles of the City limits).

INSERT EXISTING CONDITIONS MAP HERE

The City and County operate under current Comprehensive Plans, which guide development patterns within the entire study area. Sherburne County and Big Lake Township work cooperatively to implement the Comprehensive Plan, which establishes land, use for those areas located outside of the City limits. A discussion of each entities land use policies is included herein because all three jurisdictions must work together to coordinate planning for the Urban Expansion Area. The Urban Expansion district is

currently utilized in place of an orderly annexation area, for those land areas immediately contiguous to the City where the future introduction of municipal utilities are anticipated to occur. It is important to note that the current Urban Expansion Area does not include all of the land areas that are capable of being served by the City wastewater treatment plant. As a consequence, land development within the future urban service area capacity of the wastewater facility has significant infrastructure implications for the City. This being the case, it is important to discuss the current land use plans for both the City and Big Lake Township as part of the Comprehensive Plan Inventory.

LAND USE - City of Big Lake

The current land use plan that the City is operating under was developed as part of the 1987 Comprehensive Plan. The land use plan categories are summarized as follows:

LR - Low Density Residential Use: This designation is guided for a gross density of 3 units per acre. The typical development will be single-family detached homes but other forms of attached housing would be considered under the PUD approach.

MR - Medium Density Residential Use: This designation is guided for a gross density of up to eight units per acre. The land uses would consist of a variety of housing types including single family, townhouses and apartments, but at lower overall densities than strictly apartment developments.

HR - High Density Residential Use: This designation is guided for a gross density of up to twenty units per acre. The land uses could include all housing types, but would typically be multi-story multiple family dwellings.

MH Mobile Home Use: This designation is intended solely for the existing trailer park in the City and will remain as an area where housing of this type can be made available.

C - Commercial Use: This designation is intended for all types of businesses which serve the public in retail sales and service, restaurants, offices and other similar uses.

I - Industrial Use: This designation is intended for warehousing, manufacturing, and other uses typically needing large parcels of land and larger buildings.

P - Park: This designation is intended to indicate potential future park sites at several locations intended to provide recreational open space within easy walking distance, a half mile or less, of every residence within the City.

SHERBURNE COUNTY LAND USE PLAN - Big Lake Township

The area of Big Lake Township within the study area has established land use districts outlined by the Sherburne County Comprehensive Plan. The County Comprehensive Plan Land Use Map districts are briefly summarized as follows.

Urban Expansion District: Sherburne County in cooperation with Big Lake Township and City identifies "Urban Expansion Districts" in its Comprehensive Plan. The purpose of the Urban Expansion District, pursuant to Sherburne County, is to provide locations on the fringes of incorporated cities for unsewered residential, commercial or industrial development. This development is intended to be located so as to facilitate possible future service by public sewer and/or water systems while in the meantime, allowing a semi rural development pattern with room for safe on-site sewage systems and private wells.

It is the intention of the County to involve the City and Township to the greatest degree possible in establishing zoning regulations and reviewing site plans and land subdivisions in this district, so that orderly, compact municipal expansion is not unduly hindered. The boundaries of the Urban Expansion Districts are determined by joint agreement of the affected City and Township. If agreement is not reached between the local jurisdictions, Sherburne County will establish the Urban Expansion District.[1]

The existing Urban Expansion District contains approximately 380 acres of land and is located along the northern and eastern boundaries of the City. The County administers zoning regulations within the Urban Expansion District unless the City and Township agree upon a zoning map and regulations for the District. In the event the entities agree on the zoning and development parameters within the Urban Expansion District, a joint agreement is drafted identifying the specific zoning district and requirements for the Urban Expansion Areas. The joint agreement then supersedes the County Zoning Map and Ordinance. Sherburne County has notified both the City and Township of the need to update the Urban Expansion District boundaries to accommodate anticipated growth and development to the year 2020.

Agricultural Area: This designation is intended for areas of the County that will be primarily agricultural, based on the land's farming productivity. Commercial and industrial development not related to farming will not be allowed in the Agricultural Area except in locations meeting specified criteria (if located adjacent to existing commercial or industrial

[1] Sherburne County Zoning Ordinance, 1994, p. 9-1.

development and along a county or local road, or in locations consistent with a City land use plan). If the ability to economically farm any portion of the Agricultural Area is reduced through loss of groundwater irrigation rights or restrictions on fertilizer use, strong consideration will be given to revising the plan to allow smaller residential lots. The density for this land use category is one dwelling unit per forty acres. The lot size standard for this district is 5 acres however, the minimum residential lot size in this district may be reduced to 2.5 acres if the site is wooded, in the interpretation of the County Planning Commission.

General Rural Area: This category of land use allows for relatively low-density housing development of rural areas of the County that is somewhat higher density than allowed in the Agricultural Area. Agricultural, residential and suitable commercial or industrial development is allowed in this land use category. The density permitted in this category is one dwelling per half of a Quarter/Quarter Section (20 acres). A residential lot may be as small as 2.5 acres if the lot is part of a plat designed and approved under the County subdivision regulations.

Commercial & Industrial Area: Suitable commercial and industrial development for this category is permitted provided that: it does not require city sewer, does not compel widening or paving of county roads, and does not adversely affect nearby housing or farming operations. Appropriate commercial developments are considered to be those that serve only the local, not countywide, market.

Scenic and Recreational River Protection Areas: Sherburne County will continue to enforce the zoning regulations previously adopted along the Mississippi and Rum Rivers. The minimum residential lot size in this category is four acres within the Scenic River Management Area and 2 acres in the Recreational River Management Area.

The following map illustrates the current Big Lake and Sherburne County land use plan designations for the entire study area.

INSERT LAND USE DESIGNATION MAP HERE

DEVELOPMENT CONSTRAINTS

The predominance of wetlands, lakes and rivers and other natural features including forests, wildlife habitat areas and slopes are amenities that people desire to live next to and among. These natural areas provide aesthetically pleasing living sites and neighborhoods. However, the natural amenities also provide development challenges/ constraints in terms of regulatory controls, resource management and preservation as well as physical and economic constraints. Water features are typically considered as development constraints either due to physical characteristics or the difficulty/costs associated with extending services either under or over the water body. The increasing concern for water quality and quantity as well as stringent environmental regulations also tends to constrain development options adjacent to, above, below or within water bodies.

Soil Suitability for Urban Development
The soils underlying the City are generally well suited for development. The soil types are combined into engineering capability units, which indicate their suitability for the purposes of constructing building foundations and roads.

Wildlife Habitat - Unique Sites
Areas that contain endangered species; unique habitat and/or archeological/historic sites are often protected from further development or severely restricted.

Physical Barriers
Human constructed features such as streets and railroads often act to contain land use and restrict access. In dividing and distinguishing sub areas within a community, such barriers become a vital consideration for logical planning. Physical barriers within Big Lake include the multiple lakes, wetlands, rivers, rail road, and major streets including County Highways, U.S. 10 and S.T.H. 25. Another physical barrier consists of subdivisions and lands that have been developed in a manner that does not allow for or inhibits redevelopment with the introduction of municipal infrastructure. The distance between the City's wastewater treatment facility and its corporate limits combined with the physical plant capacity is viewed as a barrier, which constrains the amount and location of community growth.

The long-term agricultural designation of Township lands between the southern City limits and the wastewater plant is also a physical barrier. It is typically most efficient both physically and fiscally to provide service to lands immediately adjacent to treatment facilities. However, the long-term agricultural designation does not allow for the logical extension of utilities thereby requiring substantial investment on the part of the City and arguably premature expansion of the system to accommodate its growth.

The impact of physical barriers may be seen to have both positive and negative aspects. On the positive side, barriers serve to define cohesive areas and to lend structure to the arrangement of land uses, often separating uses, which would otherwise generate conflict. On the negative side, barriers may artificially constrain development, and in separating developed areas, produce problems of access and circulation between related land uses.

The physical barriers within Big Lake are viewed as severe in that they separate the community into several rather isolated areas and make the installation of infrastructure costly and difficult to implement. Some of the physical barriers, such as major streets, are controlled by multiple jurisdictions outside that of the City of Big Lake. Other physical barriers exist due to rural development practices and policies that continue to allow

development under standards that are inconsistent with those of the City and that often limit redevelopment and/or the future introduction of urban services. The predominance of physical barriers will require that the City not only plan for land areas within the community, but also diligently work with Sherburne County and Big Lake Township to coordinate planning for those areas which may ultimately be serviced by Big Lake.

The map on the following page illustrates the location and type of the physical barriers described above.

INSERT PHYSICAL BARRIER MAP HERE

ANTICIPATED DEVELOPMENT

As discussed herein, development continues to expand along the U.S. 10 corridor as well as in the northwest parts of the community. Urban expansion is occurring based upon the desire of landowners to develop their properties at urban densities and to capitalize upon key locations adjacent to major transportation routes. The growth pattern is determined primarily by the private sector and accommodated by the City in order to recoup infrastructure costs. The City has not identified a planned urban service area or ultimate growth boundary but rather, continues to negotiate with the Township to allow annexation by ordinance on a site-by-site basis or within Orderly Annexation Areas.

The growth pattern of the community is anticipated to extend both east and west as the Elk River and extensive wetland and lake features limit further northerly expansion. Easterly expansion options are somewhat limited due to the fact that the majority of the urban expansion area has been divided into small parcels and a rural residential subdivision.

Easterly expansion will either require the existing parcels to be retrofitted with urban services or result in an irregular corporate border, which excludes the smaller developed Township lands. There will also be a need to review possible options for school expansion of the Independent School District 727 campus as the current facilities within the City are fully developed.

Westerly expansion and development of approximately 130 acres in the southeast part of the City will likely occur in the short term. The westerly expansion of the City may be further hastened by the potential rerouting of S.T.H. 25 from its current alignment to an area in the vicinity of County Road 81.

Southerly expansion is the logical growth area for the City based upon existing infrastructure, intense existing and planned residential and commercial development along S.T.H. 25 and areas between the Mississippi River and County Road 14. The pressure to develop from south to north will continue to intensify with the continued expansion within the City of Monticello. Issues surrounding the southerly expansion of the City will likely be the most politically charged issue that the City will face over the next two decades.

Agricultural operations are an important part of the local and regional economy and to the extent practical, should be retained. However, it is also necessary to realize the ground water and pollution impacts associated with the intensive irrigation required to produce crops within southern Big Lake Township. It is probable that the increased land prices coupled with development pressures within Sherburne County, from Big Lake and Monticello, will soon surpass the value of agricultural production within this part of the study area. There will be a concerted effort required by Sherburne County to preserve long-term agricultural lands in southern Big Lake Township. The current commercial designation of lands adjacent to S.T.H. 25 and the ability to develop commercial and residential uses along County Roads and wooded areas along with the desire of landowners to develop their properties will likely compromise the ability to maintain long term agricultural use south of the City.

It is important to allow for the continuation of farming activities as long as property owners wish to continue agricultural operations and provided contiguous field and land areas are maintained. It is also imperative from the City's perspective that land areas, which will someday be served with urban level services, remain undeveloped until such a time as they are annexed to the City. Where land is adjacent to existing development and public services are available, subdivisions will be beneficial in satisfying land/housing demand and completing street networks. It is therefore crucial that shared boundaries with Big Lake Township be jointly planned to accommodate future development that provides for adequate transportation systems and urban services.

The Urban Expansion Area policies of Sherburne County do not always go far enough to control development in a manner that allows for the smooth introduction of urban level infrastructure once those areas are annexed into the City. Also, while farmland preservation is admittedly important to Big Lake Township Officials, existing policies and practices do not appear to be sufficient to prevent conversion to non-agricultural uses. It is important to note that some Township property owners have contacted the City inquiring about annexation possibilities and have indicated that they are contemplating the future sale of their land for development. That being the case, and in consideration of the physical location of the City's wastewater treatment facilities, it is important for Big Lake to investigate future growth options within the context of this plan. Those growth options include, but are not limited to establishment of ultimate urban growth boundaries, establishment of urban and/or rural service areas and investigation of large annexations and/or consolidation with all or a part of Big Lake Township.

The map on the following page illustrates the location of potential land additions and border area property owners who have expressed an interest in development.

INSERT BORDER AREA PROPERTY OWNERS INTERESTED IN DEVELOPMENT MAP HERE

LAND USE CONTROLS

Existing Zoning - City of Big Lake

The City of Big Lake administers Zoning and Subdivision Ordinances, which have been amended numerous times since their initial adopted in 1977. The City adopted its first Shoreland Management Ordinance in 1991 and updated it in 1998. Development applications are reviewed by the Planning Commission and subject to approval by the City Council. The following paragraphs summarize each of the Zoning District classifications within the City of Big Lake.

A, Agricultural District: The purpose of this District is to protect low-density areas from urban sprawl and premature urbanization by limiting development to 1 unit per 5 acres. In addition, the District shall be seen as a means of reducing overall densities and of preserving selected natural areas and the general rural environment of the City.

R-1, One Family Residential District: The purpose of this district is to allow for single-family detached homes at a density of 3 units per acre. This district allows for the development of 12,000 square foot lots that are a minimum of 85 feet wide.

R-2, Medium Density Residential District: This district allows for the development of 1-9 unit dwelling structures or 10 or more dwelling units within a single structure with a conditional use permit. The minimum lot area is 20,000 square feet + 5,000 square feet for every dwelling unit over four units. This district is intended to provide for a variety of housing types including single family, duplex, townhome and apartments but at a lower overall density of up to eight (8) units per acre.[2]

R-3, High Density Residential District: This district allows for the development of structures containing ten (10) or more units (with a conditional use permit), at a density of up to twenty (20) units per acre[3]. The land uses could include all housing types, but would typically be multi-story, multi-family dwellings. The minimum lot area is 20,000 square feet + 2,000 square feet for every dwelling unit over ten (10) units.

R-4, Manufactured Housing District: This district allows for manufactured housing or mobile homes. The minimum area requirements for a mobile home park shall be eight (8) acres with a lot width not less than three hundred (300) feet. A minimum of five hundred (500) square feet per mobile home is required which includes definable play area and open space within the mobile home park. The maximum lot coverage for mobile home parks is limited to twenty-five (25) percent.

Business Districts:
The business districts are located primarily along either side of U.S. 10. All business districts within the City are subject to minimum site design and landscaping standards. The design criteria includes standards for exterior materials, dumpsters and trash handling, off-street parking, accessory structures, screening, outdoor storage, exterior loading areas and lighting from automobile headlights.

B-1, Office Business District: This district allows for business operations to be constructed on lots containing a minimum of 20,000 square feet and 100 feet of lot width. The B-2 zoned properties are generally located in the center of the community (near the intersection of U.S. 10 and S.T.H. 10) and on both sides of U.S. 10. These districts are generally located adjacent to R-1, R-2 and R-3 Zoning Districts.

B-2, Central Business District: This district is intended to allow for the development of

[2] Big Lake Comprehensive Plan, 1987.

[3] Ibid.

business operations that provide neighborhood retail sales/service and businesses supplying commodities or performing a service primarily for residents of the surrounding neighborhoods. The minimum lot area for this district is 20,000 square feet with 100 feet of lot width. There are currently no properties zoned with the B-1, Office Business District zoning classification.

B-3, General Business District: The general business district allows for business operations to be located on 20,000 square foot lots with 100 feet of lot width. This district classification is more general in nature and the majority of these lands are located adjacent to industrial zoned land. There is one B-3 Zone located east of the Lake of Big Lake and north of U.S. 10. The site is currently developed with an A & W, Fast Food Restaurant.

Industrial Districts:
All lands zoned Industrial are subject to overall building and site design requirements of the Zoning Ordinance. The design standards include exterior materials, landscaping, trash enclosures, off-street parking requirements, accessory structures, screening of mechanical equipment, outdoor storage, external loading, and lighting from automobile headlights.

I-1, Industrial Park District: There are currently five (5) areas with this zoning designation. The intent of this district is to provide for planned industrial park development. A Joint Powers Board made up of representatives from the City and Big Lake Township jointly administers three of the five areas. The minimum lot size is 40,000 square feet with 150' of lot width.

I-2, General Industry District: This district allows for manufacturing, assembly, packaging, compounding, treatment, or storage of materials as well as the uses permitted in the I-1 Zone. There are currently two I-2 zoned areas located in the community, both of which have frontage along the Burlington Northern Santa Fe Railroad. The largest I-2 district is subject to review and administration by a Joint Powers Board made up of representatives from the City and Big Lake Township. The minimum lot area required is 40,000 square feet with 100' of lot width.

PUD, Planned Unit Development District: The purpose of this designation is to allow for variety in site design and a mix of land uses. The PUD allows a departure from the strict application of required setbacks, yard areas, lot sizes and other performance standards to create a more efficient development, which retains natural features or other public amenities. Density transfer is permitted in order to accomplish clustered site design. Uses within the PUD may include only those uses associated with the general land use category shown for the area on the official Comprehensive Land Use Plan.

SOD, Shoreland Overlay District: The purpose of this district is to regulate the subdivision, use, and development of the shorelands of public waters. The Shoreland Overlay District regulations are based upon Rules promulgated by the Minnesota Department of Natural Resources (Mn/DNR), requiring communities to adopt regulations to protect the shorelands of public waters. The City of Big Lake has administered Shoreland Management regulations since 1991. Public waters of the City have been classified by the Mn/DNR based upon their size, depth, habitat, miles of shoreline and development patterns of the lakeshore as follows:

X *Natural Environment Lakes* are generally small, often shallow lakes with limited capacities for assimilating the impacts of development and recreational use.[4] Due to the environmental sensitivity of these waters, the development restrictions are most restrictive for Natural Environment Lakes.

X *Recreational Development Lakes* are generally medium-sized lakes of varying depths and shapes with a variety of landform, soil, and groundwater situations on the lands around them. They often are characterized by moderate levels of recreational use and existing development and often have capacities for accommodating additional development and use.[5] The development restrictions for this category of lakes are moderate.

X *General Development Lakes* are generally large, deep lakes or lakes of varying sizes and depths with high levels and mixes of existing development. These lakes often are extensively used for recreation, are typically heavily developed around the shore,[6] and generally have the least restrictive standards for development.

The public waters located within the study area, and their respective Shoreland Management Classifications are identified in the following table. The locations of Shoreland Districts as well as the designation of various other districts within the City are identified on the Zoning Map, which follows the table.

[4]MN Department of Natural Resources, Statewide Standards for Management of Shoreland Areas, 1989.

[5]Ibid, A-1.10

[6]Ibid, A-1.10

Lake	Class.	I.D.	Size	O-H-W	Location		
					Twp.	Rng.	Sec.
Beaudry Lake	NE	710062	13 acres	925.30	33	27	18
Beulah Pond	NE	710101	22 acres		33	28	24
Big Lake	GD	710082	251 acres	927.90	33	28	24
Birch Lake	RD	710057	149 acres		33	27	11
Blacks Lake	RD	710097	27 acres	927.90	33	28	24
Bucks Lake	NE	710093	27 acres		33	28	11
Eagle Lake	GD	710067	426 acres	925.00	34	27	32
Hidden Lake	NE	710094	72 acres		33	28	11
Keller Lake	GD	710083	66 acres	926.10	33	28	25
Kreber Lake	NE	710070	36 acres		34	27	18
Landis Lake	NE	Unknown	Unknown		34	28	14
Lake Mitchell	GD	710081	170 acres	927.90	33	28	24
McDowell Lake	NE	710086	36 acres		34	28	24
Preusse Lake	NE	710063	50 acres		33	27	21
Strand Lake	NE	710095	22 acres		33	28	11
Thompson Lake	NE	710096	100 acres		33	28	14
Wood Lake	NE	710098	67 acres		33	28	15
Elk River	Agricultural River				Township		
Mississippi River	Scenic & Wildlife District				Township		

St. Francis River	Forested River	Township
Snake River	Forested River	Township
Source: Sherburne County Comprehensive Water Plan, 1994; Sherburne County Zoning Ordinance July 5, 1994 (*Amended 12/3/98)*		

INSERT BIG LAKE CITY ZONING MAP HERE

The following table summarizes all of the established zoning districts along with their minimum lot size, width, setback, building height, and percent coverage requirements, and is intended as a general reference.

SUMMARY OF ZONING DISTRICT CLASSIFICATIONS & REQUIREMENTS					
Zoning District	District Classification	Min. Lot Size	Min. Lot Width (Interior)	Principal Structure Setbacks (ft) F S-I S-C R	Principal Building Height/ Coverage
A	Agricultural	--	--	--	--
R-1	One Family Residential	12,000 *9,000	85 feet *60 feet	30 10 30 30	35 feet
R-2	Medium Density Residential	20,000 + 5,000 sq. ft. for every dwelling unit over (4) units	100 feet	30 30 30 30 Collector/m.Art. 45 Int./Prin. Art. 50	35 feet
R-3	High Density Residential	20,000 + 2,000 sq. ft. For every dwelling over (10) units	100 feet	40 30 40 30 Abutting R-1: 50 40 40 40 Collector/m. Art. 50 Int./Prin. Art. 80	35 feet
R-4	Manufactured Housing	8 ac. / mobile home pk	300 feet	25 Abutting Ag or Res 75	--
B-1	Office Business	20,000	100 feet	30 10 30 20	25 feet
B-2	Central Business	20,000	100 feet	30 10 30 30	35 feet
B-3	General Business	20,000	100 feet	30 10 30 30 Adj. R-1/R-2 30 30 30 30	35 feet
I-1	Industrial Park	40,000	150 feet	40 20 40 20 Adj. R-1/R-2 60 40 40 60	45 feet 30%
I-2	General Industry	40,000	100 feet	40 15 40 30 Adj. R-1/R-2	

				50 50 50 50	
PUD	Planned Unit Dev.	--	--	--	--
SOD	Shoreland Overlay	--	--	--	--

* Platted before 9-13-79 (**See Zoning Ordinance for Accessory Structure, Parking and Shoreland District Requirements)**

Sherburne County Zoning - Big Lake Township (within Study Area)

Sherburne County administers Zoning, Shoreland, Flood plain, Subdivision and other development related ordinances within that part of the study area that is Big Lake Township. The current County Zoning Ordinance is dated July 5, 1994 as amended December 3, 1998. The following zoning district provisions apply to the study area outside of the Big Lake corporate limits.

Agricultural Use District: The purpose of the Agricultural District is to preserve for farming those locations that have soils which, when property managed, are capable of high crop yields, to prevent scattered non-farm growth, and to protect from deleterious influences those farms locations that have high investments in buildings, equipment or irrigation, and to stabilize increases in public expenditures for such public services as roads and road maintenance, police and fire protection, and schools. Lot sizes for residential units are one per 1/4, 1/4 Section, or 40 contiguous acres +- in areas that are not wooded. The minimum lot dimensions for all land uses are 300 feet in width and 300 feet in depth. Permitted uses include agriculture, single-family homes, parks and open space areas, and communication towers. Conditional uses range from farm related uses to commercial day care, public buildings, commercial kennels, retail nurseries, airports, churches, school bus services, oversized garages, to airports and cluster housing development in wooded areas.

Cluster housing development in wooded areas is listed as a conditional use in the Agricultural District provided the following conditions are met: The average lot size shall be 5 acres with a minimum size of 1 acre with a minimum width of 125' and minimum depth of 200'. The applicant must also demonstrate that the proposed lots and streets will minimize intrusions on rural scenery by demonstrating that an effort has been made to site houses in and/or adjacent to wooded areas instead of in the middle of open fields.

General Rural District: The purpose of this district is to provide locations for agriculture, agricultural-related development, and housing on lots without public sewer or water services. Under certain conditions, housing in the General Rural District ma be located on lots smaller than otherwise permitted so as to take advantage of wooded sites and/or soils that are not especially well suited for row crop production. A Conditional Use Permit is required for lot sizes smaller than normally permitted. The minimum lot size for unplatted lands is 20 acres, Standard & Simple Plats is 2 acres and Cluster Plat is 1 acre. The Cluster Plat Density is 2.5 acres of eligible land as described by the Ordinance. A

buildable lot that is not connected to a public or shared sewage treatment system is 40,000 square feet. For cluster plats or those with shared or public sewage treatment systems, the buildable lot size is 20,000 square feet. The lot width requirements are 200 feet wide by 300 feet deep (if on private individual septic systems) and 125 feet wide by 200 feet deep if connected to public or shared sewage treatment systems.

Commercial Use District: The purpose of this district is to provide locations for retail and service businesses. This district is intended to be located along a State or Federal Highway, County Road or County State-Aid Highway. The permitted uses range from retail sales business to shopping centers, motels, office buildings, restaurants and automobile service stations. Conditional uses include seasonal businesses, vehicle, boat and farm implement sales, auto repair shops, permanent government structures, pawnbrokers and communication towers. The minimum lot size is 10 acres or 22,500 square feet if platted with a minimum width and depth of 150 feet.

Industrial Use District: The purpose of this district is to provide locations for industrial development adjacent to existing industrial development and along a federal, state county or local road or in locations consistent with a City land use plan as established in the Urban Expansion Zone. Permitted uses include manufacturing, processing, treatment or assembly of products, offices, warehousing, wholesale businesses, research and development, restaurants, athletic clubs, communication towers and agriculture. Conditional uses include single-family housing, contractor's office, auto repair shops, temporary businesses and pawnbrokers. The minimum lot size is 10 acres or 30,000 square feet if platted. The minimum lot dimensions are 150 feet wide by 200 feet deep.

Urban Expansion District: The purpose of the Urban Expansion District is to provide locations on the fringes of incorporated cities for unsewered residential, commercial or industrial development. This development is intended to be located so as to facilitate possible future service by public sewer and/or water systems while in the meantime, allowing a semi rural development pattern with room for safe on-site sewage systems and private wells. Permitted uses include agriculture, single family housing on parcels at least 20 acres in size, and parks. Conditional uses range from single family housing in cluster plats, multiple-family residential buildings to commercial and industrial development. Development within this District shall be consistent with the applicable City plans for the land use, road rights-of-way, and drainage; otherwise, development shall meet the requirements of the Sherburne County Subdivision Ordinance. Housing density on land platted into city sized lots but not yet served by the City are determined jointly by the City and Township. Otherwise, the maximum density permitted is one dwelling unit per acre and the development shall meet the cluster plat requirements of the County Subdivision Ordinance. Minimum lot size and dimensions are to be consistent with those previously

approved jointly by the City and Township; otherwise, the minimum lot size shall be 20,000 square feet for residential lots.
Any land parcel in the Urban Expansion District that is not jointly guided by the City and Township land use plan, and was not previously zoned for business or industrial use shall be regulated for housing development under the County cluster plat regulations. Cluster plat regulations do require that 50% of the land be maintained as open space with a 1 acre lot density. The minimum lot size for this district are 20 acres for unplatted single family development, the City residential lot size, or 20,000 square feet for cluster plats, 0.5 acres for commercial development and 2 acres for industrial or other development types.

Mississippi Wild and Scenic River District: This district identifies certain parts of the Mississippi River as possessing outstanding scenic, recreational, natural, historic and scientific values. The Wild and Scenic Rivers Program is an outgrowth of federal, state, and local efforts to protect certain Minnesota rivers, which possess these attributes. There are detailed management plans and regulations within this district that specify permitted and non-permitted uses. The upper third of the Mississippi River in Sherburne County is classified as Scenic and the lower two thirds (the part of the river within the study area) is classified as Scenic. Standards and criteria are established for affected land uses within this district and the local unit of government must adopt land use ordinances complying with these standards and criteria.

INSERT SHERBURNE COUNTY ZONING MAP HERE (BIG LAKE TOWNSHIP)

HOUSING

The City of Big Lake initiated a comprehensive housing study in 1995 to evaluate the housing stock and housing needs of the city, develop a coordinated strategy to improve the condition of the existing stock, and to promote new housing opportunities for both rental and owner occupied markets. The 1995 Big Lake Housing Strategy Plan prepared by Community Partners Inc. is adopted as an addendum to this Comprehensive Plan. A summary of the major elements of the Housing Strategy Plan is provided as follows:

- 52% of Big Lake's households have two or less persons.
- Big Lake's average household size is 2.58, which is consistent with the national average.
- 59% of Big Lake households are married couple families.
- 22% of Big Lake's households are individuals living alone.
- A significant portion of Big Lake's housing stock was built prior to 1950. While many of the older dwellings have been well maintained, several areas of the community have high concentrations of deteriorating, substandard conditions.
- A 1995 inventory of housing conditions within the City found that 80% (886) of the units were in standard condition; 17% (192) were substandard and 3.0% (32) of the housing units were found to be dilapidated.
- In 1995, there were 219 homes located around Big and Mitchell Lakes. Forty of the homes were classified as seasonal with the remaining 179 being year-round residences

POPULATION BY HOUSEHOLD SIZE	
Number of Persons in Household	Number of Households
1	393
2	362
3	299
4	290
5	105
6	21
7 or more	2
Total	1,472
Source: U.S. Census 1990, Community Partner's, Inc. Research 1995	

POPULATION BY HOUSEHOLD SIZE OWNER AND RENTER OCCUPIED		
Number of Persons in Household	**Number of Households**	
	Owner Occupied	Renter Occupied
1	280	113
2	306	56
3	236	63
4	247	43
5	94	11
6	13	8
7 or more	1	1
TOTAL	1,177	295
Source: U.S. Census 1990, Community Partner's Inc., Research 1995		

BIG LAKE

HOUSEHOLDS BY TYPE		
Married Couple Families	868	59%
Headed by Male	60	4%
Headed by Female	131	9%
Non-Family	90	6%
Living Alone	323	22%
TOTAL	1,472	100%
Source: U.S. Census 1990, Community Partner's Inc., Research 1995		

A breakdown of the age of Big Lake's housing stock is provided in the following table.

BIG LAKE HOUSING UNITS BY YEAR BUILT			
Date	# Dwellings	% of Total Units 1995	% of Total Units 1998
Pre 1939	223	20%	15%
1940-1949	79	7%	5%
1950-1959	33	3%	2%
1960-1969	112	10%	6%
1970-1979	221	20%	15%
1980-1989	246	22%	17%
1990-1995	196	18%	14%
1996-1998	379	-	26%
TOTAL	1,489	100%	100%
Source: U.S. Census 1990, City of Big Lake Building Officials Reports			

* The total number of dwellings in the table above does not include 105 owner occupied mobile homes located in Big Lake Estates. The information does include mobile homes located on lots in the community and not within Big Lake Estates.

BIG LAKE MARKET VALUE FOR HOMESTEAD PROPERTIES				
Price Range	# of Homes 1995	% of Total 1995	# of Homes 1999	% of Total 1999
$20,000-30,000	22	2%	52	3%
$30,000-40,000	32	3%	23	2%
$40,000-50,000	88	8%	43	3%
$50,000-60,000	100	9%	80	5%
$60,000-70,000	177	16%	100	6%
$70,000-80,000	321	29%	125	8%
$80,000-90,000	166	15%	283	18%
$90,000-100,000	78	7%	370	23%
$100,000-125,000	81	7%	387	25%
$125,000-150,000	23	2%	65	4%
$150,000 +	22	2%	51	3%
Source: Sherburne County Assessor				

SUMMARY

X The City of Big Lake has developed around and amongst several lakes and large wetland complexes which have provided natural settings for residential neighborhoods. The majority of shoreline areas adjacent to the numerous lanes have been developed with single family homes. There are pockets of wooded areas generally located around the water bodies and within the older residential neighborhoods. Commercial and industrial uses are located in the central part of the community adjacent to U.S. 10 and the Burlington Northern Railroad. The majority of land areas just outside of the City corporate limits are used for rural residential, agriculture and farming operations.

X The City of Big Lake operates under the Plan A form of Government. The community is represented by a Mayor/Council form of government consisting of four Council members which are elected at large and the Mayor, who also votes on the City Council.

X Fire services are provided to the City, Big Lake Township and part of Orrock Township by a City volunteer fire department consisting of thirty individuals (including the Fire Chief). The City Police Department is connected to City Hall and consists of seven full time officers (including the Police Chief), one part-time officer and eleven reserves. Emergency (EMT) services are provided by Monticello/Big Lake Community Hospital[1] which serves both the City and Big Lake Township.

X Independent School District 727 has district offices, one elementary (K-4), a middle school (5-8) and a senior high school (9-12) located on a 135-acre campus within the City of Big Lake. ISD 727 encompasses approximately 58 square miles, including the City of Big Lake, Big Lake Township, and part of Orrock Township.

X The Big Lake Park system is comprised of eleven parks consisting of approximately 84.36 acres (53.26 acres of which is upland with the remaining 31.1 acres consisting of low areas, wetlands and lakes). The City has approximately 2.75 miles of existing paved trails/sidewalks with an additional 3 miles of paved and gravel trails planned for the Shores of Lake Mitchell development.

X The majority of the City is served by a municipal water system consisting of four wells and two water towers. The City's domestic water supply is dependent upon

[1]Monticello/Big Lake Community Hospital, 1013 Hart Blvd., Monticello, MN 55362.

groundwater. As development occurs, new mains are extended into the developments.

X During the 1980's, storm sewer was provided where necessary and in conjunction with the installation of sanitary sewer, water and associated road restoration projects. However, there are still areas of the City where the high water table complicates and/or restricts development from occurring due to poor surface drainage.

X Prior to 1981, Big Lake was an unsewered lake community serviced by individual septic systems. A wastewater treatment facility was put on line in 1981(originally designed to provide service for 3,800 people), which operates via gravity flow and the use of several lift stations that pump sewage to the pump station located on Ormsbee Street. From there, sewage was pumped to the treatment plant located two miles south of the City, and the treated water ultimately discharges into the Mississippi River. The facility was expanded in 1997 to bring the system into compliance with new Federal regulations. A further facility expansion occurred in 1999 to provide service for a population of approximately 7,000 to 8,000 people. The design year to reach this population will actually depend upon the rate of growth however it is anticipated that the capacity will accommodate growth through 2010.

X The North Star Corridor, a 70-mile transportation corridor which runs along U.S. 10/47 from downtown Minneapolis to St. Cloud, is the fastest growing corridor in the state and has been identified by Mn/DOT as one of the corridors with the highest potential for successful commuter rail service. The intersection of TH 25 and Eagle Lake Road in the City of Big Lake has been identified as one of twelve potential station locations. The Northstar Corridor Commuter Rail would have inter-modal connections to existing bus service within the corridor and to the future Hiawatha Light Rail Transit (LRT) Corridor. The Hiawatha Corridor continues to the Minneapolis/St. Paul Airport and the Mall of America.

X The condition of City streets varies and many of the older areas of the community have narrow roads without curb and gutter. Newer subdivisions approved within the past ten years, have been developed with roadways meeting City design standards including width, curb, gutter and storm sewer.

X The Sherburne County Transportation Plan indicates that there is a need for a north-south collector route be located near the west municipal boundary. The route is needed to serve the developing areas of Big Lake and provide linkage to U.S. 10

and the Mississippi River crossing at Monticello.

X In Sherburne County, the major sources of truck traffic are the movement of aggregate materials from area quarries, movement of agricultural commodities, and year-round movement of commodities and manufactured goods by over-the-road trucks.[2] Routes that are heavily used by trucks include U.S. 10 and TH 25. Residential land uses located adjacent to these regional facilities raise issues of incompatible land use, pollution and noise control.

X As the community continues to develop, and as of the result of the proximity of lakes/rivers to regional transportation routes, there is increasing conflict between local and regional traffic. Traffic congestion occurs along U.S. 10 due to the large number of direct access points and close proximity of signalized intersections. Increasing numbers of accidents are occurring at non-signalized intersections along U.S. 10 including the intersection of County Road 43.

X Many of the older developments in Big Lake have narrow rights-of-way (ranging from 40 to 50 feet) than the customary 66 feet, which leave little room for on street parking, snow removal and pedestrian/bicycle traffic.

X The lack of community trails, especially within the older parts of the community where narrow roads and structures with non-conforming setbacks predominate, is increasing safety concerns for pedestrian and bicycle traffic.

X There are areas of the community where the combination of limited right-of-way and topography (raised lots), severely limit the constructed street width. For this reason, a few street will have to remain as narrow as 22 feet. Most of these are narrow, dead end roads which actually functions more as extended driveways.[3]

X The design of the U.S. 10 and S.T.H. 25 intersection is not adequate to allow for full turning movements of large trucks. As a result, traffic delays occur and some truck traffic is beginning to inappropriately utilize residential streets to access U.S. 10 at more convenient locations.

X A major transportation/land use issue facing the City concerns the increasing

[2] Sherburne County Transportation Plan, 1997, p. 17.

[3] 1993 Street Study for Big Lake, S.E.H., p. 6.

amount of traffic that flows through residential areas due to the lack of adequate road systems in and surrounding newer, developing areas of the community.

X The possibility of a S.T.H. 25 bypass around the City has the potential to mitigate problems with the current U.S. 10 intersection and the resulting pollution and noise problems associated with the highway. However, careful consideration and land use planning will be required to maintain the economic viability of the downtown commercial area. The City will need to work closely with Sherburne County and Mn/DOT on any future planning efforts associated with a S.T.H. 25 bypass.

CITY GOVERNMENT

Big Lake City offices are located in downtown Big Lake approximately one block north of U.S. 10 and east of Lake Street. The City of Big Lake operates under the Plan A form of Government. The community is represented by a Mayor/Council form of government consisting of four Council members which are elected at large and the Mayor, who also votes on the City Council. The City employs twenty-five full-time (including the Police Department) and six part-time staff which provide a range of services to its residents including administration, finance, engineering, planning, parks, building inspections, economic development, housing assistance, police and fire protection.

Fire services are provided by a volunteer fire department consisting of thirty individuals (including the Fire Chief). The Big Lake Fire Department is located at 20243 County Road 43 and provides services to the City, Big Lake Township and parts of Orrock Township. The fire rating for the City of Big Lake is 6. The City Police Department is connected to City Hall and consists of seven full time officers (including the Police Chief), one part-time officer and eleven reserves. Emergency (EMT) services are provided by Monticello/Big Lake Community Hospital[4] which serves both the City and Big Lake Township. Community recycling services are provided by Ace Solid Waste Inc., which collects newsprint, glass, tin cans, plastic, mixed paper, cardboard, telephone books, magazines, aluminum cans and textiles.

Economic Development

The City of Big Lake and Big Lake Township formed the Big Lake Economic Development Authority and entered into a joint venture to develop a new industrial park within the City. The Big Lake Industrial Park is a sixty-eight (68-acre) parcel located west of Preusse Lake and north of U.S. 10, in the eastern part of the City. The industrial park is serviced by

[4]Monticello/Big Lake Community Hospital, 1013 Hart Blvd., Monticello, MN 55362.

public sewer, water and storm sewer utilities. Financial incentives are offered to private developers to subdivide and construct industrial facilities within the park.

The map on the following page illustrates the location of various community facilities within Big Lake.

INSERT COMMUNITY FACILITIES MAP HERE

SCHOOLS

Independent School District 727 has district offices, one elementary (K-4), a middle school

(5-8) and a senior high school (9-12) located on a 135-acre campus within the City of Big Lake. ISD 727 encompasses approximately 58 square miles, including the City of Big Lake, Big Lake Township, and part of Orrock Township. As of May 7, 1999 figures for school year 1998/99 indicated 691 elementary (K-4), 512 middle school (5-8) and 415 senior high (9-12) students were enrolled in District 727 schools.[5] River Crest Christian School (a K-6, private/parochial school) is located in the southern part of Big Lake Township (near the intersection of County Road 11 and S.T.H. 25), and attended by approximately seven students from the City of Big Lake. Heritage Montessori School (K) has 50 students enrolled at the Big Lake location.

The following table illustrates the number of students from each political jurisdiction, attending ISD 727 schools during the 1998/99 school term and the respective taxes payable to the District.

Taxes Payable in ISD 727 for School Term 1998/99				
Jurisdiction	Taxes Payable	# of Students	% of Students	Taxes Payable per Student
City of Big Lake	$1,374,400.00	942	45%	$1,459.00
Big Lake Township	$783,041.99	646	31%	$1,212.14
Orrock Township	$447,005.72	472	22%	$ 947.05
Becker Township	$60,021.28	37	2%	$1,622.20
Source: Independent School District 727; Sherburne County Assessor				

The table above does not include the respective Education Homestead Credit which is paid to the District by the State of Minnesota, based upon specific criteria applicable to each local government jurisdiction. The Education Homestead Credit amounts for each jurisdiction are as follows: City of Big Lake ($302,551.20); Big Lake Township ($224,621.62); Orrock Township ($179,151.43); and Becker Township ($14,889.09).

The Big Lake School District has experienced tremendous growth in enrollments during the past several years. The continuing development and population growth occurring in the City and Township has impacted the School District which is having difficulty planning for and providing staff and facilities to accommodate ever changing enrollment. The District is in the process of attempting to reduce its budget for the 1999/2000 school year and has

[5] Sherburne County Website, http://www.co.sherburne.mn.us/eduinformal.htm.

opted for about $330,000 in cuts so far. There is anticipated to be a budget shortfall of $73,000 dollars for the 1999-2000 school year budget. The community failed to support a 1998 excess levy referendum which when combined with the enrollment growth anticipated will result in the budget shortfall. The District is looking toward further cuts in staff, maintenance, technology support in addition to a $500,000 cut in textbooks and other capital expenditures that were made during the summer of 1998.

A map illustrating the boundaries of ISD 727 is located on the following page.

INSERT ISD 727 SCHOOL DISTRICT BOUNDARY MAP HERE

PARKS AND TRAILS

The Big Lake Park system is comprised of eleven parks consisting of approximately 84.36 acres (53.26 acres of which is upland with the remaining 31.1 acres consisting of low areas, wetlands and lakes). The City has approximately 2.75 miles of existing paved

trails/sidewalks with an additional 3 miles of paved and gravel trails planned for the Shores of Lake Mitchell development. In addition, there are a number of public street right-of-ways that connect to both Big Lake and Lake Mitchell and a significant amount of the shoreline of these two lakes is publicly dedicated land. City Parks function to provide recreation amenities, open space and public access to the lakes.

BIG LAKE CITY PARK SYSTEM		
Beaudry Lake Park	15 acres	Playground
Beaudry Estates II (Park/Greenway)	1 acre	No Improved Facilities
Big Lake Senior Apartments	2.06 acres	No Improved Facilities
Brown□s Square	.2 acres	Gazebo, paved trail, monument
Lake Ridge Second Addition Park	5 acres	No Improved Facilities
McDowall Oaks	10 acres	No Improved Facilities
Mitchell Farms Second Addition Park	6 acres	Irrigation system No Improved Facilities
Peterson□s 3rd Addition Park	.8 acres	No Improved Facilities
Shores of Lake Mitchell First Addition Park	5 acres	Playground
Shores of Lake Mitchell Third Addition Park	31.3 acres	11,000 feet of paved trails and 5,000 feet of gravel trails
Lakeside Park	8 acres	Public beach; boat landing; fishing pier; play equipment; benches, walkway, picnic shelter and paved parking lot.
Source: City of Big Lake, NAC Inc.		

Big Lake Township contains Lions Park which consists of approximately 20 acres and is located north of the Elk River and west of County Road 5. The Park contains the Lions Club meeting hall, picnic area, unimproved ball diamond and is sometimes used for camping.

Trails

Within the study area, the only separated bike/pedestrian trails are located within the City of Big Lake. The City trail system consists of a series of paved (bituminous) trails and cement sidewalks, the majority of which are located in the vicinity of the downtown. A bituminous trail connects Lakeside Park to Fern Street providing bike and pedestrian

access to the downtown and commercial/retail area located north of U.S. 10. A pedestrian sidewalk system also connects the areas between S.T.H. 25 and on the south side of U.S. 10. A pedestrian sidewalk is located along the east side of S.T.H. 25 from the southern City limits to U.S. 10. The City of Monticello, in Wright County, has a separated trail way system that ends after crossing the S.T.H. 25 Bridge into Big Lake Township. The Shores of Lake Mitchell development will contain approximately three miles of trails (11,000 feet of bituminous and 5,000 feet of gravel trails) upon completion of the project.

The City of Big Lake conducted a Walking/Bicycle Trail Survey in the Fall of 1998 wherein 1,475 citizens were requested to provide feedback regarding walking paths and bicycle trail systems within the community. Seventy-one percent of the people (200 of 282 residents), who returned the survey, indicated that they ride their bikes or walk at least weekly around the lake. However, a number of respondents indicated that they do not utilize the lakefront areas for walking/biking because they feel it is too dangerous. The respondents were asked to indicate their support for a trail system around Big and Mitchell Lakes. An overwhelming majority of the respondents (220 out of 282) indicated their support for a trail located on the lake side of the road.

As of the result of the survey, the City has developed a potential trail routing concept plan which shows a trail system loop connecting McDowall, Mitchell and Big Lakes. The trail concept plan follows the alignment of Lakeside Drive/Hiawatha Avenue and connects to the existing 8 foot bituminous trail located along the north side of U.S. 10. The concept trail system follows Lake Street on the east side of the lakes and conects to Hiawatha Avenue to the north and the future McDowall Lake trail systems. A series of overlook areas are located along the east shore of Big Lake, utilizing public street rights-of-way. The concept plan also shows a potential future trail link between the lake loop and I.S.D. 727 School Campus utilizing Washington Avenue right-of-way. The lake loop trail system concept is identified on the Community Facilities Map located on page 76 of this Report.

The Sherburne County Comprehensive Park, Trail & Open Space Plan (1996) indicates that trails should be provided along the following routes in order to provide pedestrian and bicycle links to major parks, communities and to link historic and natural resource areas of the County. Within the study area on-road or detached off-road trails are shown along County Road 14 and along that part of County Road 43, located south of U.S. 10. Detached off-road trails are shown along County Road 11 and S.T.H. 25. On Road Trails are shown for County Roads 11, and 5/75.

Snowmobile Trails

The Sherburne County Grant-In-Aid Snowmobile trail runs through portions of Big Lake Township and provides snowmobile access throughout the County. These trails run

through private property and the routes are published by the DNR trails and waterways unit. The Sand Dunes State Forest, located in northern Sherburne County is a popular snowmobile destination. The Grant-In-Aid Trail requires private landowners permission, which could be significantly altered by residential growth in the study area.

Public Water Access

The Mississippi River is a state-designated canoe route, managed by the DNR. Management includes accesses, campsites, portages, and rest areas. There are five public campsites and seven access points along the Mississippi as it runs along the southern border of Sherburne county. Two of the access points are designated as boat landings and one has been designated as a canoe access point. The St. Francis River and the Elk River are also popular canoe access points. Public boat access points are also located on Big and Eagle Lakes within the study area.

WATER SYSTEM

The surficial drift aquifer (Anoka Sand Plain) is Sherburne County□s main source of water. Due to the geologic make up of this aquifer, the vast majority of its recharge comes from rainfall and snowmelt that occurs within the County. Important bedrock aquifers such as the Mount Simon-Hinkley underlie the surficial sand aquifers in the southeast part of the County in Big Lake Township. Streams and Rivers also provide water for domestic consumption. Within the study area, the Snake River (with approved disinfection) meets requirements of the public health service drinking water standards and can be utilized for domestic consumption. The Mississippi River (with treatment) also can be used for domestic consumption.[6]

The majority of the City is served by a municipal water system consisting of four wells and two water towers. The City□s domestic water supply is dependent upon groundwater. As development occurs, new mains are extended into the developments. Existing water system facilities are identified as follows: Well 1 is located on Lake Street, north of the intersection with MN Avenue near the 50,000 gallon water tower. Well 2 is located at the intersection of Fern Street and MN avenue. Well 3 is located at the south end of Lake Shore Drive, near the 200,000 gallon water tower. Well 4 is located south of U.S. 10, east of Cargill Inc. The capacity for each well is indicated on the following table.

[6] Sherburne County Comprehensive Water Plan, Sherburne County Soil & Water Conservation Service, 1994, p. 18.

BIG LAKE WELLS/CAPACITY				
Well ID	**Year Built**	**Depth**	**Location**	**Capacity**
Well 1	1957	210'	T33N-R27W-Section 19	350 GPM
Well 2	1962	230'	T33N-R27W-Section 19	600 GPM
Well 3	1980	290'	T33N-R27W-Section 19	550 GPM
Well 4	1994	260'	T33N-R27W-Section 20	800 GPM
				Total 2,300 GPM

Source: 1997 Water System Improvements Report, S.E.H.; Sherburne County Comprehensive Water Plan, 1995, p. 54D.

Big Lake has two water towers: one with 200,000 gallon capacity (located in Lakeside Park), and a second with 50,000 gallon capacity (located near the intersection of Lake and Minnesota Streets). Both towers are double ellipsoidal, 4-leg designs and were constructed in 1980 and 1957 respectively. A site has been acquired near well number 4 for construction of a new 700,000 gallon water tower which should be completed by the year 2000. No specific decisions have yet been made as to whether or not the small 50,000 gallon water tower will remain on line or be dismantled.

During the 1990's, the City experienced the development of residential subdivisions in the northwest part of the community. During peak demand periods City staff has received complaints of low pressures from residents in the Lake Ridge/Mitchell Farms area. The complaints have focused primarily on inadequate water pressure to activate homeowner□s lawn sprinkling systems. Computer simulations confirm that pressures drop significantly in the northwest area of the city during peak usage and during a fire flow or hydrant flushing operations. The low pressures observed in these instances are due to deficiencies in the water storage and distribution system.

The increasing demand for water services combined with undersized water mains and lack of adequate storage (water tower) capacity, has resulted in a lack of water pressure to this area of the City. In an effort to address the complaints, city maintenance staff began to replace existing 3/4" x 5/8" meters to improve flows. Maintenance staff indicate an improvement in pressure at those particular locations where the larger water meters have been installed.

In 1997 the City initiated a study of the municipal water system to address water pressure issues, review existing facilities, identify projected water storage needs and propose recommendations for expanding existing storage facilities. The study contemplated water

system improvements needed to accommodate community growth through the year 2020. With regard to water pressure issues, various alternatives were identified to increase water storage which involve construction of additional water tower(s) within the City. In addition, larger water mains were recommended for certain areas of the community to minimize pipe friction which can potentially drop water main pressure to substandard levels.

The City has begun to address water system issues by constructing the new 500,000 gallon tower which is anticipated to meet storage needs through 2012. In addition to the new water tower, a transmission main has been constructed for the Lake Ridge/Mitchell Farms area. As development occurs, the transmission line will be connected from Manitou Street south to U.S. 10 which should address water pressure needs for the northwest area of the community.

In the future, the City may consider putting an additional water tower in the northwestern part of the community. Additional storage in the this part of the City will allow Big Lake to dedicate the existing 200,000 gallon tower and the new 500,000 gallon tower for growth to the south and east.

The following map illustrates the location of municipal water systems within the City of Big Lake.

INSERT WATER SYSTEM MAP HERE

STORM WATER SYSTEM

The lakes, wetlands and rivers located within and around Big Lake are the principle natural resources of the community. The City of Big Lake is unique due to the existence of the water bodies which are an integral component of the history, identification and growth of Big Lake. The water bodies provide tremendous opportunities for water-based recreation and unique residential environments for people who choose to live in or visit the City. The recreational use of local water resources has a distinct economic benefit for local business. The water resources provide opportunities for people to collectively enjoy a sense of place and become part of a greater lake community.

Surface water use of the lakes continues to grow and the general water quality of the lakes is threatened by competing uses and interests. Lakeshore throughout the community is being developed and redeveloped, causing concern about public access and use of the water resources and their respective shoreland. Big and Mitchell Lakes are the two largest water bodies in the community and are heavily used for recreation purposes. The lakes are an integral component of the community and therefore, efforts to minimize the amount of pollutants entering them are important for ecological, economic, social and aesthetic reasons.

As stated earlier in this plan, both lakes are seepage lakes and are highly susceptible to changes in water quality due to the introduction of nutrients. The watershed area for the lakes is relatively small and is identified on the maps which follow this section. There are a number of storm sewer inlets that discharge water collected from urban run-off into the lakes. Their locations are shown on the Storm water Inlet map which follows this section. As the community continues to develop, careful attention to matters of storm water management will be needed to prevent problems prior to their occurrence and/or to correct any in existence. The goal of storm water management planning should be to minimize the amount of pollutants reaching all of the community lakes as well as to minimize the potential for flooding.

Storm water management planning is a regional as well as local issue. Approximately 90 percent of Sherburne County is drained by the Elk and St .Francis Rivers and their tributaries. These rivers enter the County from the north, flow southeastward, and empty into the Mississippi River near Elk River. Regionally, ground water moves toward the Mississippi River; locally, toward tributary streams and lakes.[7] The storm water discharge points for the City of Big Lake are Big and Mitchell Lakes. The County is divided into several watershed areas however, there are few watershed district or water management

[7] Sherburne County Comprehensive Water Plan, Sherburne Soil & Water Conservation Service, 1994, p. 13.

organizations within Sherburne County to regulate activities within the respective watershed areas.

One exception is the Elk River Watershed Association which is a joint powers board formed in July of 1994. Sherburne and Benton Counties and the Soil and Water Conservation Districts formed the Watershed Association for the purpose of improvement of water quality in the watersheds of the Elk River and its tributaries. Critical land use which have been identified include riparian pastures and feedlots, irrigated agricultural fields, lakeshore development, septic systems, housing developments, and land farming. Housing developments are a concern because of storm water runoff both during and after construction.[8]

The following map illustrates the location of the watershed boundaries within the study area as defined in the Sherburne County Comprehensive Water Management Plan.

INSERT WATERSHED BOUNDARY MAP HERE

[8]Ibid., p. 54E.

INSERT STORM WATER INLET MAP HERE

Sherburne County Comprehensive Water Management Plan

Sherburne County adopted a Comprehensive Local Water Plan in 1994 which focuses on water and related land resources based on watershed units. The plan addresses the interrelationships between surface and groundwater as well as the potential cumulative effects of land use practices on both water quality and quantity. The Sherburne Soil and Water Conservation District is the lead agency responsible for implementation of the plan.

City of Big Lake Storm Water Management System

The City is the Responsible Government Unit (RGU) for storm water management and as such has studied various options to control storm water. The installation of man-made infrastructure is extremely costly and often requires the cooperation of many jurisdictions and landowners to install, manage and pay for such improvements. At present, the City does not have a comprehensive storm water management plan in effect. Specific problem areas are managed on a site-by-site basis.

In 1986, a "Lake Lowering Project" was installed to regulate the levels of Big and Mitchell Lakes. A concrete inlet structure was constructed on the northeast shoreline of Mitchell Lake near Hill Street, just south of Hill Circle. Storm sewer was then constructed to take the excess flow east under Hill Street, through Beaudry Lake, and under Eagle Lake Road to the Elk River. This project regulates the high water level of the lakes, and helps to control groundwater levels on the north side of the City.[9]

The map on the following page illustrates the location of the watershed boundaries of Big and Mitchell Lakes.

[9] 1993 Street Study, p. 2.

INSERT BIG AND MITCHELL LAKES WATERSHED BOUNDARY MAP HERE

During the 1980's, storm sewer was provided where necessary and in conjunction with the installation of sanitary sewer, water and associated road restoration projects. During this period a retention pond was constructed north of Lake Shopping Center. In 1992, a storm sewer was constructed along Fern Street, from Rose Drive to the pond north of Lake Shopping Center, to intercept and reroute some of the drainage flooding a low area southwest of Humboldt Drive. The map on the following page illustrates the location of storm sewer facilities within Big Lake.

There have been several attempts to develop Brenteson Addition (14 lots), located in the southeastern part of the community near Ormsbee Street. However, the area remains undeveloped due to high groundwater levels and poor surface drainage.

Due to the difficulties and costs associated with installing storm water infrastructure, it is likely that the City will choose to implement alternative measures such as street and parking lot infiltration systems, utilizing natural means to manage storm water, and possibly reducing street width requirements. In instances where natural controls are insufficient, storm water problems will likely be addressed at the time of development/redevelopment and/or street reconstruction. The City is also beginning to evaluate key parcels such as the water tower site located near Lake Street and Minnesota Avenue for natural infiltration areas.

INSERT STORM SEWER MAP HERE

SANITARY SEWER SYSTEM

Prior to 1981, Big Lake was an unsewered lake community serviced by individual septic systems. By May of 1981 an oxidation ditch facility consisting of a main pump station, single oxidation ditch, two indoor rectangular clarifiers, and chlorine disinfection capabilities was put on line. The wastewater treatment plant was designed to treat an average flow of 0.3 million gallons per day (MGD). The system operated via gravity flow and the use of several lift stations that pumped sewage to the pump station located on Ormsbee Street. From there, sewage was pumped to the treatment plant located two miles south of the City, and the treated water ultimately discharges into the Mississippi River. The sludge handling facilities were upgraded by the City in 1996 in response to Federal requirements.

The original system was nearing capacity by the mid 1990's (providing service for approximately 3,800 people. In 1997, the City undertook a facility plan to review options for expanding the sanitary sewer system. To accommodate future growth, wastewater flows and loads were developed for a 20-year design period in accordance with MPCA guidelines. The loads were determined based on existing conditions, projected residential development and the assumption that the population of the community would nearly double to 7,500 by the year 2018. At the time of the study, no significant industrial users were utilizing the system nor were any future large users anticipated to come into the system. In the event a future industry (with high wastewater flows and/or loads) would desire to locate in the City, the sewer impacts will have to be dealt with on an individual basis prior to connecting to the system. The system expansion was studied anticipating wastewater characteristics typical of domestic sewage.

The study identified future sanitary sewer needs and recommended a series of facility improvements to accommodate future growth. The most cost effective and environmentally sensitive development approach was identified and as a result, the existing oxidation ditch treatment system was expanded. Other system improvements included modifying the existing pump station to increase power service, adding a second parallel forcemain (approximately 7,800 feet) to the treatment plant, constructing a second (360,000 gallon oval concrete tank) oxidation ditch tank, installing new aerators (three 34 foot diameter settling tanks), and expanding disinfection capabilities. The expanded wastewater treatment plant is designed to treat a wet weather flow (30 day average) of 0.84 MGD. This flow would be anticipated from a population of approximately 7,000 to 8,000 people. The design year to reach this population will actually depend upon the rate of growth.

A sanitary sewer issue that the City is currently planning to address concerns the ongoing development of the northwest part of the community. There is currently one lift station located west of Lakeshore Drive and east of Blacks Lake. The lift station will not be able to accommodate all of the sewage that will be generated within the newer subdivisions in the vicinity of McDowall Oaks. To address this situation, a sanitary sewer line has been

constructed adjacent to County Road 81 which will ultimately take sewage generated from the Lake Ridge and Mitchell Farms developments. The sanitary sewer line will be connected from its current location, south to U.S. 10, as development occurs in the western part of the City. It is estimated that there will be a need for an additional lift station to accommodate development within this part of the City.

INSERT SANITARY SEWER SYSTEM MAP HERE

Major Transportation Issues:

X **Traffic Volume Congestion**

Existing Condition The Sherburne County Transportation Plan identified TH 25 between the south County line and CSAH 14 (within Big Lake Township) as being near congestion level. Congested is defined as existing volume exceeds 105 percent of the threshold volume, indicating a high probability of operational problems due to

volume of traffic on the facility. This is due to the recreational nature of this route where traffic volumes on summer weekdays are higher and the route becomes congested.

2020 Condition

Potentially congested roadway segments are anticipated to be:

1. TH 25 between the Mississippi River and U.S. 10
2. CSAH 5 between U.S. 10 and Hiawatha Street

Roadway segments identified as being near capacity based upon 2020 forecast volume:

1. U.S. 10 between TH 25 and CSAH 5
2. CSAH 11 between TH 25 and County Road 50

X **Accident Frequency**

Existing Condition

The intersection of TH 25 and U.S. 10 is identified as a high accident frequency location (intersection with 5 or more accidents per year). The following road segments are classified as high accident rate segments:

1. County Road 43 between U.S. 10 and County Road 83
2. U.S. 10 between County Road 43 and County Road 44
3. CSAH 11 between County Road 50 and U.S. 10

X **System Designation Changes**

Within the study area, the following routes are identified by the Sherburne County Transportation Plan as having the potential for transferring from County to City and/or Township jurisdictions. The County Plan identifies a “transfer priority” (from 1-5 with 1 being the highest priority) which follows the roadway designations identified below.

- X County Road 68 from The southern boundary of the City to CSAH 14. (1 - High Priority)
- X County Road 73 from Manitou Street to U.S. 10. (1 - High Priority)
- X County Road 73 from 196th Street to Lakeshore Drive. (1 - High Priority)
- X County Road 81 from County Road 73 to U.S. 10. (4 - Low Priority) Access to be protected
- X County Road 83 from CSAH 15 to County Road 43. (3 - Medium Priority)
- X CSAH 50 from CSAH 11 to TH 25. (3 - Medium Priority) Protect collector function by limiting access, setbacks

INSERT TRANSPORTATION ISSUES MAP HERE

1993 Big Lake Street Study

The City of Big Lake commissioned a study in 1993 to review and develop a maintenance program for existing roadways, provide a framework for reconstruction of roads approaching the end of their useful life, and to establish design standards for future road development and construction. The "1993 Street Study for the City of Big Lake" was prepared by the consulting firm, Short Elliott Hendrickson Inc. (SEH) and the elements applicable to the Comprehensive Plan are summarized in the following paragraphs.

The majority of roadways within Big Lake were reconstructed in 1980 when sanitary sewer was installed throughout the community and where water mains were constructed. Street construction, at that time, was considered surface restoration following sewer and water main installation. Roads were simply reconstructed to their previous widths of 18-24 feet

with little or no budget available to widen, provide concrete curb and gutter, or to meet drainage needs. A major exception to this pattern was Eagle Lake Road from U.S. 10 to Park Avenue, which was constructed to a 44-foot width with concrete curb and gutter and storm sewer.

In 1987 the City began constructing new streets in developing areas with wider sections to accommodate parking and pedestrian needs, and began requiring concrete curb and gutter to define the limits of the street, to provide positive drainage, and to protect the edges from gradual destruction. Storm sewer was provided where necessary, and a retention pond was constructed north of Lake Shopping Center.

In 1988 and 1989, Humboldt Drive was constructed as a Frontage Road along the south side of U.S. 10. In 1992, Rose Drive was constructed along the north side of U.S. 10 from Phyllis Street to County Road 43. During the early 1990's, Mn/DOT proposed to reconstruct U.S. 10 from Lake Shore Drive to County Road 43. As part of the original project, Mn/DOT proposed to install a raised median from Lake Shore Drive to Eagle Lake Road, which generated much controversy from the business community. The raised median was proposed in an attempt to control access and turning movements along U.S. 10 within the City of Big Lake. Ultimately, Mn/DOT abandoned the reconstruction proposal settling for a maintenance fix of mill and overlay. A center two way left turn lane was provided to ease congestion, and signals were installed at Eagle Lake Road. TH 25 was completely reconstructed from Norwood Drive to the railroad tracks, and also included a center two way left turn lane.[10] The reconstruction of U.S. 10 and 25 was completed in 1993.

Development activity between 1980 and 1992 was moderate. Habitat Addition (77 lots) located on Fair Meadows Drive near Ormsbee Street was platted in 1982, but streets were not constructed until 1997. In 1992, preliminary plats were submitted for McDowall Farm Estates (potential capacity of over 200 lots); development of 18 lots along Hiawatha Avenue, Lake Ridge Addition (66 lots). This rapid acceleration in housing will have a significant impact on existing City Streets. (Page 3)

County Turn back

Sherburne County approached the City regarding transfer of County Road 73 (Lake Shore Drive and Maintou Street) to the City in exchange for adding County designation to 206th Street and 196th Avenue. The City agreed to the transfer of the roadway authority in March 1999, subject to a $250,000 cash payment from Sherburne County.

[10] 1993 Street Study for the City of Big Lake, p. 2.

Street Maintenance

Since 1980 when most streets were reconstructed in Big Lake, the policy for new street construction has been done on a “build as we go” basis. There has been no specific plan and as such, street widths and structural sections have been determined with a short term estimate of future traffic and land use. A Comprehensive Transportation Plan is necessary in order to classify streets so that potential collector and arterial streets are identified early, and so that pavement designs can properly represent the type and volume of traffic to be carried.

MSA System

As of the Report date, the City’s population had increased from 3,113 in 1990 to 3,700. When the population reaches 5,000, the City will be eligible to establish a Municipal State Aid Street System which is subject to separate funding for maintenance and construction of the streets so designated. This system normally consists of the more heavily traveled collector and arterial streets, and connects with county roads and trunk highways. Funding is apportioned on the basis of construction needs and population and construction must meet certain established design standards. Currently a typical City the size of Big Lake receives approximately $150,000 for maintenance construction annually. With the population of Big Lake increasing rapidly, it is prudent to plan for this future street system so that reconstruction can be timed with eventual funding.

The 1987 City of Big Lake Comprehensive Plan identified a functional roadway classification system based upon the overall transportation needs and future development assumptions of the time. The Big Lake Functional Classification Map is located on the following page.

INSERT CITY OF BIG LAKE ROADWAY EXISTING FUNCTIONAL CLASSIFICATION MAP HERE

Sherburne County Functional Road Classification

The existing and proposed functional classification of roadways identified in the Sherburne County Transportation Plan for the study area are indicated in the following table. The Sherburne County proposed 2020 Functional Classification Map is located on the following page.

FUNCTIONAL CLASSIFICATION OF MAJOR ROADWAYS			
	Sherburne County		City of Big Lake
Roadway Segment	Existing Functional Classification	Proposed Functional Classification	Existing Functional Classification
U.S. 10	Principal Arterial	Principal Arterial	Principal Arterial

TH 25	Minor Arterial	Minor Arterial	Minor Arterial
CSAH 14	Major/Urban Collector	Major/Urban Collector	N/A
CSAH 11 (south of U.S. 10)	Minor Arterial	Major/Urban Collector	N/A
CSAH 11 (north of U.S. 10)	Major/Urban Collector	Major/Urban Collector	N/A
CR 50	Local Road	Local Road	N/A
CR 81	Local Road	Minor Collector	Not Designated in 1987 Plan
CR 73	Local Road	Minor Collector	Minor Collector
CR 68	Local Road	Local Road	Minor Collector
CSAH 5	Major/Urban Collector	Minor Arterial	Major Collector
CR 75	Local Road	Local Road	N/A
CR 43 (south of U.S. 10)	Local Road	Minor Collector	Minor Collector
CR 43 (north of U.S. 10)	Minor Collector	Minor Collector	Minor Collector
CR 83	Minor Collector	Local Road	N/A
Source: Sherburne County Transportation Plan, 1998; Big Lake Comprehensive Plan, 1987			

The table indicates that the City□s functional classifications for the following roadway must be changed in order to be consistent with the Sherburne County Transportation Plan: County Road 81 should be designated as a Minor Collector, County Road 68 should be changed from a Minor Collector to a Local Road, and CSAH 5 should be changed from a Major Collector to Minor Arterial.

Traffic Volumes

The Traffic Volume Map shows traffic volumes for major thoroughfares in the study area from 1995. Pursuant to the 2020 projection by Sherburne County and Mn/DOT, the following routes are identified as having the potential for substantial increases in traffic volume resulting in congested conditions: CSAH 5 from U.S. 10 to Hiawatha Street, S.T.H. 25 from the Monticello River Crossing to U.S. 10 and County Road 11 from S.T. H. 25 to County Road 50.

INSERT ROADWAY FUTURE FUNCTIONAL CLASSIFICATION MAP HERE

INSERT ROADWAY JURISDICTION & TRAFFIC VOLUMES MAP HERE

TRANSPORTATION - SPECIAL AREA STUDIES

The Sherburne County Transportation Plan was prepared with close cooperation between the County and Mn/DOT. The Transportation Plan includes special area studies which impact the study area. A summary of each of the special area studies is presented as follows:

Review north-south collector street options (County Roads 73 and 81) in the City of Big Lake. *(Sherburne County Transportation Plan, 1997, p. 50-52.)*

This special area study began as an analysis of growth and traffic issues along County Road 73 which extends north of U.S. 10 along the west side of Big Lake. This route primarily serves older residential neighborhoods which have been established along the west side of Big Lake. The roadway is narrow (22 to 26 feet) with residences, docks and other buildings inclose proximity to the roadway. Significant growth in the NE part of Big Lake and Big Lake Township has resulted in additional traffic using this narrow route to access U.S. 10. Increased expansions to the northwest have prompted many complaints

by home owners along this route. The primary concerns are the increased traffic volumes, speed, safety and loss of local street (lake lot) character. Based on the close proximity of houses and the lake, it would be difficult to improve County Road 73 (i.e., widening to improve safety) without significant impacts. There is some urgency for addressing this issue because of future developments that are likely to occur in the area that could limit potential alternate routes.[11]

The analysis included an examination of the existing roadway system to determine if County Road 73 could be downgraded in importance to discourage through traffic, and if other routes could be improved to serve as the primary collector route for the area. The findings and recommendations are as follows:

Concept 1: Develop a long-term plan to connect County Road 81 and 200th Street at a single intersection with U.S. 10.

[11] Sherburne County Transportation Plan, 1997, p. 50.

Realign TH 25 north of Monticello following the 200th Street alignment to connect to U.S. 10. This route would bypass Big Lake and remove some of the heavy turning movement problems associated with commercial developments at the corner of U.S. 10 and existing TH 25. Consideration should also be given to realigning CSAH 5 from north of Big Lake to connect with TH 25 at this intersection with U.S. 10. A significant portion of the new alignment of CSAH 5 would follow an NSP transmission line. This alternative would more directly connect CSAH 5, a north-south minor arterial route throughout the County, with TH 25 and the Mississippi River crossing in Monticello. Additional investigation of this alternative (origin-destination study) is needed to determine the movement of traffic from CSAH 5 to TH 25. Also, a more detailed feasibility study needs to be completed to analyze the potential alignments and impacts for this alternative.[12]

See the map on the following page for reference to route alignment options.

[12] Sherburne County Transportation Plan, 1987, p. 52.

INSERT SHERBURNE COUNTY BIG LAKE WEST SIDE ROUTE ALIGNMENT OPTIONS MAP HERE

Concept 2: Realign County Road 73 and/or County Road 81 to make a collector connection to the intersection with 200 street.

These concepts could be pursued without a connection to CSAH 5. The concepts should be developed to a collector standard, such as minimization of direct access and provision of a wider shoulder, resulting in a more continuous route that would promote use of this route instead of 73rd Street.[13]

It is recommended that the City, county and Mn/DOT work together to determine the most feasible alternative and preserve the right-of-way through land use and development controls in this area. This can be done through an official mapping process.

U.S. 10 Access Management Study:*(Sherburne County Transportation Plan, 1997, p. 52-53.*

U.S. 10 serves as a vital link for the movement of goods and services as well as providing convenient access for commuters to the St. Cloud or the Twin Cities metropolitan area. In addition, this route serves a larger statewide purpose linking small towns and larger urban areas with recreational areas in Northern Minnesota. It is an economic necessity to the County and State that these routes continue to function at a high level of service. As traffic volumes continue to grow, Mn/DOT will look to control of access locations as the primary tool to maintain a high-level of service and safety for the corridor. An access management study, to develop an overall concept plan for access to U.S. 10, has been undertaken by Mn/Dot and the communities located along the corridor. The goal of the access plan is to provide a good level of service and safe route for users of the trunk highway system and to provide adequate access to serve adjacent land use along the corridor.

The access study included an inventory of existing access locations along the U.S. 10 corridor, their function, current and potential use, adjacent land use and location of the access with respect to future regional Mississippi River crossing alternatives.

Desirable spacing criterion in urban and developing areas is considered to be one-half to two-thirds mile. In rural areas, the spacing was increased to one to two miles. A greater spacing in the rural areas provides the traveling public with a safer and more efficient highway. Based upon the aforementioned criteria, access focal points were identified and are shown on the following map. These access points should be considered as the

[13] Ibid., p. 52.

approximate locations where future full access intersections would be provided to U.S. 10. As traffic levels increase in the corridor and as development occurs, communities and local governments should plan to focus their local street and traffic patterns to the locations identified by the study. The plan should be viewed as a long-term guideline for corridor access with implementation to occur as opportunities present themselves.

The study identified the following proposed access points within the City of Big Lake and surrounding Township:

Proposed Access Points
Approximately 1/8 mile west of existing County Road 81 and U.S. 10 (involves realignment of County Road 81 to the west)
Existing County Road 73 and U.S. 10
S.T.H. 25 and U.S. 10
County Road 5 and U.S. 10
County Road 43 and U.S. 10
Entrance of Industrial Park and U.S. 10
West line of Section 20 and U.S. 10
Source: Sherburne County Transportation Plan, 1997, p. 55.

The Big Lake West Side Route Alignment Options Map on page 110 illustrates the location of proposed access points along U.S. 10, within the study area.

Access Management Guidelines: Minnesota Statutes outline the extent to which Mn/DOT may restrict access. Mn/DOT may restrict access to right-in/right-out only, or to a single-access point, but some form of access must be granted to every parcel (the State cannot force a land-locked situation). To restrict access to a greater degree, Mn/Cot must

acquire the right through negotiation or eminent domain. Mn/Dot can also affect access throughout comments to local communities regarding plats and its driveway access permitting process.

Cities and counties may control access through zoning and subdivision regulations. Any number of means may be used to control access, including access points per land parcel and distance between access points. In fact, direct access may be prohibited altogether if an alternative, indirect access is available. The following access management guidelines are identified by the Sherburne County Transportation Plan.

- X Align access points with existing access points.
- X Allow for adequate spacing to separate and reduce conflicts.
- X Encourage indirect access rather than direct access on high-speed, high-volume arterial routes.
- X Implement frontage roads, grade separated crossings, right-in/right-out entrances and exits to reduce the number of conflicts and accident potential.
- X Implement specific access guidelines for rural and urban arterial roads (County Plan Table 10 & 11).
- X Minimize any new accesses while consolidating and/or reducing existing access points as redevelopment occurs.
- X Guidelines apply primarily to routes with an arterial functional classification but may also be used on collector streets.
- X Encourage shared driveways and internal circulation plans.
- X Restrict turning movements to reduce conflicts. (If access points cannot be eliminated, consider turning movement restrictions (e.g., left-in only, or right-in/right-out only) through channelization including options for installation of raised medians or signing.
- X Develop parallel street system for carrying local traffic.
- X Develop proper secondary street spacing.
- X When reviewing plats and new development proposals, be sure they provide proper intersection spacing for future signals. As a guideline, signalized intersections should be limited to through streets with spacing between 1/4 mile and 2/3 mile depending upon the type of street. Collector streets should provide some continuity and connectivity with other street systems.
- X Develop proper setbacks for future frontage roads. If frontage roads cannot be justified make sure that proper building and parking lot setbacks are established so that future frontage roads can be installed with minimal impacts.
- X Encourage proper lot layout to minimize access points. Promote direct residential access points onto local routes, not arterials or major collectors. Direct residential access off arterial or collector routes can result in complaints when traffic levels

increase. In rural areas, where farms have one access point per 40-acre entitlement and where they cluster lots in one portion of the farmstead, access should be encouraged off local roads, not high-speed, high-volume state or county roads.

- Encourage connectivity between developments. Individual developments should align streets to provide access to existing developments or reserve right-of-way to provide for future connections to adjacent developments. This promotes neighborhood connectivity, good emergency services, and more efficient travel for mail, garbage, and bus services as well as street maintenance.
- Consider official map process for important corridors. Important arterial corridors or future interchange areas that are located in development-prone areas can be protected through an official mapping process. Local agencies should revise zoning ordinances and subdivision regulations to provide for dedication of officially mapped corridors at the time of platting.

RAILROADS

Big Lake is served by the Burlington Northern Santa Fe (BNSF) Railroad which runs through the south central part of the City bisecting the community. Its alignment is directly adjacent to and south of U.S. 10, west of the lake of Big Lake. Near the intersection of TH 25, U.S. 10 and the railroad begin to separate and part of the City's downtown area lies between the two corridors. At the eastern City limits, the separation distance between the highway and railroad approximates five hundred (500) feet.

BNSF currently carries an average of 50 to 60 trains per day, with a maximum of about 70 trains during peak shipping seasons. The primary commodities shipped are coal to the SHERCO Power Plant in Becker, agricultural and industrial commodities between Chicago and the West Coast, and general freight.[14]

[14] Sherburne County Transportation Plan, 1997, p. 17.

The future of the BNSF includes several changes. First, the single track between Clear Lake and Big Lake will be upgraded to two tracks by 2003. This improvement has not been assigned for a definite program year. Also the BNSF expects train traffic to increase up to 80 trains per day, although no definite time line has been identified.[15]

The results of Mn/DOT□s North Star Rail Study, which is underway, could significantly impact this rail line, as it has been identified as a potential corridor for commuter rail traffic. Access management plans for U.S. 10 could also significantly affect rail grade crossing activity, as limited access on U.S. 10 could add traffic on routes currently crossing the railroad track.[16]

AIRPORTS

A small private airport that has historically operated in southern Big Lake Township is located west of S.T.H. 25, about two miles south of the City. The facility operates under a Conditional Use Permit granted years ago and has a grass runway approximately 2,500 feet in length. A 1997 storm caused severe damage to aircraft and the hanger facilities. Since that time, the grass runway has not been maintained and Township Officials indicate that there has been little, if any airport related activity at the site.

Air service for small aircraft is provided by Buffalo Municipal Airport a local/regional facility which is located approximately eleven miles from the City of Big Lake. Air service is also provided via the St. Cloud Municipal Airport which contains two runways. The airport is primarily used for small corporate and private planes. There are about 100-150 flights per day at this facility. Northwest/Messabi has ten arrivals and ten departures daily and is the only commercial airline which utilizes the facility. Minneapolis/St. Paul International Airport is located approximately forty-five miles southeast of the City and offers a full array of flight services.

TRANSIT

[15]Sherburne County Transportation Plan, 1997, p. 18.

[16]Ibid., p. 18.

Transit service is currently provided via Sherburne County RiverRider which has been in operation since 1979. It provides door-to-door service on a dial-a-ride/flexible semi-fixed service. In 1995, it expanded its service to Wright County, connecting Sherbune County to Buffalo, Cokato, Howard Lake, Montrose and Waverly. Trips served by River Rider include health programs, medical appointments and shopping. Disabled and elderly persons comprise about 85 percent of the ridership.[17]

The future of transit service in Sherburne County could be enhanced by two recent initiatives created by the McKnight Foundation and Mn/DOT in response to welfare reform and the North Star Corridor Study. Sherburne County and the St. Cloud MTC in concert with Sterns, Benton and Wright Counties have received a two-year grant from the McKnight Foundation for enhancing transportation services for persons who are in the transition process from welfare to work. Beginning in 1998, the McKnight grant will support the creation of a new regional Commuter Services Coordinator pilot program to link the counties, employers and employees with transportation services such as rideshare and transit service, including funds for increasing transportation services throughout the County and region. In addition, the Minnesota Legislature also appropriated funds for welfare to work transportation enhancements, which could also be used to assist in providing additional transportation services throughout the County and region. Sherburne County will need to explore ways to provide additional transportation services and coordinate with other transportation providers in response to welfare to work initiatives and growth in the County s current transportation and transit systems.[18]

The North Star Corridor is a 70-mile transportation corridor which runs along U.S. 10/47 from downtown Minneapolis to St. Cloud. This is the fastest growing corridor in the state and has been identified by Mn/DOT as one of the corridors with the highest potential for successful commuter rail service. The Northstar Corridor Development Authority (NCDA) is the joint powers board studying future transportation options for the Northstar Corridor. The Northstar Corridor Commuter Rail would have intermodal connections to existing bus service within the corridor and to the future Hiawatha Light Rail Transit (LRT) Corridor. The Hiawatha Corridor continues to the Minneapolis/St. Paul Airport and the Mall of America.

[17] Sherburne County Transportation Plan, 1997, p. 18.

[18] Ibid., p 19.

The Northstar Corridor Commuter Rail would utilize existing BNSF rail lines and have intermodal connections to existing bus service within the corridor as well as to future LRT Corridors. The NCDA has secured federal and state authorization to study, design and construct the potential commuter rail system and other transportation improvements. The intersection of TH 25 and Eagle Lake Road in the City of Big Lake has been identified as one of twelve potential station locations. During the summer of 1999, the NCDA will focus on developing specific station area planning, design, and land use plans for the corridor. Discussions with neighborhoods, community staff and elected officials, interest groups and the general public will identify actions necessary to link commuter rail to current and future land uses. It is anticipated that a site plan for each station will be prepared. The plan will show access for cars, busses, bikes, and pedestrians to the rail station as well as the passenger waiting and train boarding facilities. In addition, land use plans for the area and one-half mile around the station will be developed in cooperation with the communities.[19]

The map on the following page illustrates the location of stations contemplated along the Northstar Corridor.

[19] Northstar News, Northstar Corridor Development Authority, Number 5, April 1999, pages 2-3.

INSERT NORTHSTAR CORRIDOR MAP HERE

December 7, 1999

TO: Big Lake Mayor and City Council

RE: Big Lake Comprehensive Plan Update: Issues Report

FILE NO: 243.05 D

Representing the third phase of preparation in the update of the Big Lake Comprehensive Plan, we are pleased to submit the Comprehensive Plan Issues Summary. To date, two phases have been completed in the update of the City's Comprehensive Plan. The first was the planning *Tactics Report* (dated April 1999), which summarized community views/opinions and highlights community concerns voiced by local officials and residents. The second phase *Inventory* (dated July 1999) provided an analysis of technical and factual data related to the social, natural environment, land use, transportation, and community facility aspects of the City of Big Lake status today.

The next logical and progressive step toward completion of the Comprehensive Plan Update process is the *Issues Summary*, which is attached to this letter. The *Issues Summary* entails an analysis of the information collected to date and organizes it into meaningful issue statements, which will serve as a basis for the *Policy Plan* and *Development Framework* portions of the Comprehensive Plan. By doing this, the City will be able to not only direct development policy for the community, but resolve issues which have affected development in the past.

It has been NAC's pleasure to assist the City with the preparation of this material. Additionally, we look forward to the challenges, which lie ahead in the formulation of the plan, which will guide Big Lake into the future.

Respectfully yours,

NORTHWEST ASSOCIATED CONSULTANTS, INC.

David R. Licht, AICP
Associate

Deborah Garross
Senior Planner

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The material in this section is grouped into six basic subject areas, which are identified as follows:

- Social Development
- Natural Environment
- Land Use
- Transportation
- Community Facilities
- Administration

The map on the following page illustrates graphically, where prime issue areas exist within the City of Big Lake and the study area located within two miles of the corporate city limits.

INSERT ISSUES MAP HERE

Increasing Population Growth

The City of Big Lake has experienced rapid population growth during the 1990's, as have other communities in the region. This growth has put strains on, and expanded the need

for City services (sewer, water, fire and police protection) and community facilities including the wastewater treatment plant, roadway network, recreation system and schools. Careful planning is critical throughout the design of new developments to address issues at the onset and avoid future problems.

Increased Households vs. Decreased Household Size

While the number of households in Big Lake increased dramatically during the decade of the 1970's and also the 1990's, the household size has decreased from 2.86 in 1980 to 2.76 in 1998. This lower household size is reflective of a combination of young, married couples that are waiting longer to, and having fewer children. There are also increasing numbers of "empty nester" parents whose children have grown and left home. The decrease in household size is also attributable to changes in the family structure, which have resulted in the creation of more single parent households than was typical in past decades. The increased number of households is largely attributed to the amount of vacant land available for residential development, a favorable market economy and low fuel prices which allow people to commute over longer distances, to larger metropolitan areas for employment.

These factors will have a direct effect upon the future housing types developed in the community including a need for higher density housing options (i.e., sewered single family lots and multi-family dwellings and "executive" type homes which cater to career-oriented families who seek a suburban living environment). Technological innovations are also changing the workplace allowing more individuals to work part-time in the home. These trends show that larger lots and "executive" homes are in demand, which creates a two-sided issue as it relates to residential development. On one hand, larger lots/homes are needed to diversify the City's housing stock and provide higher end dwelling opportunities. On the other hand, the larger lots and homes take up more space and will house fewer people, thereby using up the City's limited vacant land supply more quickly. Larger lot sizes and the current public desire for very low-density development also contribute to urban sprawl and often increased installation and maintenance costs for local infrastructure and services.

Age Influences

The 1990 Census has indicated that the median age in Big Lake is 28.8, which is comparable to other cities and that of Sherburne County. The labor force age group (ages 20 to 64) represents the City's largest age group accounting for 57.3 percent of the population while the second largest age group, the school age group (ages 0 to 19), represents 33.9 percent of the population. The retired age group (ages 65 and over) is the smallest and accounts for 8.8 percent of the City's population.

The predominance of individuals in the labor force age group is typical of communities

proximate to larger metropolitan employment centers, due to an increasing flow of young families to outlying areas. This has become, and will continue to be a challenge for communities in Sherburne County. Big Lake's age demographic is a major factor in planning for the future of the community due to increased demand for services such as parks and trails, entertainment and schools. The largest number of children in the school age group is between the ages of 0-4 (360), which is nearly double that of the group between the ages of 10-14 (193). Therefore, future planning for schools is particularly critical, given the fact that existing schools within Big Lake are nearing capacity and there is little room available on the land locked school campus.

Although a significantly smaller group overall, the retired age population must not be overlooked. It is anticipated that this age group will become more prevalent over the next decade as seniors from the rural areas move into higher density housing located in Big Lake, as a result of public utility service being available to accommodate this type of development. Additionally, older residents of the community are typically interested in staying near family and friends.

The City approved two senior housing projects in 1999, which will increase the amount and type of residential units available in the community. Both projects include townhome (duplex units) that will be sold to owner's age 55 and older. Big Lake Senior Apartments includes a three-story, 68-unit apartment complex with the potential to expand to a total of 93 units. The projects involved financial assistance from the Big Lake Economic Development Authority and will provide a mix of rental and individually owned units. The Big Lake Senior Apartments project is located along S.T.H. 25 and includes the development of a public park and trail system along Keller Lake. The setting will afford residents good views of the lake and easy access to recreational facilities and local commercial areas, which can be accessed by a sidewalk system. The Shadow Wood Village project is located within close proximity to grocery, bank and restaurant services near U.S. 10 and Phyllis Street, as well as recreational facilities available at the School District campus.

Topographic, Landscape & Screening Issues

The overall terrain within Big Lake can be roughly characterized as flat to gently rolling overall and generally void of severely steeped slopes and large spans of natural tree cover. The lack of severe topography and forested areas in the community can be a positive aspect as it relates to ease of site design/development, limited grading and non-agricultural

erosion control. However, the flat nature of land and limited vegetation within the community can also tend to create adverse issues related to aesthetics, as built elements are not buffered by natural topographical differences or tree cover. Rather, the open nature of land and lack of natural vegetation makes it harder to integrate man-made and natural features.

In Big Lake, structures tend to sit on top of the land rather than being integrated with it and while not typically a factor related to improper site design, the structures are more visible, appear larger and greatly influence views from neighboring properties. It is therefore critical that high quality development and site design be enforced for all new projects as well as structure remodeling or additions. Concurrently, the requirement of landscape plantings and screening play a large role in blending man-made versus natural features and new verses existing development. The City should consider developing minimum landscape, screening and buffer yard standards as well as tree planting standards for new developments to accomplish better transition between uses and soften the visual impact of built structures within the community.

Agricultural Land Protection

While there is not much land within the City limits that is used for agriculture, Big Lake Township has identified the majority of lands south of the City (within the serviceable area of the City wastewater treatment facility) for long-term agricultural production. Although agricultural production is important to the region, urban growth pressures within Sherburne County and especially the areas of Big Lake and Monticello raise questions as to the viability of preserving agricultural lands in the long term. The Sherburne County Comprehensive Water Plan also points out that these lands are marginal for crop production without extensive irrigation efforts. The mix of sandy permeable soil conditions with extensive irrigation has the potential to result in ground water contamination. In fact, similar conditions near the City of Clear Lake resulted in high nitrate levels and water pollution problems.

A major community issue involving the City, Big Lake Township and Sherburne County concerns the desired level of protection of this land use. The current land use controls are not viewed as strong enough to in fact, preserve farmland and protect the area from premature development without public sewer and water. Precaution should be exercised to minimize sporadic development and to avoid gaps between development, which tend to interrupt the homogeneous pattern of urban services such as streets, utilities and parks. Urban growth boundaries, staged service area plans and an orderly annexation process should be pursued to allow for sound fiscal planning, economize service delivery, provide cohesive land development patterns and avoid sprawling developments. The City will need to work collectively with Big Lake Township and Sherburne County in this effort.

Ground Water Pollution

The majority of the City is served with sanitary sewer service with the exception of subdivisions in the northeast part of the community. These subdivisions were initially developed under the jurisdiction of Big Lake Township and later annexed into the City. There are no known instances where septic systems have failed however, as time passes and the systems become dated, the potential exists for ground water contamination. There are additional areas within the Urban Expansion District where small lot subdivisions have been permitted within Big Lake Township utilizing private wells and septic systems. The City will not only need to monitor ground water in these areas to ensure that no contamination of drinking water occurs, but will also face the undesirable task of introducing urban sewer and water into developed neighborhoods. The task of retrofitting older areas with municipal utilities is typically more costly, difficult from a physical installation perspective and controversial among neighbors.

The land areas between the southern City limits and Mississippi River are heavily irrigated to support agricultural production. Soils located in these irrigated acres have rapid permeability rates, which can carry contaminants to groundwater and are classified, as geologically sensitive lands. The combination of growth pressure, sandy soils and high levels of irrigation has the potential for serious impacts on ground water quality. This matter is of high importance because of the potential impact to the City's water supply and the likelihood that these areas may someday, be annexed into Big Lake.

Soil Issues

Soil classes present in Big Lake vary in their suitability for urban development. Overall, soils are generally acceptable for development but contain pockets of poor soils, which typically coincide with wetland areas, and may need special drainage control to accommodate development. The prevalence of poor soils becomes an issue related to land use development for several reasons. Most commonly, developable land is limited by the presence of hydric soils and creates issues related to development density and design. Wetlands in areas of development require unique street and lot arrangements which tend to yield less housing units per acre in low density zoned areas. Additionally, provisions for utility access and drainage are intensified and bring about longer-term issues, which the City must address.

Hydric soils exist primarily in the north and west parts of the community in the areas surrounding Blacks, McDowall, and Keller Lakes. The issues associated with development in areas of poor soils will likely become more predominant in the future as the City continues to grow. Wetlands, flood plains and the associated wet soil conditions that are associated with these areas will likely impede development options and further urban expansion to the north. The City will need to carefully evaluate the extent to which growth should continue to occur north and west of the current corporate limits. These issues are

significant in that the current land use plan for Big Lake Township and Sherburne County calls for future urban expansion to occur north of U.S. 10. Urban growth in this direction may be impeded by the natural topographic (soils, waterbodies, flood plains) features, which in effect, are barriers to urban development.

River Corridors/Floodplains

A notable variation to the gently rolling topography of Big Lake and the study area are the river corridor areas with their natural beauty and forested vegetation. These areas are the focus of development interest because they offer unique vistas, woodlands and wildlife that people desire to live by. The actual river flood plains present minimal development restrictions and as a result, are often targets for urban type uses. Such areas, however, pose a periodic threat due to high water and resulting loss. As a consequence, there is a need to preserve these areas and if development is to take place within their boundaries, ensure that measures are taken to afford adequate and appropriate protections.

The City currently borders the Elk River in the northeast part of the community and future expansion into the existing Urban Expansion District will result in additional access to the river corridor. While this is viewed as positive from an aesthetic and potential park and open space perspective, additional protections need to be considered to manage development of these sensitive lands. The City should consider adopting flood plain regulations, which establish structure standards and minimum base elevations to protect any investments adjacent to the river. In addition, flood plain areas should be retained wherever possible for open space and trail corridors for the enjoyment of the entire community.

A series of open space, park and trail corridors have been planned for the McDowall Lake and Shores of Lake Mitchell neighborhoods which utilize the lake, river and wetland features. Retaining public access, view and open space adjacent to these features is positive from a community recreation perspective as well as good policy on the part of the City to prevent overdevelopment of sensitive lands. The City will continue to face pressure to develop these areas for private use. A major issue for Big Lake will be to balance private interests with the need to provide public access and enjoyment of the limited natural areas within the community. Development of a community-wide park and open space system, including interconnecting trails, which utilize natural corridors, will be a task that the City will need to undertake soon before the opportunity disappears.

Lakes, Wetlands and Drainage Issues

Keller, Mitchell and Big Lakes are the largest water basins in the community protected by the State Department of Natural Resources. Other smaller lakes, wetlands and rivers are also located predominantly in the north and western areas of the community and study area. The waterbodies have been impacted over time by farming practices and urban

development, which have resulted in erosion, siltation, pollution from livestock waste, and fertilizer runoff, which have led to the decline of water quality. As natural amenities, they will continue to act as the backdrop to low density residential development. When this occurs, the single most important aspect will be the application of Shoreland District regulations, which are intended to preserve the natural state of the water bodies as aesthetic features, natural drainage basins, and for wildlife habitat.

Urban level development has a much more immediate and evident impact on natural drainage and wetland/ponding systems due to increased rates of storm water runoff associated with more impervious surfaces. Also, both agriculture and development alter drainage flows and typically involve the filling of natural ponding (storage and infiltration) areas.

The City does not currently have a comprehensive storm water management plan or program in place. As rapid growth continues, the lack of such a plan will continue to result in storm water, drainage, erosion control and water quality issues. It will be crucial for the City to take a more comprehensive approach to storm water management in the future in order to correct existing drainage problems, treat storm water to prevent further degradation of natural waterbodies and prevent costly infrastructure improvements. Additional protection for wetland areas should be considered including the establishment of setback standards as well as minimum buildable lot area requirements (outside of the ordinary-high-water mark) for lots platted adjacent to waterbodies.

Erosion

The loss of topsoil is a concern for agriculture and urban development and also often leads to the ultimate degradation of waterbodies in that many times topsoil is transferred to these locations by wind and water erosion. In this regard, both wind and water erosion are aspects of the problem. This is evident in the community as recent problems with drainage ditches have arisen as a result of topsoil and debris collecting in these areas and/or grading practices, which have taken place as part of development projects. This prevents the proper flow and handling capacity of storm water, thereby creating downstream flooding problems and siltation in connecting water bodies and streams.

As it relates to urban development, the City needs to play a key role to regulate and monitor grading practices and drainage planning. The replacement of agricultural land (lands brought into the City by annexation), with homes and businesses necessitates a redesign of drainage patterns from storm water, which flows predominantly overland and into drainage ditches as opposed to physical control of flows through the use of curb and gutter, storm water pipes and retention areas. Concurrently, farm fields with open soils and the lack of natural vegetation will be replaced with turf lawns and landscape plantings as a means of further eliminating wind and water erosion hazards.

The importance of establishing vegetative cover immediately following final site grading should be stressed to builders and contractors and enforced by the City. Subdivision regulations and development agreements should contain erosion control guidelines and mechanisms to ensure that erosion controls are installed kept in place and maintained during the entire construction process. Furthermore, zoning controls should also be put into effect for all uses that include land-disturbing activities (for example, grading projects requiring the removal of 50 or more cubic yards of material).

Air and Noise Pollution

At present, Big Lake is not plagued with any evident air or noise pollution of major significance. However, there are areas along S.T.H. 25 and U.S. 10 where structures have been allowed to develop within close proximity of these heavy traffic routes. Trash and noise generated from vehicles and semi-truck traffic impacts the quality of residential living environments and attention may be needed in terms of establishing buffers for existing homes. Likewise, many businesses along U.S. 10 are located extremely close to the highway. Outdoor eating areas and businesses catering to travelers are negatively impacted by noise and fumes from traffic as it moves through town, idles at traffic signals or while waiting for trains to pass. The City will need to carefully evaluate future development proposals adjacent to high volume streets and update land use controls to ensure proper setbacks, buffer yards and land uses are planned.

In addition to the highways, the increasing number of trains utilizing the Burlington Northern Santa Fe Railroad has been cited as an issue of concern. The addition of the Northstar commuter train will increase the number and frequency of trains traveling through Big Lake. The primary concern is the noise associated with the train whistles however, there are also vibration and trash impacts associated with the railroad. The City will need to carefully evaluate future development and redevelopment proposals adjacent to the railroad and update land use controls to incorporate increased setbacks, buffer yards, berms, landscaping and sound reduction mechanisms to alleviate air and noise pollution.

The City of Big Lake has evolved from a vacation destination and resting-place to a full service community with suburban character. Over several decades, but most notably in the last 30 years, Big Lake has been transformed into an urban environment due mostly to its key location with respect to major transportation corridors. Transportation improvements to Interstate 94 and U.S. 10 along with the expansion of the area cities such as Elk River, Monticello and the metropolitan areas of St. Cloud and the Twin Cities make it possible for people to live in Big Lake and commute to other locations for employment.

Today, the character of the community is proximate to that of a suburb providing a good living environment and support services for residents. The continued pressure for urban development however, necessitates that detailed attention is given to planning Big Lake's future and solving any underlying or outstanding problems.

Residential Development

Big Lake has provided very positive housing opportunities for typically young families. The development pattern has been truly suburban with relatively small lot single-family housing with a significant supply available in the low to modest price range. The older areas of the community have small lots and homes, which are located on lands originally intended for resort and cabin development. During the 1990's the City experienced significant growth due to the rapid development of large tracts of land. Many of the new developments were built on relatively flat, featureless lands that were used for farming prior to being annexed into the City. However some of the developments such as McDowall Oaks and Shores of Lake Mitchell were developed in higher amenity areas with abundant lakes and wetland features.

Two areas of the community contain an abundance of high-density apartment and townhome developments. One of the multi-family areas is located south of the ISD 727 School Campus and the second area is located northwest of the intersection of U.S. 10 and Euclid Avenue. A mobile home park is located in the south central part of the community. Other scattered sites of townhome development also exist throughout the community including Shoreview Townhomes, which is located along the southeast shore of Big Lake. A new mixed residential development (Big Lake Senior Apartments) containing a three-story apartment building and series of duplex units is planned to be developed along the southern part of Keller Lake.

A primary concern of community leaders is that there is an overabundance of entry-level housing and a need to expand housing type and value opportunities in the City. There is also concern about the deterioration of the existing housing stock and the ability to redevelop older portions of the community. Other high priority issues that are related to residential development concern the ability of the local population to support commercial

and industrial businesses as well as provide housing for the local work force. A key issue identified during the tactics phase of the Comprehensive Plan update process concerned the ability of Big Lake to create a sustainable community. There is a need for the City to take action to respond to the problems and concerns identified herein. Some efforts can be accomplished by City government however, issues of sustainability and housing market diversity will also require effective coordination and joint planning with Big Lake Township and Sherburne County.

1. Lack of Orderly Development Pattern and Non-sewered Development:
   The development pattern within Big Lake has changed from a radial pattern surrounding the lakes to linear expansion along transportation corridors. The growth pattern has not occurred based upon particular planning objectives or utility service areas. Rather, expansion has occurred based upon intermittent annexations and private development of individual properties. Lands are brought into the City based on the desire of individual property owners who have pursued development of their lands. As a consequence, the City is experiencing difficulties providing wastewater, recreation facilities, water pressure and drainage systems to accommodate the sporadic growth within the community. The most recent development pressure has occurred in the northern parts of the City, furthest from local wastewater and drinking water systems.

   Immediately outside of the corporate limits, residential and commercial/industrial development has been permitted with private septic systems and wells. These areas pose significant problems for the eventual introduction of municipal services because the development standards are typically incongruent with urban development standards of the City. It is expensive and difficult to retrofit older neighborhoods with municipal sewer, water and storm sewer facilities because existing landowners often oppose project assessments. Physical limitations associated with substandard street design, building placement and lack of open spaces to provide ponding and park areas also complicate matters. A major community issue therefore is the introduction, maintenance and financing of public infrastructure.

   Complicating this issue is the rapid development that is occurring within Big Lake Township, parts of Sherburne County and the study area. Market demands for acreage lots, low interest rates and fuel prices combined with development regulations that are less restrictive than those of the City, have resulted in accelerated development of rural areas. These factors have created favorable conditions for development of rural areas adjacent to Big Lake, and made it difficult for the City to compete for higher valued homes. People are able to build higher

value homes in the Township, (offering more privacy and larger tracts of land etc.), for a comparable amount of money as that required to construct a smaller home on an urban lot with full municipal services. These conditions create a high level of concern for the City of Big Lake and other local governments. While the individual may receive more home/land for their dollar, local governments including school districts, find it increasingly difficult to provide economical services to vast areas of development.

The existence and potential for further scattered residential development within the service area of the Big Lake wastewater treatment facility is considered to be a major community issue. Specifically, concern exists in regard to the efficiency and cost effectiveness of service delivery to such development. The issues here are the City's ability to: control remaining vacant land in the community and within the wastewater treatment facility service area, as well as to promote redevelopment and/or retrofit older areas of the community.

To economize service delivery, provide cohesive land development patterns and avoid further urban level development without urban services, the City should identify specific growth and planned utility expansion areas. In conjunction, a joint planning effort should be coordinated with Big Lake Township and Sherburne County to encourage the adoption of more restrictive regulations within the urban growth area to prohibit the conversion of vacant and agricultural lands to urban uses including residential, commercial and industrial uses without urban services (public sewer, water, storm water, urban section roads, parks and trail systems). A policy restricting development to one unit per quarter/quarter section within the entire urban growth area should be pursued. Amendments to the County's Land Use Plan and Zoning Districts should also be sought to prevent residential, commercial, and industrial development within the urban growth areas without urban services.

In the event of a mandated need to provide public sewer services to existing platted areas within the study area (i.e., along the Mississippi River), this development approach will add to the feasibility of installation of such facilities, while keeping costs to a minimum. Also, practices need to be implemented where, in the event public sewer becomes available, the ability to re-subdivide existing or future lots with urban services can be accomplished without variances. Such provisions however, need to be undertaken cautiously so as to maintain desired community and neighborhood character. A great deal of coordination and effort on the City's part will be needed to obtain support from Big Lake Township and Sherburne County, to implement land use controls that will result in the long-term benefit of the region, as opposed to one individual entity.

2. Housing Diversity:

A need for housing diversity is also viewed as a growing issue. Historically the City has been a source of modestly priced housing. The Inventory Report documented that 93 percent of Big Lake's homestead properties have market values less than $125,000 *(1999 market value for homestead properties, Sherburne County Assessor)*. This is due to a number of factors: 1) Development of small lots (originally platted for seasonal cabins), with larger, year-round single family homes. 2) Newer development of flat, relatively featureless lands that have resulted in quick build out of large areas with a limited variety of house styles often lacking interesting architectural design and landscaping details.

It is likely that there will continue to be a market for low to moderately priced housing however, an increased emphasis needs to be placed on middle to higher end housing types. For example, as the existing population ages, different types of housing styles will be necessary to meet changing physical and life style needs. There is also a need to provide for larger homes to accommodate families with older children and changing working dynamics, which allow work to be done in the home. It is becoming more and more desirable to provide office space within the home to accommodate computer areas for both students and adults. Families changing recreational desires as well as multiple vehicle homes often necessitate the need for three and four stall garage units, and larger storage facilities. The need for additional storage is exacerbated by the fact that Big Lake is a "lakes" community with a history of catering to recreational boating, snowmobiling and other activities.

A means to address these housing needs must be pursued now. This will serve to accommodate the upward mobility of existing residents as well as provide opportunities to attract new residents. It will also assist the City in enhancement of its tax base. To facilitate this objective the City should consider establishing design standards to create a diversity of home styles and architecture within developments. Standards that address contemporary design trends such as three stall garages, increased height requirements (allowing for steeper pitched roofs and contemporary building design options), and coving techniques (allowing varied front yard setbacks to accomplish the feeling of open space), exterior materials and/or increased floor area requirements should be considered. The City should also investigate higher standards for subdivision design, including such amenities as street lighting, entrance monuments and sidewalks.

3. Substandard Lots of Record and Lakeshore Development

As mentioned earlier in this report, a substantial amount of the community is

developed on small lots (less than 10,000 square feet), which were originally platted for resort and seasonal cabin use. The majority of the cabins have been upgraded to year-round homes. The City will continue to face problems associated with the desire of residents to upgrade their homes and add garages and storage buildings to small lots. To further complicate matters, current Shoreland Management District requirements are imposed upon pre-existing development. The result is that there are a substantial number of non-conforming lots and dwelling units within the older neighborhoods of the community that surround the lakes.

To address these issues, the City will need to take a leadership role and strictly enforce minimum lot size, impervious surface and setback standards. The combination of substandard lots should be required to result in parcels with enough land area to accommodate current housing styles. The City should strictly enforce provisions that do not allow the reconstruction of non-conforming units that are destroyed by fire. In instances where tax forfeited properties become available, efforts to acquire the lands for storm water infiltration and/or to combine the land with adjacent properties should be made. Furthermore, development of substandard lots should only be allowed if the lot size is at least seventy (70) percent of the required lot area and all setbacks could be met. These types of standards are supported by State Shoreland Management Rules and are intended to prevent further development that compromises the natural environment and the public health, safety and welfare.

4. Deteriorating Housing Stock

A principal concern of many relates to the deterioration of the existing housing stock. The City spends a great deal of time and money to acquire and remove dilapidated structures within the community. However, the task is increasingly difficult and it is not apparent that the current programs will be able to resolve this issue. Within the context of the Comprehensive Plan, there are opportunities to identify target areas, which have the potential for redevelopment that may spur additional private sector investments. One area where redevelopment could be pursued involves the neighborhoods located between Minnesota and Washington Avenues. This area of the community contains large lots that have the potential for redevelopment with "New Urbanism" techniques. Such an effort would involve a recombination of lots and possibly the introduction of alleys for access as opposed to direct access along Eagle Lake Road (CSAH 5). With this approach, design options to develop homes located closer to the front property line or possibly an area of row houses could be instituted. Such an effort would require the cooperation of the existing landowners and development of plan alternatives and possibly land acquisition/combination.

Other areas of the City that contain concentrations of homes that are dilapidated or that do not allow for conversion to current housing needs also exist. One such area is located in the vicinity of Idaho Avenue where the possibility exists to combine small lots into parcels that would support redevelopment of higher density attached housing. The areas located within close proximity of the Town Center should be considered for possible redevelopment and the opportunity to increase residential densities to support local business and civic areas.

Other options exist to improve the housing stock that does not require substantial investment by the City. Some of these options include code enforcement and requiring certain property upgrades at the time of a building permit for addition or alteration. The City could consider adopting standards regulating the conditions under which outdoor woodpiles, trash receptacles, and/or recreational vehicles can be stored. A mechanism that has been successfully used by many communities including the City of South St. Paul is the institution of a housing code requiring units to be brought into compliance with Building Code standards prior to their sale. The City will need to determine the extent to which it is willing to exert its authority to prevent further deterioration of the housing stock.

5. Medium and High Density Housing:

Medium density housing is rather limited in the community at this time. The lack of medium density development (usually characterized as 5-9 units per acre) creates land use transition issues among the low density residential and the high density residential and business uses. The establishment of these uses would benefit the community in several ways. Medium density residential units would add another tier of housing diversity to the available choices and could serve single person households, young couples and families, and older couples whose children are grown and gone.

The City has a relatively good supply of high-density housing consisting of apartment units, which are generally located south of the ISD 727 School Campus and northwest of U.S. 10 and Euclid Avenue. The current apartment complexes are in relatively good condition however they do lack recreational amenities and their appearance would be greatly improved with parking lot and landscaping improvements. The apartment areas are located on very flat, open fields and as such there are few trees and landscape materials to soften the appearance of the large structures. The City should consider instituting design standards for recreation areas, exterior materials, parking lots, landscaping and irrigation requirements for future high-density residential developments. Minimum screening

and buffer requirements should also be considered for multi-family projects.

Commercial Development

Commercial development within Big Lake consists of primarily service-oriented businesses that cater to the local population. The majority of commercial development within the community has occurred within the U.S. 10 corridor and on the north side of the BNSF Railroad. To this day commercial/industrial uses continue to expand eastward along this corridor, which also serves as the primary transportation route within the City (as well as to outlying areas). The railroad also has played a critical role in attracting businesses and connecting the City to outlying regions. This is expected to continue and potentially expand with the development of the Northstar Corridor commuter train system, which will link Big Lake to St. Cloud and Minneapolis.

Cities are often viewed in terms of the success of their business community. The commercial atmosphere of a City is also often linked to community image both from local residents and visitors. The U.S. 10 commercial corridor is the predominant man-made feature in Big Lake due largely to its location, use, function and visibility. The commercial corridor has evolved without any overriding concept. Further complicating matters is the dual function of the highway as a regional transportation system and local means to access various parts of the community. Unfortunately, the dichotomy between the two functions is at a point where intervention is needed from various government jurisdictions to ensure continued viability and safety of the highway system and the adjacent land uses.

As the community continues to grow, additional commercial development will be supported. A limiting factor however, is the availability of commercial retail and service opportunities in very close proximity to the City within Elk River and Monticello. With regard to future commercial service and development within the U.S. 10 corridor and elsewhere, the City must address the following issues:

1. <u>Expansion of Commercial Corridor</u>

   A critical land use issue, which is becoming increasingly more evident as the City grows, is continued linear expansion of the commercial/industrial strip along U.S. 10. The existence of the railroad serves as a physical barrier to southerly development and limits internal road circulation as well as subdivision design options. This situation combined with poor access management has resulted in transportation conflicts between regional and local traffic and a costly development pattern. Local, regional and state governments continue to make large expenditures to provide safe, managed transportation and infrastructure improvements for the benefit of relatively few businesses. Future commercial and industrial expansion should occur based upon nodes or clusters rather than linear

strip fashion, in order to maximize public investments for the greatest number of users possible. Focusing commercial development in nodes or clusters enhances opportunities for support services that can take advantage of larger numbers of employees, shoppers and business activities in a localized area. The City, Township and County need to work together to develop coordinated land use policies to discourage further strip commercial/industrial expansion along U.S. 10, S.T.H. 25, County Road 50 and 200th Street NW.

2. Development Quality

There are no current commercial developments, which set an architectural tone, offer unique styles or features within the community. The existing commercial uses have been developed over a period of time and comprise an eclectic mix of low profile and nondescript architecture. Exterior materials range from metal to wood, stucco, brick and masonry block. Newer buildings often reflect a franchise style of architecture, which again, lends itself to the nondescript feeling of the commercial corridor. A number of non-conforming residential uses and vacant lots containing overgrown vegetation and weeds also exist which detract from the commercial character of the area.

A number of buildings do not have paved parking lots, the lots are in disrepair and there are significant drainage problems with ponding occurring on walkways, parking lots and adjacent streets. There is a demonstrated lack of traffic control, internal circulation, drive isle and access restrictions throughout the business districts. In many instances it is impossible to tell where the local street ends and the parking lot begins because there is one massive expanse of pavement. Likewise, gravel and asphalt parking lots continue from one property to another resulting in large bituminous surfaces that are often unattractive, contain trash and debris, lack surface water drainage and are difficult to navigate due to uncontrolled vehicle movements. Other characteristics, which detract from the business areas are trash dumpsters that are left out in the open, a general lack of landscape treatments, little to no buffering and/or screening between uses, uncoordinated signage and poor traffic circulation.

To address these issues, a concerted effort will be needed to develop a good rapport between the business community and the City in order to effect changes in the existing developed commercial areas. Incentive programs to encourage building owners to upgrade their properties should be encouraged. In addition, minimum standards for parking lot circulation, landscaping, access and exterior materials should be developed and applied as new buildings are constructed and/or remodeled. The City should investigate redevelopment options to clear or relocate

inappropriate and non-conforming uses from the commercial areas.

3. Commercial Corridor / Redevelopment Opportunities:
Many areas along the commercial corridor contain non-conforming residential and/or industrial land uses. There are also several vacant lots and underutilized or vacant buildings. The business corridor contains a collection of unrelated business uses that are generally, automobile oriented. Some of the vacant property is being utilized for unimproved off-street automobile parking. The existing development pattern has resulted primarily to take advantage of good visibility from the highway. A major issue related to commercial land use configurations is the shallow strip development pattern along U.S. 10. The City should consider identification of target areas, which could be enhanced or redeveloped to spur private sector improvements along the corridor.

The City should also consider developing a commercial corridor plan designed to improve function, compactness, image, multiple use and circulation. To the extent possible, attention should be given to grouping specialized and/or similar land uses into identifiable nodes. Uses that do not contribute to the strength of the commercial corridor or have a sound economic reason for being there should be encouraged to locate in other areas where space and access are less restricted.

A focus of attention should be to improve circulation systems with efficient frontage roads, traffic signals, secondary access roads, organized and structured parking lots and pedestrian linkages. There is a need to separate local from regional traffic and allow, to the extent possible, neighborhood access to commercial uses utilizing streets other than U.S. 10. Better parking facilities with organized traffic flow devices will allow traffic to quickly, and more safely, move from the street into commercial facilities. A pedestrian system to allow pedestrian movement to occur from neighborhoods, schools, high-density residential developments and other facilities should also be considered. Improving the function of the commercial corridor will require a coordinated and planned effort involving both the private and public sector.

4. City Center
The original City Center existed in the areas where S.T.H. 25 crosses the railroad tracks and connects to U.S. 10. Remnants of the City Center exist today in the form of a row of commercial buildings located west of S.T.H. 25 and the vacant historic school building located in the northeast corner of U.S. 10 and Lake Street. The City Center is considered to be an area of significance due to the existence of unique structures, vacant land, good pedestrian access, existing restaurants and services.

The area is also located within close proximity to Keller Lake. A mixed development designed to integrate commercial, civic, recreation, entertainment and perhaps high-density residential components could occur in this area. There is an opportunity to provide a link between Town Center and Keller Lake and a unique business atmosphere that could be supported by local residents. The City as part of its economic development efforts should consider opportunities such as this.

Future Commercial Development

The City needs to challenge the existing policies and practices of the Township and Sherburne County that allow commercial development in areas without urban services. This type of development undermines the City's ability to introduce urban services, strains local and regional transportation systems and often results in land use compatibility problems. Furthermore, the ability of the City to attract and retain business is compromised when opportunities exist to build in the rural areas, which typically have less stringent development regulations. The City should make every attempt to work with the Township and County to preclude the expansion and premature development of commercial uses within the areas that could ultimately be served by the City's wastewater treatment facilities.

There is a distinct possibility that S.T.H. 25 will be rerouted from its current alignment to the west (in the vicinity of 200th Street/County Road 81). The City should closely monitor this process and make every effort to annex areas to control the lands contiguous to the future intersection of S.T.H. 25 and U.S. 10. Enough land should be sought to allow for development of planned commercial areas adjacent to the intersection that will provide long-term economic and employment benefits to the community. Planned commercial districts would be significantly different than the existing strip development pattern that exists in the community today. The objective would be to create areas with internal access and development focused on cluster settings, limiting individual access and frontage on the highways. The key to accomplishing this type of land use is to preserve large, vacant tracts of land, which will support planned development projects. In addition, it is necessary to develop objectives for the district to create significant employment and tax base opportunities and to resist the temptation to prematurely develop the areas with fast food, gas station and other types of uses that do not provide substantial long-term economic benefits to the community.

Planned commercial districts should allow for a variety of commercial activities within a self contained, comprehensively planed commercial center. This land use designation would require development plans to address the locations of all buildings, including orientation, development intensity, height, scale and architectural design features, signs, buffers,

landscaping, circulation and parking patterns, market analysis and open space. Appropriate uses may include offices and professional uses, retail and retail/service businesses. The markets for such districts would include a series of neighborhoods and sub-regional traffic.

Industrial Development

Industrial development like the commercial areas is concentrated along the U.S. 10 corridor. While the establishment of the Big Lake Industrial Park in the eastern part of the City is acknowledged, a continuing void exists within the City with regard to industrial development, which offers major employment opportunities. The potential to attract this type of industrial development is not known at this point. It is clear however that the City faces stiff competition from other areas including Elk River, Monticello and Becker, which have organized programs to attract development and offer financial incentives to entice developers to locate in their communities.

As with commercial development, the issue of concentrating industrial development should be considered to provide economical service delivery. In addition, more consideration needs to be given to the development and implementation of quality standards and attention given to the possibility of establishing different areas for differing types of industrial uses. The intent for establishing areas where similar uses are located is to minimize conflict between uses and protect investments. The City has begun this effort with the creation of Big Lake Industrial Park East located along the eastern edge of the community and north of U.S. 10.

As in the case of commercial and residential development, it is important that the City, Township and County work together to limit the amount of industrial development that occurs without urban services, especially within the ultimate service areas of the Big Lake wastewater treatment facility. In addition, the removal and/or relocation of incompatible uses from the industrial districts should be encouraged whenever possible. Other issues that should be addressed by the Comprehensive Plan include inappropriate location of industrial uses within commercial and residential areas, linear development along U.S. 10, exterior appearance, secondary road access, and parking lot design including internal traffic circulation, surfacing, drainage and landscaping. Prior to any expansion of industrial lands within the community, additional market analysis should undertaken to clarify what potential exists to attract and sustain industrial development.

Public/Semi-Public Uses

Within Big Lake there are a number of public and semi-public uses including City Hall, parks, ISD 727 School Campus, and churches. It will be important for the City to address and identify sites for future public facilities including parks, water towers, and maintenance

facilities. Planning should occur now to ensure that land areas are identified and/or preserved for the facilities that will be required to service the ultimate growth area of the community. An issue that will present itself in the near future concerns the expansion of the current school campus. The campus is located along the east side of County Road 43. Unfortunately, development within the Township has been allowed to occur east of County Road 43, that will not only impede the future expansion of the school campus, but will also need to be retrofitted for public utilities at some future date. The Comprehensive Plan should address issues such as these by incorporating policies to prevent premature development, contemplate the need for future expansion of public facilities, and reserve lands in the appropriate locations for public infrastructure improvements. A community facilities plan should be established as part of the Comprehensive Plan to ensure that a coordinated system of infrastructure, parks and services will be achievable without costly expenditures to retrofit, prematurely expand or duplicate public services.

Although a community's transportation system is comprised of many sub-elements, the City's primary concern due to its commuter, bedroom community status focuses upon its roads and related regional/sub-regional aspects. The following paragraphs highlight issues, which presently exist within this context.

1. U.S. Highway 10

   As the major traffic carrier, U.S. 10 serves local as well as regional and inter-state travel needs. U.S. 10 is an important thoroughfare linking the Twin Cities to St. Cloud and beyond. Unfortunately, this regional facility also bisects the City of Big Lake and is part of the community's local road circulation system. This fact has resulted in conflicts between regional traffic and local use of the highway to access various parts of the community. The City will work closely with MnDOT and Sherburne County to pursue frontage road designs, signalization, access restrictions and other devices to maintain and improve safety and traffic circulation within the corridor. The City will also need to carefully plan future land use and local road facilities in a manner that does not conflict with the regional highway system.

2. 200th Street & C.S.A.H. 5 Realignment

   The Sherburne County Transportation Plan proposes to realign 200th Street (Airport Road) from its current alignment to connect to County Roads 81 and 200th Street at a single intersection location with U.S. 10. The route would bypass Big Lake and remove some of the heavy traffic and the associated truck turning movement problems from the City. The realignment is of great importance to the City of Big Lake not only as a means to correct existing transportation problems but also as a major influence upon both existing and future land use.

   The City should be involved to the fullest extent possible in the realignment planning effort. It will be important for the City to evaluate and identify the impacts associated with the realignment and also to annex the land areas around the new intersection, into Big Lake. The new intersection will be a desirable location for commercial and/or industrial development to occur. As such, the City should seek to control the land uses that will occur near the intersection, to assure that future development will occur with urban services and well planned access/circulation. There will also be a need for the City to evaluate the impacts to the existing Town Center, associated with the intersection relocation.

3. County Road Turn back

   The Sherburne County Transportation Plan indicates that several roads, which are currently under the jurisdiction of the County, are planned to be turned back to the City. Big Lake should consider developing a policy with regard to this issue to

ensure that the City's best interests are secured. Items to be considered concern under what terms and conditions the City will take over jurisdiction for such roads. (I.e., the current physical condition of the road, improvements required to bring the facility into conformance with City design standards, method of reimbursement and maintenance issues/capabilities).

4. Local Road Network

As the community has experienced urban growth, U.S. 10, S.T.H. 25 and the County Highways have been the backbone of the City's road system. Mn/DOT and Sherburne County are however, experiencing difficulties financing and maintaining their road systems. This is especially true for Sherburne County, due in part to the exorbitant population growth it is experiencing. This situation is not expected to change in the foreseeable future. As such, it is increasingly important for the City to plan its local road network in advance of development. There will need to develop a road system network that is fairly detailed and classified as to function and related design standards. The system should be designed to assure multiple access points within and among developments to avoid funneling inappropriate amounts of traffic through existing neighborhoods. Particular attention also needs to occur in order to provide adequate collector and reliever roads to move traffic throughout the community without negatively impacting residential areas. A hierarchy of road systems is needed throughout the community to accommodate the amount of growth that is occurring.

Of particular concern are capacity and safety issues associated with Lake Shore Drive (former County Roads 73) and County Road 5. The existing lakes, wetlands and neighborhoods within the northwest part of the City make the introduction and/or upgrade of current facilities extremely difficult. There is a definite need for an east/west collector facility in this part of the community. Other areas of the community such as those adjacent to County Road 5 are developed with either inappropriate land uses and/or inadequate setbacks/buffering and lot depths to protect the uses from the negative impacts of the road. Because of the lack of collector and other higher functioning road systems, trucks and large volumes of traffic are forced to drive through the residential areas of Big Lake to access other areas of the County. This situation is anticipated to worsen with ongoing intensive development of areas of Sherburne County located north of the City.

Another issue of concern is the maintenance and upgrade of local and County Roads such as County Road 5 (Eagle Lake Road) south of U.S. 10, County Road 68 (Ormsbee Street), County Road 43, Humboldt Avenue and other frontage/backage roads. As Sherburne County plans to turn-back various roads,

the City will need to plan for their upgrade and maintenance. Many of the road facilities within the City are substandard in right-of-way and pavement width, do not contain curb, are subject to drainage problems and do not contain adequate pedestrian/bike systems. The City will likely be expected to take over more control and the financing associated with not only the local road systems but also various County roads and cost participation with the upgrade of State highways and railroad crossings.

It is apparent that the City will not be able to rely on Sherburne County to provide the level of transportation systems that will be needed to support growth anticipated within the City. As such, there is an even greater need to plan for and implement local transportation networks to provide for the needs of the community. The City should consider developing a Comprehensive Transportation Plan with the assistance of the City Engineer. Particular attention to future road alignments, functional classification, and design standards will be needed to improve the existing system and mitigate future problems. The Transportation Plan will need to be coordinated with the land use plan elements of the Comprehensive Plan. The City will also need to carefully plan for and develop maintenance programs and expand upon funding capabilities for these efforts. This effort should include pursuing State funding, ongoing capital improvements planning and closely monitoring assessment policies to ensure that adequate funds will be available to maintain and improve local facilities as needed.

5. Northstar Corridor - Commuter Rail

A commuter rail train station is being planned southwest of the intersection of U.S. 10 and County Road 43. This facility will provide an alternative means for residents to commute between the City and Minneapolis. From a transportation perspective, the City will need to plan for adequate parking facilities and internal circulation systems, which will allow traffic to easily access the facility. Pedestrian trail systems should also be planned to allow people to walk to and from the train station from adjacent residential, commercial, industrial uses and school facilities.

6. Pedestrian Trails

An important component of transportation planning involves providing a safe means for pedestrians to move from place to place within the community. The City is in the process of developing a trail system concept to separate pedestrian from vehicle traffic around Big and Mitchell Lakes. This plan also contemplates providing connections among several City parks. An overall trail system plan should be developed for the community so that links can be provided at the time lands is developed. The City should also consider adopting standards for design,

construction materials, and implementation of the trail system. The overall system should strive to provide pedestrian connections between major community facilities such as schools and parks as well as connections to the local business districts. A funding mechanism should also be identified and implemented as soon as possible. One option would be to establish a trail dedication policy in addition to the park dedication requirements within the Subdivision Ordinance.

The services and facilities provided by the public are a broad and encompassing number of items, which serve to protect the health and welfare of residents plus enhance the quality of their living environments. These are also matters in which the City may have a very direct and immediate impact as it relates to community character and development. As a consequence, these are very important matters to consider as part of the Comprehensive

Plan.

1. Public Sanitary Sewer and Water Services:
The City is just completing the expansion of its wastewater treatment facilities to accommodate anticipated growth for the next ten to fifteen years. There are two fundamental issues that are important for the City to address regarding the provision of sewer and water services: Definition of service area boundaries and financing. The City should consider identifying its projected ultimate growth boundary and then establish a plan for the phased introduction of infrastructure within that boundary. This is viewed as critical not only so that the City can plan for infrastructure needs, but also to control development in those areas that it believes will ultimately be under the jurisdiction of Big Lake.

The institution of urban and rural service districts with appropriate subdivision and zoning controls will give property owners an idea of when their lands will be serviced and also allow the City to control its growth. The objective is to give the City the authority to control the location, timing, land use and circumstances under which municipal infrastructure will be introduced, as opposed to the current practice where logical growth is hampered by pre-existing development. This policy change will also alleviate problems associated with having to retrofit pre-existing developments with new infrastructure.

2. Parks:
The City has increased the amount of public parkland within the community significantly over the past decade. New neighborhood parks have been dedicated as of the result of subdivision activities and the City is working to develop a trail system to connect many of the facilities. The City should consider the preparation of a comprehensive parks and trails plan including updated park dedication fees that are consistent with other communities in the region, sidewalk and trail dedication requirements, performance standards identifying the land characteristics that the City desires for its parks and design requirements. The City has a limited ability to finance park and trail improvements and therefore, it is critical that careful planning occur to ensure that appropriate location, area and facility improvements occur to provide for the recreation needs of the community. The City should also consider the formation of a Parks and Recreation Advisory Committee to assist in the preparation of a community plan and/or to provide recommendations for future parkland and cash dedications.

3. Public Buildings
The current City Hall is expected to serve the community's spacial needs for the immediate future however, additional space needs to accommodate a growing

police force may be needed in the future. The City will also need to evaluate and plan for additional maintenance facilities for public works and to accommodate park and recreation needs. As the population of the City increases, there will be associated public service needs. These may include fire station substations, police department, library, public works and parks and recreation facilities.

Beyond the physical aspects of the Comprehensive Plan is the very important issue of how the City will bring about a realization and implementation of the goals, policies and plans it has defined. Administration therefore is as important a consideration, which are prepared.

1. Zoning and Subdivision:
   The City has its own subdivision and zoning ordinances in effect however, concern exists in regard to their content and coverage. Both ordinances are in need of

updating in terms of performance and design standards. Considering that both ordinances are used on a day-to-day basis, an update of such regulations should be considered a high priority need for the City. To be recognized in this matter is that zoning and subdivision regulations are critical to implementing the City's desired character and standard of quality.

2. Economic Development:
The City and Big Lake Township jointly comprise the Big Lake Economic Development Authority. Several joint venture projects including Big Lake Industrial Park East have resulted due to the ongoing commitment to economic development. It will be important for the City to evaluate its potential to attract and sustain both commercial and industrial development within the community. Because of the fact that many of the neighboring communities are further along in their economic development strategies and the incentives they can offer, Big Lake will need to identify its niche in the marketplace. The City will also need to determine whether it desires to allow development to continue on a first come, first serve basis or seek to assemble appropriate land holdings for development of larger, more significant uses.

3. Growth Management:
As in the case of the 1987 Comprehensive Plan, an expansion of the City's tax base is viewed as a primary community objective. Related to such expansion is an ability to provide businesses (and residents) with necessary public services in the most financially responsible manner possible. Directly related to this objective is the need to ensure the financial viability of the sanitary sewer and water systems of the community. It is therefore important that community growth be managed and staged so that the financial success of these investments is not compromised.

Within the context of this Comprehensive Plan, the City will need to determine whether it will continue to grow on a parcel-by-parcel basis or seek to establish its ultimate projected growth limits and plan for phased community development.

The foregoing statements have focused upon the problems and needs of Big Lake and the subjects, which must be addressed as part of the Comprehensive Plan. While the problems have captured the primary spotlight of this report, the positive assets and opportunities of the community are not overlooked.

April 12, 2000

TO: Big Lake Mayor and City Council

RE: Big Lake Comprehensive Plan Update: Policy Plan

FILE NO: 243.05 E

We are pleased to submit the Policy Plan chapter of the Development Framework, which represents the fourth phase of the Big Lake Comprehensive Plan Update. To date, four of six phases have been completed in the update of the City's Comprehensive Plan. The first was the planning *Tactics Report* (dated April 1999), which summarized community views/opinions and highlights community concerns voiced by local officials and residents. The second phase *Inventory* (dated July 1999) provided an analysis of technical and factual data related to the social, natural environment, land use, transportation, and community facility aspects of the City of Big Lake. The third phase *Issues Summary* (dated December 7, 1999 entailed an analysis of the information collected and organized it into meaningful issue statements, which served as a basis for the *Policy Plan* chapter of the *Development Framework* element of the Comprehensive Plan.

The goals and policies that are outlined within the *Policy Plan* are founded upon and respond to the problems and opportunities, which were identified in the *Tactics Report*, *Inventory* and *Issues Summary*, elements of the Comprehensive Plan Update. The following Policy Plan is an attempt to respond to what are considered to be the primary local as well as regional concerns. The Policy Plan should be used as a decision-making tool and consulted prior to making important decisions related to land use development, redevelopment, transportation systems, or community facilities. An understanding of the policies will assist the City in making consistent decisions concerning development matters.

The fifth step in the Comprehensive Plan Update process will be to complete the *Development Framework*, which includes the transportation and land use plan chapters of the Comprehensive Plan. These chapters will explain the reasons for recommendations made, and provide direction as to alternatives that can be considered by the community. The Development Framework will contain specific direction for development and improvements within each of six neighborhood-planning districts, which have been established for Big Lake. The sixth and final element of the Comprehensive Plan Update will be the Implementation chapter of the plan, which will identify the steps, and strategies required to accomplish the plan objectives.

It has been NAC's pleasure to assist the City with the preparation of this material. Additionally, we look forward to the challenges, which lie ahead in the completion of the

Development Framework and Implementation sections of the Comprehensive Plan, which will guide Big Lake into the future.

Respectfully yours,

NORTHWEST ASSOCIATED CONSULTANTS, INC.

Deborah Garross
Senior Planner

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The basic intent of the Comprehensive Plan is to provide a coordinated decision-making framework to guide development and change within the community. The results of the Comprehensive Plan, if properly constituted and carried out, are stable and attractive residential neighborhoods, vital commercial and industrial locations, better traffic circulation and quality public services and facilities. In general, the Comprehensive Plan effort should maintain and enhance Big Lake as a desirable place to live and work.

The City has undertaken the task of preparing an update of its original 1987 Comprehensive Plan. In this regard, the update has involved a complete re-examination of all areas that affect future development patterns in Big Lake. The policies, which are outlined herein, are founded upon and respond to the problems and opportunities, which were identified in the *Tactics Report* (dated April 1999), *Inventory* (dated July 1999) and *Issues Summary*, (dated December 1999) elements of the Comprehensive Plan Update. The following Development Framework is an attempt to respond to what are considered to be the primary local as well as regional concerns.

The Development Framework begins with a Policy Plan, which consists of goals and policies. The Policy Plan should be used as a decision-making tool. The Policy Plan should be consulted prior to making important decisions related to land use development, redevelopment, transportation systems, or community facilities. An understanding of the policies will assist the City in making consistent decisions concerning development matters.

The second element of the Development Framework includes the transportation and land use plan chapters of the Comprehensive Plan. These chapters explain the reasons for recommendations made, and provide direction as to alternatives that can be considered by the community. The final section provides specific direction for development and improvements within each of the six neighborhood planning districts, which have been established for Big Lake.

The *Tactics Report*, *Inventory* and *Issues Summary* summarize a broad range of community issues, which will not be reiterated in the Development Framework. The Policy Plan component of the Development Framework has been formulated to provide policy and recommendations that respond to these community issues.

The purpose of the Policy Plan is to describe in writing what the community desires to

produce or accomplish with regard to the physical environment. The Plan also provides guidelines as to how these desires are to be achieved. Building on the issues and opportunities identified in the Tactics Report, Issues Summary and Inventory, this chapter identifies general community goals and supporting policies. The policy statements can be used as a benchmark against which development requests, proposed plans, programs and actions can be assessed. Policies should provide a decision-making framework for all public and private actions and development within the City.

The Policy Plan does not provide information on the timeliness and priorities for needed community improvements. Instead, it provides a series of criteria, which can be used to direct general actions undertaken by public and private groups in response to community needs. Moreover, the policies should be considered and utilized collectively. In some cases, a single policy may define and outline a course of action. More frequently, however, a group of policies will be applied to a given situation.

The flexibility and adaptability of the Policy Plan is particularly useful when unanticipated development decisions emerge. It complements the maps, ordinances, and city codes, which are more static documents. In some instances, policies may not address a new situation in the community. In this case, the Policy Plan should be updated or modified. This will give the Comprehensive Plan an up-to-date quality, which will withstand the test of time.

In the sections, which follow, the terms “goals” and “policies” are frequently used. These terms are defined as follows:

> **GOALS** are the generalized end products, which will ultimately result in achieving the kinds of living, working, and recreational environments that are desired.
>
> **POLICIES** are definite courses of action, which lead to goal achievement. They serve as guides to help make present and future decisions consistent with the stated goals.

Community goals should set the overall direction for the future of Big Lake. The following goals focus on improvement of the City’s social, economic, and physical environment. The City, as well as regional agencies, have the responsibility to accommodate and respond to

growth and development where and when it is needed. The City's policy is not to limit population or development, but to plan for and direct it in an organized and coordinated fashion.

Goal 1: Maintain and improve a safe, viable, orderly, productive and enhanced environment for all residents of the community.

Explanation: Functional land use, structural patterns, and transportation systems are needed to serve and connect, but not disrupt various land use concentrations. Community facilities such as water, sewer, police and fire protection, schools, parks/trails, and a community center should be provided and maintained in order to promote the health, safety, and welfare of individuals and the community as a whole.

Goal 2: Preserve and enhance Big Lake's character and sense of identity by creating a strong community-wide framework for cultural, social, commercial and recreational activity.

Explanation: Changes in Big Lake's population and orientation to adjacent communities and the metropolitan areas of the Twin Cities and St. Cloud, have altered the community character. Big Lake's individual identity can be preserved and enhanced through careful definition of goals and policies, attention to new community directions, and broadly coordinated community development efforts. Big Lake should work to achieve a full range of community-oriented services and facilities within a strong, consistent, and clearly identifiable framework and focus.

Goal 3: Provide for sustainable and continued orderly growth of the City through careful management of the development process.

Explanation: Growth in Big Lake is inevitable, but the methods used for growth management can have a considerable impact. The impacts of all new projects must contemplated and the appropriate provisions made to ensure that development is sustainable and will not burden the existing community. Future development will be required to identify projected impacts on public facilities and to provide the means to mitigate the impacts. The services required to support new projects will be financed by the development to the

extent permitted under law. Future development/community expansion will only be allowed when it is accompanied by supporting infrastructure and community services.

Goal 4: Prevent over-intensification of development, in other words, development that is not accompanied by a sufficient level of supportive services and facilities (utilities, parking, access, etc.).

Explanation: A major problem that the City faces concerns the amount of development that has occurred without providing for proper road access, easements, drainage and/or the ability to introduce sewer and water utilities. This problem is commonly associated with annexing lands that contain areas, which have been developed under Township or County standards without public utilities. Rural developments are typically approved with standards that are less restrictive than those of the City. As a result, the ability to retrofit the developments with sanitary sewer and water services is expensive, controversial, and sometimes not physically possible due to street/lot design/layout. To mitigate future problems the City will work with Big Lake Township and Sherburne County to limit the amount of development that can occur within the facility service area of the wastewater treatment plant. This task is planned to be implemented through policy and ordinance development based upon joint planning for the areas tributary to the wastewater treatment facility.

Goal 5: Plan for coordinated, orderly growth and development of extra-territorial areas.

Explanation: Growth patterns in the City of Big Lake will include infill development, redevelopment, and outward growth beyond its current boundaries. As part of its land use planning process, the City must anticipate and plan for utility, public service and street extensions. The City is aware that significant residential growth will soon consume the remaining land area within the community. This goal suggests active cooperation with Big Lake Township as well as Sherburne County to assure that the City and rural areas will not conflict. Long-range joint land use and annexation planning would be in the interest of the City and Township. Orderly

annexation agreements would provide for orderly growth and development, establish joint planning and regulation of land use, and avoid costly annexation confrontations for the City and Township.

Policies:

1. Encourage opportunities for a balanced population with respect to age and economic composition.

2. Develop a cohesive land use pattern, which ensures compatibility and functional relationships among activities.

3. Establish planning districts within the community based upon homogeneous or compatible land use characteristics and/or division by physical barriers.

4. Plan and develop residential neighborhoods according to predetermined planning/ development district boundaries.

5. Maintain and where possible, enhance environmental quality through implementation of zoning and land use standards/requirements.

6. Create programs and incentives for continuing privately initiated maintenance, improvements for energy conservation, and redevelopment of existing land use. When possible, the City may be a partner with already established private groups in undertaking development and redevelopment efforts.

7. Preserve and protect the public interest through consistent application of the Comprehensive Plan, Zoning, Subdivision, Sign Ordinances, City and State Building Code.

8. Promote equitable property tax by supporting uniform appraising standards Citywide.

9. Plan for and encourage development that facilitates energy resource conservation, yet maintains compatibility and relationships of uses.

10. Actively promote the economic growth and development of the community as a partner and in cooperation with the private sector.

11. Promote the development of permanent private sector employment opportunities in the

City.

12. Relate land use development to transportation needs, desired development and community priorities.

13. Analyze all development proposals on an individual but uniform basis from a physical, economic and social standpoint to determine the most appropriate uses within the context of the planning district in which it is located and the community as a whole.

14. Avoid over-allocation of use types on a community as well as a sub-area and development district basis.

15. Consider the removal of land from the tax rolls only when it can be clearly demonstrated that such removal is in the public interest.

16. Promote redevelopment efforts to acquire and redevelop substandard and/or non-conforming buildings and properties in conformance with the established district plans.

17. Renewal, replacement and redevelopment of substandard and grossly incompatible development is to be accomplished through public/private partnerships and programs.

18. Plan for coordinated, orderly growth and development of extra-territorial (those areas outside of the current corporate limits of the City), areas.

19. Accomplish transitions between distinctly differing types of land uses in an orderly fashion, which does not create a negative (economic, social or physical) impact on adjoining developments.

20. Wherever possible, ensure that changes in types of land use occur at center, mid-block points so that similar uses front on the same street, or at borders of areas separated by major man-made or natural barriers.

Goal 1: Maintain and where necessary, strengthen and enhance the character of individual neighborhoods.

Policies:

1. Preserve the integrity of existing single-family neighborhoods by prohibiting intrusion of incompatible uses.

2. Encourage the appropriate use of Federal, State, local and other financial resources in order to obtain funds and other incentives that will promote the rehabilitation of the existing housing supply.

3. Protect residential neighborhoods from penetration by through traffic on local streets. Where through traffic problems are identified, correct such problems as opportunities arise.

4. Eliminate substandard and inappropriate commercial development within residential areas the community.

5. Prohibit future commercial development within designated residential areas (neighborhood commercial uses should be viewed as unnecessary when the proximity of the neighborhoods to commercial areas is adequate).

6. Promote medium and high-density residential development around areas targeted for economic development to provide ancillary and market support.

7. Where appropriate, the existing housing stock is to be preserved and improved through inspection, code enforcement, and resultant updating.

8. The City will review enacting a Housing Maintenance Code or other programs to protect the health and safety of occupants and ensure the on-going stability of residential neighborhoods.

9. Encourage individuals to upgrade properties by implementing incentive programs as opposed to regulatory mandates.

Goal 2: Provide safe, healthy, attractive and high quality "life-cycle"

residential environments throughout the community that emphasize physically coordinated neighborhoods, which incorporate all dwelling unit types, sizes and styles.

Policies:

1. Residential development will be restricted or prohibited on floodplains, wetlands, and other natural features that perform important protection functions in their natural state.

2. Wetland areas will not be counted as buildable lot area in meeting the required lot size of the specific zoning district.

3. Establish minimum buildable lot area standards, (outside of the ordinary high watermark of waterbodies), for each residential district

4. Establish minimum structure setback standards from the ordinary high watermark of waterbodies.

5. Within urban residential areas, outside storage is to be minimized. For those instances where outside storage is acceptable, it is to be conducted in an orderly, confined, limited fashion and in a manner where the items being stored are fully screened from adjacent public properties.

6. Accessory buildings within urban areas should be of a compatible design and size to maintain a residential neighborhood character. Such buildings are to be limited to residential use related activities.

7. Property maintenance violations that infringe upon residential neighborhood quality pose public health, welfare and safety problems will be rectified and brought into compliance with current City standards.

8. All proposals for attached housing should provide for adequate soundproofing, increased energy conservation and provisions for social and recreational facilities within each development project.

9. All proposals for attached housing should provide for landscaping, building and grounds maintenance by a private association.

10. All new housing is to meet established zoning and building performance standards.

11. Disperse varying types and scale of housing units throughout the City.

12. Ensure that all new housing adheres to the highest possible standards of planning, design and construction.

13. Residential amenities that are required through zoning and subdivision regulations will be maintained.

14. Major streets are to border and not penetrate neighborhoods.

15. Maintain a balance in the types and quantities of housing units available throughout the City, emphasizing larger single family units/lots, low to medium density multiple family and elderly housing developments to balance with existing residential development.

16. Existing, undeveloped, single family residential land should be developed in a manner responsive to determined market needs and compatible with surrounding development.

Goal 3: **Provide sufficient housing in terms of cost, size, type, and style to meet the needs of all segments of the population, notably groups with specialized housing needs, such as the physically challenged and elderly.**

Policies:

1. Promote development of a variety of housing types for all stages in the life cycle.

2. Promote fair housing practices.

3. The preservation of owner-type housing for low and moderate-income households will be encouraged.

~~4.~~ The City will work with State; Federal and/or other government units to afford community residents access to housing assistance programs.

Goal 4: **Encourage the development of well designed multiple family dwelling projects which are compatible with adjacent uses.**

Policies:

1. Develop various housing types in a manner consistent with the City's Land Use Plan.

2. A balanced proportion of mid-density development will be encouraged and will specifically include provisions for traffic circulation that would mitigate adverse effects on existing single-family residential neighborhoods.

3. Multiple-family developments/units should not be concentrated but rather, should be distributed throughout the community.

4. Allow varied housing types as defined by the Zoning Ordinance consistent with the following percentage ratios:

Dwelling Type	Percent of Total Dwellings
Single Family, Two Family,	85%
Townhomes (3+ units) and (Apartments)	15%

5. Higher density residential areas should also be located as depicted on the Land Use Plan in close proximity to the Town Center or other commercial and industrial areas to take full advantage of the services provided in these areas. In addition, medium and high-density housing developments help provide the needed customer base for business uses. To avoid an overbalance of multiple dwellings (apartments), such a housing type should, however, not exceed fifteen percent of the city's total housing supply.

6. High-density housing is not to be utilized solely as a buffer or as a means to absorb negative impacts. Rather, high-density housing should be located on sites that offer amenities for the residents or developed with site amenities. The objective is to integrate high-density units within the community as opposed to concentrating large numbers of apartment units in one or two areas of the City.

7. High-density residential development should have access to, at a minimum, collector

level streets so that traffic generated by the complex will not be channeled onto minor residential streets.

8. Provide high-density development with reasonable, but not necessarily direct, access to major thoroughfares.

9. Multiple-family dwellings should be located in close proximity to public open space such as parks, playgrounds, schools and similar uses. In lieu of this, adequate private recreational space/amenities should be provided on the site.

10. Multiple-family development will be allowed within residential zoning districts if integrated as part of a Planned Unit Development. Multiple-family development should be designed to accomplish the following goals:

    a) Underground parking areas should be provided, where possible, to reduce the volume of outside parking and separate garages as a means of improving the general residential character of multiple family developments.

    b) Exterior materials should be high quality, maintenance free and consist of brick or other decorative stone/masonry type of materials.

    c) Multiple family developments should provide private playground/tot lot and other recreational opportunities for the residents of the development.

    d) Multiple family developments should contain landscaping designed to accentuate the buildings and provide for screening and or buffering for adjacent properties.

    e) The grounds of multiple-family developments will be irrigated to ensure the survivability of plants and to maintain the exterior appearance of the development.

11. Locate multi-family housing within appropriately designated zoning districts and as part of Planned Unit Developments that are located in close proximity to areas, which offer a wide range of existing supportive services, commercial and recreational facilities.

Goal 5: Encourage innovation in subdivision design and housing development through the use of planning techniques such as the cluster and planned unit development concepts.

Policies:

1. Promote innovative planning and design solutions.

2. Adopt standards for Planned Unit Developments to encourage innovative design solutions, more efficient land use, reduce unit land costs, lessen the amount of new dedicated streets (thereby reducing on-going repair and snow removal costs), lower utility costs (through reduced footage and hence lower maintenance costs), and reduce additional run-off resulting from development.

3. Encourage residential developments, which surround or are adjacent to City parkland to orient their units to maximize the aesthetic benefits and proximity to the parks and natural features.

4. Housing styles and development techniques, which conserve land and increase efficiency are to be encouraged, provided desired densities can be maintained.

5. New housing construction is to reflect modern and emerging construction techniques, styles and technology.

6. Provide for quality landscaping of public and private space.

7. Encourage design and planning innovations in both housing unit design and land development.

Goal 6: **Protect residential development from adverse impacts of non-residential uses, including noise, air, and visual pollution through implementation of appropriate land use, setback, and buffer yard and screening requirements.**

Policies:

1. Require strict adherence to all performance standards where higher intensity uses are located adjacent to single family neighborhoods.

2. Group homes and institutional uses should be located in appropriately zoned multiple

residential and business districts. Proposals should address proximity to shopping, park, recreation facilities, and transportation.

3. Establish sufficient setback, lot depth and buffer yard requirements for new development along major streets to prevent future problems of street upgrading (e.g., widening).

4. Establish setback and screening standards for all properties located adjacent to the railroad in order to protect residential homes from the negative noise, litter and sight impacts of the railroad.

Goal 7: **Maintain a high quality residential environment through rehabilitation or where necessary, redevelopment of substandard units. Undertake such actions through private means and/or public action, when feasible.**

Policies:

1. Whenever possible encourage the combination of substandard lots into buildable parcels.

2. Where structures are allowed to be built on substandard lots, the structures should be designed for and integrated into the site.

3. Continue to require minimum buildable lot area and dimension requirements for substandard lots of record.

4. Require development on substandard lots to conform to established impervious surface standards.

5. Require development on substandard lots to conform to off-street parking standards established for the use.

6. Enact appropriate zoning and subdivision controls to prohibit the reduction of yards, lots and parcels, below the minimum requirements set forth for the underlying zoning district.

Goal 8: **Develop objective community-based criteria that private development projects must demonstrate in order to qualify for Planned Unit Development status.**

Policies:

1. The City will set forth minimum performance standards that must be demonstrated by a project in order to qualify for PUD status. Said performance criteria may include standards for common open space, recreational amenities, operating and maintenance requirements, density bonuses based upon the amenities offered in the development, minimum design guidelines for private streets, and/or other amenities deemed appropriate by the City.

2. The City will amend its Zoning Ordinance to specify the public objectives that private development must provide in order to qualify for PUD consideration. Said objectives may include woodland preservation, establishment of the greenway system, implementation of various parts of the community loop trail/parkway systems, providing for view areas and scenic vistas and/or other objectives deemed appropriate by the City.

The water and natural environmental resources in Big Lake are the center and a principal attraction of the community. All site development proposals should utilize and promote the intrinsic properties of water resources and natural areas within the community. Developments should provide pedestrian access and/or public view of these features. The goals and policies set forth herein are intended to guide the proper utilization and preservation of natural features as valuable community amenities.

Goals:

1. Protect environmentally sensitive areas and unique physical features with special emphasis given to the lakes, wetlands and the Elk River.

2. Ensure that community development is compatible with features of the natural environment and can be accommodated without destroying environmental features and natural amenities.

3. Encourage residential living units to be designed to blend into the natural setting of the landscape for the enhancement of sound orderly economic growth and development as well as for the protection of unique natural features and wildlife habitat areas.

4. Encourage the use of a variety of housing types and subdivision design elements to permit steep slopes, wooded areas, and areas of special scenic beauty to be preserved as scenic easements, private and/or public open spaces.

5. Provide adequate protection through land use development policies, to maintain the environmental balance between natural and man-made physical features, and insure against property loss or deterioration of property values.

6. Preserve and protect the quality of Big Lake's natural vegetation against disease and unnecessary destruction.

7. Require screening and landscape plantings in association with all new projects or improvements to existing property which complements the architectural character of built features, blends the structural and natural environments, and which protects adjacent properties from adverse effects of the proposed development.

8. Ensure that land uses near U.S. 10, S.T.H. 25 and the railroad are compatible with expected noise levels in the area.

9. Within new development, preserve the maximum amount of public access to natural features as possible.

10. Utilize the Elk River as an aesthetic and recreational amenity by planning for development of a riverfront park.

11. Utilize Keller Lake as an opportunity to create a recreational amenity link to the Town Center/Civic Area of Big Lake.

12. Develop land use controls and regulate land development intensity, which respects the capacity of the natural environmental features to support such activity.

13. Provide protection for lakes, forested areas, wetlands, floodplains, river areas, storm drainage, and natural habitats to ensure against loss of significant community amenities.

14. Prohibit development on wetlands, floodplains and other natural features that perform important protection functions in their natural state.

15. Encourage the preservation, restoration, and enhancement of shoreland and wetland environments in their natural state. Where desirable and practical, promote development that complements these features and that which is in conformance with Federal, State, and local regulations.

16. Eliminate and prevent flooding problems associated with lake, wetland, river and/or drainage areas in the City by keeping drainage areas free of excess debris/silt and through proper design and management of infrastructure in urban areas.

17. Monitor the effects of increased pollution as the community continues to grow and prohibit those land uses or facilities, which contaminate the environment unnecessarily.

18. Maintain and where feasible, improve the natural and aesthetic quality of the City's water resources.

19. Protect and maintain natural wetlands, ponding areas and drainage ways in an effort to establish a community-wide storm drainage system.

General Policies:

1. New development and expansion of existing activities will be restricted and regulated where environmental damage may result.

2. City regulations on densities, lot size, and development design should be used to protect natural features important to the community and vital to desirable development.

3. Building designs must be integrated into a site having environmental features, which should be preserved.

4. The use of development cluster concepts and planned unit developments are encouraged where protection of natural features is important to the community and vital to development desirability.

5. Restrict or regulate expansion of any existing development where environmental damage may result.

Soils/Slope Policies:

1. In areas of soils that have limitations for development, soil testing will be required to identify the soil correction measures necessary to insure safe and quality construction.

2. Drain tile around building foundations and streets will be required in soil areas characterized by moisture retention, high water tables, or perched water tables.

3. Require erosion control plans for all site grading to prevent erosion, dust, and soil sedimentation.

4. Development on slopes identified as potential problem areas due to erosion or slippage characteristics will be restricted or prohibited. Methods of controlling erosion or soil slippage should be indicated on all development requests involving steep slopes.

5. Establish a pollution control program, which monitors the potential contaminants within the City, in order to protect soil and ground water resources.

Storm Water/Wetland/Drainage way Policies:

1. Restrict or prohibit development on wetlands, floodplains, and other natural features that perform important environmental functions in their natural state. Where desirable and practical, maintain such natural features in a condition for appropriate storm water system or recreational use.

2. Encourage infiltration and the use of natural drainage systems to manage stormwater wherever possible to limit the amount of disruption to natural systems and minimize the need for man-made storm sewer systems. Where infrastructure is required in urban areas, promote the most efficient and effective means of proper design and management, which best serves long-term needs.

3. Adopt and enforce wetland preservation regulations consistent with the Minnesota 1991 Wetland Conservation Act.

4. Require subdivisions to plat lots with minimum lot area above the designated wetland/lake boundaries to insure adequate buildable area and usable yards.

5. Institute buffer area landscape standards for areas adjacent to lakes and wetlands that require the maintenance of native vegetation and prohibit the clearing/mowing of vegetation to the waters edge.

6. Protect and preserve soil types associated with drainage ways in order to channel flowage, and control erosion.

7. Establish a storm water drainage policy that utilizes natural ponding, infiltration and provides municipal procedures for the acquisition or dedication of natural areas.

8. Require all new developments to manage on-site storm water generation to ensure that no negative impact will occur with regard to downstream flooding or water quality.

9. Integrate new development to the natural characteristics of the land to enhance the development through the preservation of attractive natural amenities (i.e., wetlands, waterways, wooded areas, slopes, etc.).

10. Require grading and drainage plans as part of any new subdivision, commercial development, or industrial development. These plans must illustrate proposed drainage patterns, planned for on-site storm water retention, and erosion control.

11. Ensure proper management of storm water runoff in all areas of the community so that post development surface drainage flows do not exceed pre-development rates.

Floodplain Policies:

1. Participate in the Federal Emergency Management Agency (FEMA) flood protection program.

2. Establish the Elk River as an aesthetic natural and recreational amenity within Big Lake.

3. Remove non-conforming structures from the floodway to enhance the River's appearance and to reduce potential flood hazards.

4. Continue to implement a floodplain ordinance consistent with FEMA and the Minnesota Department of Natural Resources guidelines, to protect property and public safety from damage due to flooding.

5. Maintain and improve flood protection facilities and efforts to ensure a timely and effective response to periodic floods.

Tree Preservation:

1. The City will develop a woodland preservation ordinance in order to protect the limited woodland resources of the community.[1]

2. The City will develop subdivision tree planting requirements for new developments in order to provide for tree cover, shade, traffic calming and neighborhood visual interest throughout the City.

3. The City will consider alternative development design options including individual site grading, narrow road widths and other practices designed to preserve existing woodland areas.

4. Require tree preservation to be a design consideration for subdivisions in areas having significant tree cover.

5. Programs designed to protect oak and elm trees through disease control measures and reforestation should be continued.

Recycling:

1. Continue to promote a community-wide recycling program to reduce levels of disposable waste.

2. Continue and expand the recycling programs within the City.

Goal 1: **Maintain and continue development of a strong economic base and create a favorable climate for the operation of responsible free enterprise systems.**

Policies:

1. Promote and maintain balanced commercial activity that is viable and responsive to the needs of the community and surrounding market area.

2. Efforts to achieve commercial redevelopment will be encouraged and promoted through both private and public efforts.

3. Promote the redevelopment and expansion of existing businesses to obtain a higher level of sales and business attraction.

4. Promote the attraction of new businesses that are complimentary to existing businesses and will contribute to customer attraction and business interchange.

5. High intensity commercial areas are to be supported by high density and medium density housing in close proximity.

6. Provide a balanced supply of commercially designated or zoned land in proportion to the market demands for commercial property and development.

7. Allow the development of additional convenience commercial centers only when there is clear and demonstrable evidence indicating a need for the uses proposed for the center. This evidence should include, among other related considerations, the delineation of the retail support area and its population, purchasing power of the retail support area by type of goods as well as the proportion which could be reasonably expected to be captured by the uses proposed, location of competitive facilities, and anticipated dollar volume per square foot of retail floor area.

Goal 2: Provide safe, convenient, attractive, quality and accessible commercial development within Big Lake.

Policies:

1. Safe and convenient pedestrian movement will be accomplished within all commercial districts via the use of sidewalks, trails or other means acceptable to the City.

2. Commercial properties should be platted at the time of development in order to ensure a thorough review of the site in relation to adjacent properties and to allow for the development of public streets, adequate drainage systems and pedestrian circulation systems within the business districts.

3. When possible or when opportunities arise, major street access to commercial districts should be at the periphery of the districts.

4. Promote clean up and improvement of parking lots, driveways, service roads and alleys to accommodate rear yard parking and customer access to businesses.

5. Promote commercial site clean up through community promotion and code

enforcement.

6. Commercial areas should be developed as cohesive, interrelated and coordinated units with adequate off-street parking and appropriate regulated points of access.

7. Development of scattered open parcels along the existing roads and highways will be accomplished in a fashion, which establishes functional development patterns (for example, utilizing shared access and parking, etc.).

8. Direct property access onto U.S. Highway 10, S.T.H. 25, and County Highways should be discouraged and the development of appropriate frontage/backage road systems will be encouraged.

9. Restrict commercial development at street intersections to ensure adequate setbacks, access, landscaping and signage that promote a good visual impression and does not interfere with traffic movement/function.[1] Development of one quadrant does not indicate or dictate commercial use of all of the remaining quadrants.

10. Require all new commercial development to provide adequate accessory uses (i.e., parking, loading, internal circulation, enclosed refuse containers etc.).

11. Promote high quality commercial development possible through site plan and architectural review.

12. All future highway commercial development must be respective of future planned highway improvements with regard to setbacks, lot size, access, and parking.

13. Expand a pedestrian circulation system within the existing commercial corridor, which connects major economic and recreational activity areas to residential neighborhoods and is compatible with the overall transportation system.

Goal 3: When opportunities arise, consolidate existing spot and uncoordinated linear commercial development into more functional patterns.

Policies:

1. Strongly discourage any further spot or uncoordinated linear commercial development in favor of a unified and pre-planned development pattern.

2. Whenever possible, remove or relocate inappropriate residential, industrial or other uses from commercial districts.

3. Encourage commercial redevelopment of blighted highway development through the utilization of private and public cooperative efforts.

4. Promote joint utilization of parking and other related supportive services in service and commercial districts.

5. Allow further commercial expansion within the U.S. 10, S.T.H. 25 highway corridors only for high quality developments that can demonstrated that no public expense burden will be generated and that such development complies with and contributes toward the goals and policies of the City.

6. When opportunities for re-development/re-subdivision arise, allow for the expansion of commercial lots where additional screening and/or off-street parking areas can be accommodated.

Goal 4: Maintain and improve the commercial, retail service focal points for the community.

Policies:

1. All service and commercial uses should be adequately screened or buffered from any adjacent residential development.

2. Commercial development should be adequately landscaped in accordance with community requirements as may be amended.

3. Discourage the intrusion of commercial land uses in residential districts. When shown to be necessary, commercial uses are to be located only at the intersection of collector or arterial roadways.

4. Establish an orderly transition between commercial areas and low-density residential neighborhoods through the introduction of either higher density residential or limited business commercial development.

5. Order the residential density patterns in a manner of decreasing density from areas immediately abutting the U.S. 10, BNSF Railroad corridor areas to both existing and planned low-density residential neighborhoods.

6. Predetermined development standards will be established to ensure the quality of development desired by the community.

7. Outdoor commercial storage should be strictly enforced to ensure that exterior storage is limited to only those areas approved for the site and to require maintenance of screening/fencing.

8. Materials that are associated with environmental pollution will not be stored outdoors or in a means whereby contamination of the air, soil, surface or groundwater could occur.

9. Develop and enforce ordinances to eliminate the visual pollution created by signs and "franchise" architecture.

10. Signing of commercial properties will facilitate identification and business promotion and will be in strict conformance with City Ordinances.

11. Visual pollution from signs, utility lines and dilapidated structures is to be eliminated through the strict enforcement of City Ordinances.

Goal 5: Review existing uses located along the periphery of the commercial districts and develop ordinance use and yard standards, which allow for the re-use of existing buildings.

Policy:

1. Develop an inventory of commercial buildings that are underutilized due to access restrictions, building construction, poor visibility and/or other criteria deemed appropriate by the City.

2. Review and revise City Ordinances to allow for uses and yard standards that take into account the property restrictions and allow for the maximum utilization of the commercial property.

Goal 1: Promote the development of high quality, high value industries that enhance the City's economy through an improved tax base and expanded employment base within Big Lake.

Policies:

1. Promote full development of Big Lake Industrial Park East with uses that incorporate quality site design, scale and exterior materials.

2. Discourage further linear industrial expansion along major roadways and highways by encouraging industry to develop within the Big Lake Industrial Park.

3. Promote the on-going maintenance and improvement of existing industrial uses. Introduce screening, buffering, and landscaping to better protect adjacent residential neighborhoods.

4. Industrial properties will be platted at the time of development in order to ensure a thorough review of the site in relation to adjacent properties and to allow for the development of public streets, adequate drainage systems and pedestrian circulation systems within the business districts.

5. Promote the infill of development in the existing industrially zoned areas of the City.

6. Plan for and set aside adequate areas for long-range industrial expansion in addition to the existing industrial park and zoning districts.

7. Identify industrial activities complementary to existing activities and promote and facilitate the development of such industries in Big Lake.

8. Encourage site upkeep and maintenance through code enforcement to promote a positive industrial image in Big Lake.

Goal 2: Promote the type of industrial development, which maximizes the return on city investments in public facilities and services.

Policies:

1. Give due consideration to all potential physical implications and services and facility demands (i.e., traffic generation, sewer and water demands, etc.) of any proposed industrial development.
2. Within economic capabilities, provide those public services and facilities to Big Lake industries to help ensure their satisfaction with locating in the community.

3. Consolidate industrial uses in compact and functional districts. When possible, assemble large industrial land parcels.

4. Promote quality development through the enforcement of zoning performance standards.

5. Encourage industrial site designs that integrate the facility with natural features of the land and provide an aesthetically attractive appearance.

6. Promote the development of transitional land use between differing land uses to provide buffering and separation in an effort to establish compatible land use patterns.

7. Prohibit penetration of residential neighborhoods by traffic generated by industrial activity.

8. Industrial development will provide adequate off-street parking and loading facilities.

9. Outside storage of equipment and materials will be screened and landscaped to eliminate any visual impact from streets and other public view areas.

10. Existing industrial uses and new industrial development will not cause pollutants or contaminants to be emitted into the surrounding environment in excess of state and federal regulations.

11. Ensure that industrial uses are developed with paved parking lot facilities, which allow for access and internal circulation that accommodates semi-truck traffic and/or the use of heavy equipment.

12. Industrial uses should provide for adequate storm water control and management consistent with requirements of the City.

Goal: **Work to achieve cooperation in annexation requests by developing orderly annexation agreements with neighboring Big Lake Township, which will be mutually beneficial to each jurisdiction.**

Policies:

1. Establish open and ongoing communication with Big Lake Township and Sherburne County to monitor and evaluate growth and annexation issues.

2. Establish an annexation policy, which specifies the conditions under which land will be brought into the city.

3. Do not allow development to occur without public sewer.

4. Big Lake's plans for future growth in bordering and extra territorial areas should be coordinated with Big Lake Township through implementation of orderly annexation agreements, joint planning efforts or other means to allow for the eventual introduction of sanitary sewer and water services.

5. The City will work with Big Lake Township to develop orderly annexation agreements or joint plans that identify the urban growth boundaries of the City and target years for areas eligible for orderly annexation/phased urban expansion.

6. A joint planning board consisting of members from the City and Township should be instituted to review land use/subdivision proposals within the orderly annexation area.

7. The orderly annexation area will be subject to the Zoning and Subdivision controls of the City of Big Lake or other ordinances jointly agreed upon by the City and Township.

8. Through initiation of a joint planning effort between the City, Township and County, investigate opportunities and obstacles concerning the consolidation of Big Lake and Big Lake Township.

Goals:

1. To the extent possible, establish and promote physical features, which will help create a sense of community identity and recognition.

2. Plan and provide public facilities and services in a coordinated and economic manner on a basis that is consistent with the nature of development and possible pending problems within the community.

3. Minimize costs and undue further investment for public facilities and services by encouraging full utilization of existing and available service system elements prior to future expansion.

4. Ensure adequate distribution and provide for safe, easy access to all facilities and services within the community.

5. Initiate dialogue with Big Lake Township and Sherburne County to discuss development of an orderly annexation area, agreement(s) and joint planning agreements, which outline the planned urban expansion of the City.

6. Minimize the impact of non-local facilities, (such as powerlines, pipelines arterial roads etc.), which cross or are located in the community, through the use of land development guidelines.

7. Public systems such as storm drainage, water supply and sanitary sewer along with their private extensions should be designed in a comprehensive manner to utilize fully the natural environment conditions minimizing development cost.

8. Through establishment of a Capital Improvement Program, plan and budget for public service improvements such as utility extensions or upgrading, fire and police protection, waste water treatment plant expansion, roadway network connections/ improvements, and recreation system elements, as dictated by new or anticipated development.

9. Provide the services and facilities essential for the protection, operation, and use of public and private property in the City.

10. Ensure that intensification of land use activity and development is accompanied by sufficient corresponding increases in related supportive and service facilities such as

parks, off-street parking, fire and police protection, road systems etc.

11. When new or expected development necessitates, initiate impact studies and cost analysis for public service improvements such as utility extensions or upgrading, fire and police protection, wastewater treatment plant expansion, roadway network connections/improvements, recreation system elements, and schools.

Public/Semi-Public Utilities

Goal: **The City will plan its utility, service and street extensions to accommodate fiscally responsible, long term planned, managed, sustainable growth and expansion of the community.**

Policies:

1. The City will evaluate future growth in terms of its local infrastructure capacity.

2. The City will require developers to provide information concerning the projected impacts to local services including police, fire, rescue, utilities, parks and recreation and schools.

3. The City will work with the appropriate landowners and agencies to acquire land to accommodate the future eastward expansion of the wastewater treatment plant.

4. Based upon available information and demand projections, the City will identify sanitary sewer service district(s) to provide for a maximum five-year supply for urban development.

5. The City will identify an urban service area, (by using sanitary sewer districts, or other appropriate means), whereby phased development and installation of infrastructure will occur in a planned and coordinated manner.

6. An urban reserve area will be established which is designed as a holding zone for future long-term community growth. The urban service area reserve will graphically identify lands within the City, which will be considered for sanitary sewer service district expansion.
7. The urban and urban reserve area boundaries will be identified based upon facility capacity, water tower service areas, lot inventories, the logical physical location for extension of utilities and the agricultural/use characteristics of the land.

8. Urban and urban reserve service areas will be clearly designated with appropriate density and use controls, to facilitate staged and substantially utilized service systems.

9. Boundary limits for urban expansion will be clearly delineated in a staged manner and non-farming type uses will be prohibited from prematurely encroaching into urban reserve/agricultural areas.

10. The spread of small scale, non-farm subdivisions and/or uses in urban reserve areas is strongly discouraged.

11. To preserve agricultural land use within the urban reserve areas, a maximum density of one unit per quarter, quarter section (forty acres) should be instituted.

12. To prevent an over-allocation of land zoned for any particular use in excess of actual demand or service capacities, an agricultural zoning district will be maintained for lands within the urban reserve district, and for new lands annexed to the City, until such a time as the property is eligible to be rezoned to a higher, urban use that is guided by the Land Use Plan.

13. A rezoning of property to allow a more intensive land use that is guided by the Land Use Plan should be deemed premature unless the criteria set forth below are satisfied:

    a. Consistency with the Comprehensive Plan: A proposed development will be deemed consistent with the City's Comprehensive Plan when the development is consistent with the goals, policies, and recommendations of the Comprehensive Plan. Developments that follow planned public improvement corridors or constitute an in filling of development will be deemed consistent with the City's growth strategies as outlined in the Comprehensive Plan.

    b. Adequate Waste Disposal Systems: A proposed development should be deemed to have adequate waste disposal systems if within the sanitary sewer service district, there is adequate sewer capacity in the present system to support the proposed development if constructed to its maximum permissible density after reasonable sewer capacity is reserved for planned public facilities, and commercial and industrial development projected for the next five (5) years; or if in areas outside of the sanitary sewer service district, there is adequate on-site sewer capacity potential to support the development if constructed to the maximum permissible density indicated in the Big Lake Comprehensive Plan.

c. Adequate Water Supply: A proposed development should be deemed to have an adequate water supply if the development has adequate sources of water, either from public systems or private wells, to serve the proposed development if constructed to its maximum permissible density without causing an unreasonable depreciation of existing water supplies for surrounding areas.

d. Adequate Drainage: A condition of adequate drainage will be deemed to exist if:

    1. Surface or subsurface water retention and runoff are such that it does not constitute a danger to the structural security of structures within the proposed development.

    2. Structures within the proposed development will not cause pollution of water sources or damage from erosion and siltation on downhill or downstream land.

    3. The proposed development and related site grading will not cause harmful and irreparable damage from erosion and siltation on downhill or downstream land.

    4. Factors to be considered in making these determinations may include: average rainfall for the area; the relation of the land to the floodplain; the nature of soils and subsoils and their ability to adequately support surface water runoff and waste disposal systems; the slope of the land and its effect on effluents; and the presence of streams as related to effluent disposal.

e. Adequate Streets: A proposed development should be deemed to have adequate streets to serve the development when:

    1. Streets that serve the proposed development are of such a width, grade, stability, vertical and horizontal alignment, site distance and surface condition that an increase in traffic volume generated by the proposed development will not create a hazard to public safety and general welfare, or not seriously aggravate an already hazardous condition, and when, with due regard to the advice of Sherburne County and/or the Minnesota Department of Transportation, said

streets are appropriate for the intended use.

2. The traffic volume generated by the proposed development would not create unreasonable congestion or unsafe conditions on streets existing at the time of the application or proposed for completion within the next two- (2) years.

f. Public Service Capacity: A proposed development will be determined to have necessary public service capacity when services such as recreational facilities, police and fire protection and other public facilities, which must be provided at public expenses, can reasonably be provided for within the next two (2) years.

g. Consistency with Capital Improvement Plans: A proposed development will be deemed consistent with capital improvement plans when improvements and/or services necessary to accommodate the proposed development have been programmed in the Big Lake, Sherburne County or other regional capital improvement plans or that a revision to capital improvement programs can be accommodated.

h. Those that initiate a request to rezone property for the purpose of allowing a more intensive land use that is guided by the Land Use Plan should demonstrate that the requested action is not premature.

12. Once established, geographic land use designations and related zoning classifications should be changed only when it can be demonstrated that such modifications are in the best long-term interest of the community. Such changes should occur only when they will promote land use compatibility and pre-determined goals and policies of the Comprehensive Plan.

13. Immediate, short-range market potential and demands for activities, which are not suggested for a site or area by the Comprehensive Plan or allowed by the Zoning Ordinance, should not be the sole justification for a change in activity.

14. Where land use allocations are provided for long term market needs and absorption, interim uses should be considered for such properties provided that such activities can exist in harmony with existing and proposed uses and that such uses will not serve as obstructions to planned activities and development.

15. Leap frog" or premature urban development in Big Lake will be discouraged by

requiring all new development to comply with the City's growth management policies.

16. When new or expected development necessitates, impact studies and cost analysis for public service improvements such as utility extensions or upgrading, fire and police protection, waste water treatment plant expansion, roadway network connections/ improvements, recreation system elements, and schools should be initiated.

17. The community should be planned and developed on a unit (neighborhood) basis as determined by physical barriers and/or homogeneous land use characteristics and urban/rural development area boundaries.

18. Big Lake will cooperate with other units of government such as the County, School Districts, state and federal governments to coordinate the provision of facilities and insure all necessary services are readily available within the corporate limits of the City.

19. Proper growth and development control will be accomplished by means of properly administered zoning, subdivision and building/property maintenance ordinances and follow up inspection and enforcement.

20. Expansion of sanitary sewer facilities should only be permitted when all of the following have been satisfactorily met:

    a. Land to be included in the sanitary sewer service district is not enrolled in "green acres" or other types of agricultural preservation programs.

    b. The land lies within one-quarter mile of the sanitary sewer district boundary or presents environmental problems that can be alleviated by delivery of City water and sewer service.

    c. The land is located within the designated urban service area reserve.

    d. The potential sewer discharge of the land area to be included is within available capacity limits.

    e. The developer/owner will hold the City harmless should limitations on sewer hook ups be imposed.

    f. The developer and/or benefiting property owners assume the significant majority of improvement/service costs.

g. The land does not qualify as a premature development or subdivision as regulated by the City's Subdivision Ordinance.

h. Inclusion of the land in the sanitary sewer service district is necessary to achieve a five-year supply and respond to a shortage of land to which service is available.

22. Municipal sanitary sewer and water service should be provided only to lands within the immediate urban service area that are contiguous to developed areas of the City.

23. Sanitary sewer allocations will be provided on a "first come-first serve" basis.

24. Sanitary Sewer should be financed by those who receive such service.

25. Developers will be responsible for costs associated with the extension of municipal utilities to new developments.

26. Assessments associated with sanitary sewer service will be imposed in accordance with the assessment policy of the City, which establishes financing methods for various City improvements, including, but not limited to, trunk mains and laterals for sanitary sewer and water.

27. Utility lines installed to serve a particular parcel of land will be extended at the developer's expense through the parcel to provide future hook up opportunity to adjacent property.

28. The phasing of the introduction of municipal services to various areas within the Urban Expansion District will be identified in the Comprehensive Plan in order to allow property owners to plan for the conversion of rural land to urban development. The City will establish an ultimate growth boundary projection and staged development plan based upon its infrastructure capacity. The staged growth areas will be established based upon realistic growth expectations.

29. Easements for utility systems will be required and located according to uniform standards, providing for ease of access for maintenance and repair and minimal disruption of other activities or areas.

30. Underground installation of all new utility services will be required, and when

economically feasible, the conversion of existing overhead systems to underground is to be encouraged and promoted.

31. The City will consider developing a program (consistent with the requirements of MPCA Rules 7080) to monitor private septic systems to ensure that they are maintained in working order and do not pose pollution problems. Said program may be established in conjunction with other agencies.

32. Any non-local utility lines and essential service facilities which are located in or which are routed through and bisect the community will be located in such a fashion as to minimize impact upon existing as well as future development.

33. Coordination among all utility improvement programs should be required (i.e. utilities should be bunched in common trenches).

34. Runoff will be managed to protect the ground water recharge areas in accordance with the City's policies.

35. Soil types associated with drainage ways will be protected and preserved in order to channel flowage, and control erosion.

36. Natural drainage will be preserved to the extent possible in order to minimize storm sewer costs.

37. A Capital Improvement Program for all public facilities should be prepared and annually updated.

Goal: The City will develop a policy to address requests from other jurisdictions and private developers to provide sanitary sewer service to areas outside of the corporate limits of Big Lake.

Policies:

1. Requests to provide sanitary sewer service to areas outside of the City of Big Lake will be evaluated in terms of the impact the proposal has on the ability of the City to provide service locally to accomplish its local land use objectives.

2. The City will establish the priorities and terms under which it will consider sanitary sewer extensions to areas beyond its corporate limits.

3. The City will establish appropriate fee schedules to ensure that all installation, construction, and the physical cost of pipes, lift stations and other improvements are paid for by the jurisdiction to which services will be extended.

4. The City will retain ownership of the physical system and charge fees to cover all costs associated with treatment, plant improvements or other system modifications needed to accommodate the proposal.

5. The party requesting sanitary sewer service extensions will be responsible to finance all studies, research, review, construction and inspection of utilities.

Governmental Buildings, Facilities and Services Policies

1. Cooperation and coordination between governmental units should be promoted and encouraged in the provision of public facilities and services.

2. An objective of the City is to maximize the use of public resources, buildings and facilities.

3. Public facilities and services should be located and centralized so as to offer ease of access and minimal response time. The facilities should be readily accessible to both the existing and planned street system. These facilities will also be designed to enhance community identity and recognition.

4. All public facilities will be developed, improved and maintained according to adopted standards of design and performance to serve as examples for private development. Public facilities should present a positive appearance.

5. Public buildings will be designed and maintained to be resistant to personal and property crime opportunity while maximizing public and City usability.

6. Those areas, places, buildings, structures and other features having significant architectural, historical, community or aesthetic interests and values should be preserved to the extent possible.

7. All public facilities will be located where the proposed use is compatible with the existing and proposed land use of the area.

8. Public facilities should be developed upon sites, which offer ample land area for any necessary expansion.

9. Potential public facility sites should be evaluated for their compatibility to the City's sanitary sewer plan.

10. The displacement and relocation of residents resulting from the development of governmental service facilities will be discouraged.

11. Public facilities should be adequately screened, landscaped, and buffered in order to minimize their impact on surrounding uses and enhance the community and area in which they are located.

12. The water towers associated with the City's municipal water system will be located such to both fulfill its intended function and promote Big Lake's identity.

13. The City should examine the feasibility of providing additional fire substations within the community, which will adequately protect citizens within the existing and potentially expanding fire service area.

Parks and Open Space Policies

1. The City will promote the development of a coordinated Park and Trail System Plan to address the recreational issues and opportunities within the community.

2. The City will classify and make any improvements to the park and open space system utilizing the following types of parks where encouraged by the Park and Trail System Plan:

    a. Community Parks: These parks would provide facilities for more intensive recreational activities, such as tennis courts, ball fields, swimming pools, and ice skating rinks.

    b. Neighborhood Parks: These parks could be much smaller in size than the community parks, and only provide limited recreational offers for children such as tot lots with small climbing apparatus; or walking trails with park benches and picnic areas oriented towards adult-type recreation.

c. Linear Parks/Greenway/Open Space System: These parks would be set in natural areas of the community where preservation of the natural environment would be the primary emphasis. Hiking trails, wildlife sanctuaries and picnic facilities would be among the primary uses of such a park facility, which in turn would benefit the natural wildlife of the area and natural enthusiasts.

3. The City will gauge capital improvements made to individual park facilities on the basis of relative need for developed park facilities.

4. Recreational open space improvements should be programmed in accordance with a Capital Improvement Program and updated on an annual basis.

5. New recreation sites should be pursued in association with new residential subdivisions, which serve a broad range of age groups and activities.

6. The City will investigate opportunities with the School District and/or other government jurisdictions to provide for shared recreation/open space amenities.

7. Parks should be designed and maintained with proper lighting, landscaping, shelter design, etc., to ensure a high degree of public and property safety.

8. The City will encourage continued citizen participation in the planning, development and operation of recreational open space.

9. An appropriate balance between active, passive, and cultural recreational areas and activities, tailored to the needs of the total population throughout the community should be provided.

10. When financially feasible, recreational facilities and a year-round program of activities should be provided which are suited to the varied recreational needs of all age groups within the community.

11. On a periodic basis, the City should undertake studies to analyze the effectiveness and comprehensiveness of the community recreation program.

12. When financially feasible, safe and convenient pedestrian and bicycle access to recreational facilities will be provided.

13. The use of motorized recreational vehicles will be limited to designated areas.

14. When financially feasible, the City should acquire and reserve sufficient park and open space land to fulfill the needs of the present and projected future population of the community.

15. Parks and open space should be developed and improved to take maximum advantage of natural community features.

16. Where necessary, park and open space areas should be screened, fenced or buffered for the safety and protection of the user.

17. Neighborhood and community scale recreational facilities should be located within safe and easy access of users.

18. Adequate parking will be provided to serve major park and recreational facilities.

19. Cooperative agreements with the School District(s) should be established for provision of recreational open space areas, athletic programs and services.

20. Park and open space facilities will be planned and developed in coordination with similar services of surrounding communities.

21. Dedication of land for park and open space facilities should be accepted only when the land satisfies the predetermined needs of the community.

22. The City will continue to monitor its park dedication fee structure to ensure that implementation of the community-wide park and trail system will be accomplished.

23. The City will investigate the use of separate trail dedication requirements to implement the community trail system.

24. Park improvements associated with development proposals will be required to be installed at the time of development to ensure that park facilities are available to neighborhood residents.

Transportation is a system composed of differing modes, which respond to the access needs of a community. Full attention is required to all modes within the system to ensure a balanced operation as well as a system, which properly responds to the requirements of all individuals. Factors affecting transportation are the placement and type of uses and activities, which generate service needs. Within the context of the aforementioned considerations, the following goals and policies are provided for transportation planning and development.

Goals:

1. Discourage new development of any kind which does not have direct property access onto a paved roadway and onto roadways which are not capable of accommodating the associated traffic increases due to factors such as construction, alignment, orientation, surfacing, width, site lines, state of repair or joint jurisdiction.

2. Develop a comprehensive street system and necessary traffic control devices for the safe and efficient movement of people and goods throughout the City.

3. Establish a street system that connects isolated neighborhoods and promotes the safe and convenient interchange of traffic.

4. Establish a City street and traffic control system, which conforms to existing laws, optimizes service provided to Big Lake residents and minimizes adverse impacts.

5. Develop a system of priorities for improving the various elements of the transportation system.

6. Assign priorities to various travel routes, modes, and programs, and formulate a corresponding action and development program.

7. Upgrade and improve substandard streets.

8. Effectuate land use and transportation planning that accommodates the future improvement of U.S. 10 through the City of Big Lake.

9. Improve traffic safety along U.S. 10 through controlled access, proper intersection design, consideration of frontage/backage road systems, and providing select signalized intersections.
10. Establish a street system, which is sensitive to homogenous neighborhoods and activity

areas.

11. Install necessary traffic control devices to provide for the safety and efficient use of motorists, pedestrians, and land uses abutting street systems in Big Lake.

12. Provide sufficient off-street parking to meet the demands of all types of land uses.

13. Develop and expand the pedestrian system and bikeway system to encourage the linkage of neighborhoods, parks, and public facilities within the City, minimize potential conflicts between trail users and motor vehicles, and to ensure the safety of trail users.

14. Ensure the provision of pedestrian and bicycle facilities, which are consistent with the safe and convenient circulation needs of the pedestrian and the bicyclist.

General Policies:

1. Treat all modes of transportation and related facilities as one system to be coordinated and related on a comprehensive basis.

2. Plan transportation facilities to function in a manner compatible with adjacent land use. In those instances where the function of a transportation facility has changed over time to become incompatible with adjacent land use, establish a program to eliminate this incompatibility.

3. Consider the mobility needs of all persons in the planning and development of the transportation system.

4. Design transportation facilities to conserve natural resources and existing man-made facilities and minimize the total need for ongoing public investment.

5. Prepare and annually update a Capital Improvement Program for transportation facilities.

6. Coordinate transportation planning and implementation with neighboring and affected jurisdictions.

7. Work with Sherburne County and Mn/DOT to discuss the ways and means by which long-term transportation planning goals can be met to satisfy both regional and local

needs.

8. Ensure that the highway system complements and facilitates local movements provided by local streets, bicycle trails and pedestrian facilities. Establish and maintain a line of communication with county and state highway officials in order to ensure that planned improvements are consistent with the goals and objectives of the community.

9. Ensure that all components of the transportation system are maintained and developed to high standards to insure against detrimental impact upon community growth.

10. Focus the transportation system on activity centers within the community and in neighboring areas.

11. Land use controls are to promote combined and/or concentrated types of activities in the high intensity use districts to reduce dependency and requirements for travel and transportation, as well as to provide preferred modes of travel.

12. Discourage new development of any kind which does not have direct property access onto a paved roadway and onto roadways which are not capable of accommodating the associated traffic increases due to factors such as construction, alignment, orientation, surfacing, width, site lines, state of repair, or joint jurisdiction.

13. Monitor the need for park-n-ride facilities in the community or similar facilities in other locations to accommodate the continue increase in residents who commute to work in car pools.

14. Provide for early and continuing citizen involvement in transportation planning and implementation projects.

15. Minimize the amount of land devoted to streets and the number of street miles within the community to the extent possible.

16. Wherever feasible and practical, establish pedestrian and bicycle trails in conjunction with street and highway improvements.

17. In those areas where incomplete street facilities exist, action will be taken to plan, design, and develop a street system, which reflects high standards and relates land use to transportation needs and policies. Action will be taken immediately to reserve

required rights-of-way to prevent additional costs and difficulties.

18. Plan for anticipated increases in traffic volumes and corresponding roadway improvements by analyzing existing right-of-way widths, accessibility, speed, surfacing, sizing, and maintenance requirements of existing roadways and those in areas of new development.

19. Phase out existing gravel roadways by evaluating their function in relation to the long-term transportation system and continually work to upgrade or eliminate them as necessary.

Street Policies:

1. Require streets to be developed according to their function. Pavement width, load capacity, and continuity of the street must recognize the function for which the street is intended.

2. Upgrade the major thoroughfare systems through the use of State Aid funds when warranted by traffic conditions.

3. Give priority to City and County State Aid roads to serve industrial or commercial areas.

4. Require proper visibility, design and control of all intersections and driveway access points to promote safety.

5. Established a phased program to improve hazards and poorly designed intersections and access points so as to increase the safety of both motorized and non-motorized traffic.

6. Require that all streets be adequately signed, striped, maintained, and lighted to ensure the safety of the motorists who use them.

7. Design all local or residential streets to prevent penetration by through traffic and properly direct traffic to collector or arterial streets.
8. Minimize and limit vehicular access onto all major collector and arterial streets ensuring adequate distance between intersections and utilization of appropriate traffic control methods and devices.

9. Minor collectors should be considered in major subdivisions to channel traffic out of the

subdivision onto the City's major collector or arterial street system.

10. Relate and phase street improvement to area land development in order to avoid interrupted or inadequate access.

11. When the location of major roadways next to existing residential neighborhoods is unavoidable, or when new residential development occurs contiguous to or includes a planned major roadway:

    a. Every attempt should be made to limit frontage and direct access onto the major roadway by providing access to the residential areas off of minor residential streets.

    b. Whenever possible, the alignment of the proposed roadway should be set to take advantage of any existing topographical or vegetative buffer. When no natural buffer exists, adequate provisions should be made to reduce the visual and noise impacts of said road on the residential area.

12. Modify the classification system for the street network in Big Lake to be consistent with the Minnesota Department of Transportation standards.

FUNCTIONAL CLASSIFICATION OF STREETS
(Source: Minnesota Department of Transportation)

Class	Function	Provide Access To
Principal Arterial	Service to major centers of activity, provides continuity to rural arterial system	Principal Arterial Minor Arterials
Minor Arterial	Service of an intra community nature, urban concentrations to rural collector roads	Principal Arterials Collector Streets Land
Collector Street	Land collection and distribution between collector streets and arterials, land access to minor generators	Land Minor Arterials Local Streets
Local Streets	Service to abutting land	Land High Order Systems

13. Relate public signage to the overall system of street function and control and develop a uniform system and policy regarding public signage which eliminates unnecessary signs and replaces outdated, inappropriate and confusing public signs.

14. Establish and enforce standards and controls for business and advertising signage and lighting in order to prevent driver distraction and potential hazards.

15. Wherever possible, limit or prevent individual lot access to property from major streets.

16. Where direct access is allowed from properties to major streets, require the installation of hammerhead driveways (a driveway that will allow vehicles to turn around on the lot so that vehicles will drive as opposed to backing out of, private driveways), or other means to increase site distance and limit backing vehicles onto such roads.

17. Require proper signage and visibility at grade railroad crossings.

18. Require all development to be accessed by public streets.

Parking Policies:

1. Minimize and reduce the demand and resulting space requirements for parking through the adequate provision of pedestrian and bicycle facilities and through land use development coordination, such as the concentration and/or consolidation of, for example, higher density housing with proximity to shopping, employment, and recreational activities.

2. Ensure that any new development or expansion of existing development includes adequate off-street parking.

3. Develop parking facilities so as to conserve land, promote joint use and minimize conflicts with vehicular, pedestrian and bicycle traffic.

4. Periodically review parking requirements to ensure that required supply is reflective of actual demand.

5. Minimize parking lot access to public streets to the functional minimum.

6. Utilize landscaping techniques to eliminate large continuous expanses of pavement, and enhance the aesthetics of parking areas.

7. Develop parking lot design standards including requirements for drive islands, minimum and maximum driveway width, separation, curb and gutter, as well as drainage and snow storage to improve internal circulation, function and the appearance of such facilities.

8. Group parking in functional clusters avoiding irregular and inefficient lots.

9. Provisions for handicapped parking in compliance with state law are to be made in all parking lots.

10. Where feasible and practical, prohibit parking on arterial and major collector streets.

11. Eliminate and prevent any on street parking, which conflicts with moving traffic or creates hazards.

Pedestrian/Bicycle Trail Policies:

1. Establish a loop trail system around Big and Mitchell Lakes to provide for safe pedestrian traffic and to link other trail systems to Town Center, the school campus and other recreational areas to the central community lakes area of Big Lake.

2. Provide for safe pedestrian movement within high intensity activity centers, separated when feasible from vehicular circulation.

3. Give trail development priority to the following areas:

    a. Trails along major streets that have the most direct access to trail destinations.

    b. Trail connection with existing and proposed parks, play fields and school sites.

    c. Plan for trail inclusion in association with new development.

    d. Trails that will link together separate portions of Big Lake's trail system with each other and Big Lake's trail system to other communities.

    e. Cooperate with state, regional and county agencies in the formulation of a comprehensive trail system and elimination or duplication of facilities.

4. Consider utilizing a trail dedication fee from newly platted parcels for trail right-of-way acquisition or trail development.

5. Develop trails in conjunction with roadway improvements.

6. Route trails that minimize stop signs, cross traffic, and mixing with other modes of

transportation.

7. Encourage new development to respect the community trail system and where possible to contribute to the City rights-of-way and development.

8. All trails are to include design features, which provide access to the handicapped.

9. Design and construct trails according to the standards established by the State Department of Transportation and State Planning Agency.

10. Ensure that trail crossings on heavily traveled streets are clearly marked and lighted.

11. Establish trail priorities to identify trails to be constructed in five years. Annually review and reassess the five-year trail priorities.

12. Whenever feasible, require the construction of bikeways or sidewalks in conjunction with street improvement projects.

13. The use of motorized all terrain vehicles will be prohibited on the City trail system.

14. Promote the development of trails in association with residential, commercial and educational uses to provide both functional and recreational access between these environments.

Railroad Policies:

1. Improve the future level of safety at railroad/street intersections by installing signals.

2. Encourage land and street access development, which minimizes the impact of the railroad track and right-of-way as a physical barrier.
3. Require lots platted adjacent to the railroad to contain adequate buffer yard areas including deeper lot dimensions, increased structure setbacks, substantial berms, landscaping, fence and/or screening to protect uses from noise and view of the railroad corridor.

4. Require developments within one-quarter mile of the railroad tracks to incorporate sound mitigation, soundproofing for all future construction.

The City of Big Lake undertook a housing study in order identify the status of the existing housing stock and to develop strategies to improve housing opportunities within the community. 1995 Big Lake Housing Strategy Plan is the result of the housing study and it identifies the key housing issues facing the community as well as programs to remove dilapidated structures and maintain or improve existing units within the City. The 1995 Housing Strategy Plan is adopted and incorporated as an addendum to this Comprehensive Plan. The following housing policies are re-printed herein to address the need for consistency between the Housing Strategy Plan and Comprehensive Plan.

Goal 1 **The City will consider establishing a municipal Housing and Redevelopment Authority (HRA) for the purpose of administering local housing programs.**

Policy:

1. The City will research the merits/issues associated with a municipal HRA to determine if local housing programs can be more effectively administered and/or additional services can be provided.

2. The City will consider the establishment of a Housing Commission, separate from the Big Lake Economic Development Commission, for the purposes of administering and overseeing the implementation of local housing programs.

Goal 2 **The City will continue to implement the Rental Housing Registration/Inspection Program.**

Big Lake administers a rental housing registration/inspection program to assure that all rental units in the City comply with housing laws and codes. Under this program, rental-housing units are registered with the City and inspected on a periodic basis to assure that the units meet safety and sanitary codes. This program also sets forth the procedures and implementation guidelines to remove blighted and unsafe conditions associated with rental residential properties.

Policy:

1. The City will continue to implement this program.
2.

Goal 3 **The City of Big Lake will continue to administer a Housing Acquisition/Demolition Program.**

The City of Big Lake administers a Housing Acquisition /Demolition Program wherein residential units that are dilapidated and beyond repair are identified and demolished. Following demolition, the underlying property is analyzed to

determine its highest and best use an either sold for redevelopment or retained as green space or other appropriate land use. This program has been successful for the removal of several dilapidated structures within the community.

Policy:

1. The City will develop a new inventory of sites for which this program will be targeted.

Goal 4 Develop and implement a Housing Rehabilitation Program.

Policies:

1. The City of Big Lake will develop a Housing Rehabilitation Program that will address the City's housing rehabilitation needs and upgrade the City's existing housing stock.

2. The City of Big Lake will continue to seek local, state and federal funds to assist in financing the Housing Rehabilitation Program.

Goal 5 The City of Big Lake will consider establishing a Housing Committee (as opposed to the Big Lake Economic Development Committee) to administer local housing programs.

Policies:

1. The Housing Committee will assess housing needs and develop policies, programs, guidelines, and finance plans to address the housing needs of Big Lake. Additionally the Housing Committee will guide the implementation of the housing programs and projects and assess their effectiveness in addressing Big Lake's housing needs.

Goal 6 Assure that adequate staff is assigned to accomplish the housing goals that are established.

Policies:

1. The City of Big Lake will assure that the staff resources necessary to accomplish its goals are analyzed and adequate staff is hired or assigned to accomplish the goals that are established.

2. The City will provide the means for the implementation of a system to follow up on code violation issues and establish a consistent reporting system to keep the City Council appraised of the status of complaints.

Goal 7 The City will work with Sherburne County to promote more timely judicial review of property code and housing violation matters.

Policies:

1. The City will investigate the opportunity to develop an alternative dispute resolution program to settle code violation matters outside of the district court system.

2. The City will advise Sherburne County of the issues associated with the priority and timeliness of judicial review of code violation cases.

3. The City will investigate alternatives to the judicial process to facilitate code compliance such as administering a notification process and property assessments for site maintenance (weed control, garbage and refuse etc.).

4. The City will investigate the possibility of creating a joint prosecution position that is shared with other government jurisdictions. The objective of such a position would be to streamline the process for adjudicating code violations.

Goal **The City of Big Lake supports economic development efforts within the community.**

Policies

1. The City will work with local business owners to develop a long-term redevelopment program for the Highway 10 Corridor and Town Center, which accomplishes the objectives of improving the overall appearance, function and utilization of existing lands guided for commercial and industrial development.

2. The City of Big Lake will continue to participate as a member of the Big Lake Economic Development Authority and to support its effort to further business and industrial expansion within the community.

3. The City will promote business organizations for the purpose of developing marketing strategies and acting as catalysts for development/redevelopment efforts.

4. The City will consider utilizing tax increment financing as a tool to spur economic development ventures within the community.

5. In its efforts to support business development, the City will utilize fiscal tools, tax abatement and other incentives, to the extent possible, for business operations which seek to accomplish community objectives such as but not limited to the following:

    a. The creation and/or retention of quality jobs (e.g. stable employment and/or attractive wages and benefits).

    b. To encourage desirable development and/or redevelopment that would not otherwise occur “but for” the assistance provided through Tax Increment Financing.

    c. To accomplish the City’s goals for life cycle housing.

    d. To remove blight and/or encourage redevelopment in the commercial and industrial areas of the City in order to encourage high quality development or redevelopment an private reinvestment in those areas.

    e. To encourage additional unsubsidized private development in the area, either

directly, or through secondary "spin-off" development.

6. The City will support the development of a Tax Increment Policy to outline the community's position relating to the use of Tax Increment Financing for private development and to develop a streamlined application process that can be consistently applied.

7. The City, at its sole discretion, will utilize the tools and incentives available to encourage economic development.

8. With respect to financial subsidies, the determination of the number of jobs to be created and the wage level thereof should be guided by the following principles and criteria:

    a. Each project should be evaluated in a case-by-case basis, recognizing its importance and benefits to the community from all perspectives, including created and retained employment positions.

    b. If a particular project does not involve the creation of jobs, but is nonetheless found to be worthy of support and subsidy, it may be approved without any specific job or wage goals, as may be permitted by applicable law.

    c. In cases where the objective is the retention of existing jobs, the recipient of the subsidy will be required to provide reasonable demonstrable evidence that the loss of those jobs is imminent.

    d. The setting of wage and job goals must be sensitive to prevailing wage rates, local economic conditions, external economic forces over which neither the grantor nor the recipient of the subsidy has control, the individual financial resources of the recipient and the competitive environment in which the recipient's business exists.

    e. Because it is not possible to anticipate every type of project which may in its context and time present desirable community building or preservation goals and objectives, the governing body must retain the right in its discretion to approve projects and subsidies which may vary from the principles and criteria of the Policy.

9. The City will continue to improve the vehicular circulation within the Highway 10

Corridor to enhance the viability of the businesses located along the strip.

10. The City will develop a framework of strategies to attract industrial developments to the Big Lake Industrial Park.

11. The City of Big Lake will continue to improve the image of the City by exercising more control over urban design, land use relationships and by requiring the use of quality building materials, which are superior in appearance, and durability.

Goal 1 The City of Big Lake will incorporate the procedures and requirements for Comprehensive Planning into the Zoning Ordinance and City Code, consistent with the process outlined in Minnesota State Statutes.

Policies

1. The procedures and application requirements associated with amending the Comprehensive Plan should be incorporated into the City of Big Lake Zoning Ordinance and City Code.

2. All Comprehensive Plan amendments will be referred to the Planning Commission for public hearing prior to review by the City Council.

3. The City should provide for and encourage opportunities for citizen participation at all levels of the planning and review process.

4. The City should continue to be developed in accordance with a Comprehensive Plan for land use, housing, transportation, and community facilities and adhere to the Plan to ensure consistent development policy.

5. The City should utilize the Comprehensive Plan to maximize the potential of undeveloped properties, consistent with good planning and development practices.

6. The City will review and amend the Comprehensive Plan as necessary to ensure its usefulness as a practical guide for current and future development.

7. The City should adopt appropriate administrative and management tools necessary to implement the objectives of the Comprehensive Plan.

8. Enforce City ordinances to ensure development in accordance with the Comprehensive Plan.

Goal 2 The City of Big Lake will coordinate the efforts of City Advisory Boards

and Commissions in order to facilitate the goals and objectives of the Comprehensive Plan.

Policies:

1. The City Council will hold annual workshop(s) with each Advisory Board and Commission to review goals and objectives and to strengthen the communication bond with each committee.

2. The City Council will work to coordinate efforts of the Planning Commission, Economic Development Authority and other appropriate committees in order to inform members of large projects and land use decisions affecting community development.

3. The City will adopt appropriate policies and procedures for each Board/Commission identifying the purpose, meeting procedures and membership criteria as well as procedures for appointing new members.

4. The City Council will adopt policies and where applicable, amend the Comprehensive Plan and/or local ordinances to incorporate clear direction and standards for the development of lands under joint powers agreements. The objective is to ensure that the appropriate board/commissions as well as the public are aware of special land use restrictions associated with areas such as the Big Lake Industrial Park and other joint powers development projects.

5. The City will seek to clarify the roles of individual committees and to provide a means of communicating activities of various committees among one another as well as for the public. The actions of the City Council will also be communicated to the individual committees.

6. The results of major studies undertaken by the City associated with infrastructure improvements, land use, transportation, market analysis and the like should be shared with the appropriate City boards and commissions.

Goal 3 The City of Big Lake will expand its Development Review Process to ensure maximum communication between review team participants and

to provide comprehensive and consistent feedback to the development community.

Policies:

1. All commercial and industrial site plans, residential subdivisions and major projects will be reviewed by all City Departments including Building Inspections, Police and Fire Departments in order to assure that the project can be adequately served and/or constructed consistent with City standards.

2. The City will seek to adopt a uniform street naming and numbering system throughout the community in order to allow quick response for emergency services and public works.

3. The City will review local fees and charges for services including park dedication fees, on an annual basis to ensure that services are properly financed and to be consistent with the general rates of other communities in the region.

4. The site review process will be uniformly focussed on mandatory City requirements.

END NOTES:

[1] In the case of the intersection at U.S. 10 and S.T.H. 25, two corners are developed with gas stations, which have a high level of traffic utilizing the site. In both cases, the structures are located close to the street and access to and within the sites is unrestricted.

[2]The vast majority of each site is covered with hard surfaces and little attention to landscape design, pedestrian safety or the function of the internal site circulation and the adjacent road facilities have been taken into account. The result is that there are conflicts between vehicular turning movements and intersection stacking. The intersection appearance is also poor due to the close proximity of buildings, canopies, signs and parking lots to the street. There is no definition to the sites or intersection and the ability to introduce improvements is limited. This situation should be avoided in the future by requiring adequate setbacks, site lines, parking lot and driveway improvements and landscape/green buffers around the perimeter of the lot.

INTRODUCTION

The basic intent of the comprehensive planning process is to provide a well-founded and coordinated decision-making framework to guide both public and private development and community improvement and change. In this regard, this report represents the Development Framework for the City of Big Lake. The plan is based upon community issues and desired end results, which have been identified in determining community goals and policies.

The Development Framework, in combination with the Policy Plan, assists City policy makers in daily decision-making. Since maps and plans in the Comprehensive Plan may be amended as time goes on, reliance on a land use map for future guidance may make for difficult decisions. However, the relative consistency of community goals and policies ties the land use activities together over the long term.

The Development Framework is the basic, general plan for the community. It establishes the general parameters, issues, and overall goals, which are to be achieved. It further defines and establishes direction for the basic elements, which comprise and influence the community. Programming of development regulations and improvements is based upon the Development Framework. Once these elements of the comprehensive planning process have been completed, ordinances and programs should be revised so as to bring about the plans and desired results.

The arrangement of this section includes overall concept plan for the City and categorical plans for land use, transportation, parks and trails, and planning districts. These sections are arranged in a format that provides guidelines for how specific policies may be applied.

In summary, the Development Framework provides the foundation for guiding and managing change and improvements within the community. It determines directives and means for specific assignments and accomplishments. Additionally, it establishes the groundwork and parameters for facilities planning.

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INTRODUCTION

The basic elements of a Comprehensive Plan include natural environment, land use, transportation, community facilities, and administration. These elements have been discussed extensively in the Inventory and Policy Plan element of the Comprehensive Plan and are translated into the components of the Development Framework Land Use Plan concept. The concept plan for the City of Big Lake revolves around a number of separate yet interrelated elements: 1) the neighborhood is to serve as the basic foundation of the community; 2) the commercial areas serve as the focal point for the individual neighborhoods which together form the "community;" 3) the industrial areas support the tax base and provide employment opportunities; 4) land use transition is a method of insuring compatibility between land uses; 5) the growth and viability of the community depends upon the ability to annex additional area; and 5) environmental protection. These elements are graphically represented on the following page.

These concepts provide a valuable reference point for the resulting physical development of the City of Big Lake. Additionally, these concepts must apply to all areas identified for future City growth and development. The basic elements of the City's concept plan are identified in this section. The concept plan will graphically indicate a land use direction for development to the year 2020. Review and adoption of a conceptual plan for the area, developed with input by the residents of the City of Big Lake and Big Lake Township, will provide the basis from which the overall Comprehensive Plan for Big Lake will be developed.

CONCEPTUAL ELEMENTS

The Neighborhood

In order to enhance and reinforce the sense of community identity within the City, it is essential that a sense of continuity and focus be established. Since the character of Big Lake is that of a "small town/lakes community," individual neighborhoods should be maintained. Each neighborhood should relate well within itself as well as to adjoining neighborhoods and the entire community. Quality low-density residential development within Big Lake is expected and encouraged to be the predominant type of new residential land use. For Big Lake, the first step is annexation of additional areas with natural features to create residential development within a desirable development format. Residential development formats will likely involve platting of curvilinear street patterns and lot arrangements that create desirable living environments amongst wetlands, water bodies and wooded areas.

INSERT CONCEPT PLAN GRAPHIC HERE

As stated within the Policy Plan, residential neighborhoods should be protected from penetration by through traffic on local streets. This attention to traffic is coupled with a fundamental consideration for natural and man-made barriers, which tend to help delineate and organize neighborhoods. Finally, the overall neighborhood orientation is set in terms of amenities and services which function as a focus for neighborhood activity. Park land and open space are primary within this group, contributing open space are primary within this group, contributing substantially to the creation of a desirable residential environment within the community.

In that the community's neighborhoods have developed as units, maintenance and enhancement of the desirability and attractiveness of the neighborhoods will be essential in the future. In this regard, the development of remaining open land and areas to be annexed should be done in a manner that respects the integrity of existing neighborhoods and new neighborhoods and other land use areas that are created.

Commercial Development

The existing commercial area concept includes the Town Center area and the highway-oriented retail goods and services along the frontage roads and areas adjacent to the current and future U.S. Highway 10. The retail and service elements of the commercial corridor has spread in an east/west direction along U.S. Highway 10 to take full advantage of visibility and access opportunities. Emphasis now is being placed on efforts to improve circulation, the appearance and function of commercial areas in an attempt to fully utilize lands within the corridor.

New development and redevelopment efforts will emphasize the creation of commercial nodes, to the extent possible. The City will provide direction, through its development regulations and the use of redevelopment/reinvestment tools and programs. The development of the Town Center and link to Keller Lake in addition to the continuation of infill of the existing commercial areas will provide the primary commercial opportunities for the City. The City commercial core concept entails the Town Center and the continuation of mainly highway oriented retail goods and services transitioning to less intense medium density residential and low density residential environments.
d on efforts to improve circulation, the appearance and function of commercial areas in an attempt to fully utilize lands within the corridor.

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The Plan also establishes a linear commercial area along the proposed future U.S. Highway 10 bypass. This is intended to promote high quality development taking advantage of the visibility from a major transportation corridor and the related proximity to high traffic access points. This development pattern is not intended to establish strip development that is isolated but instead promotes the following:

1. Quality architecture.
2. A strong community business base.
3. Site design that integrates with adjacent properties to promote business interchange.
4. A good transportation system.
5. Environmentally sensitive.
6. Avoidance of site over-utilization.

Industrial Development

The City of Big Lake and Big Lake Township have recently completed the full utilization of the Big Lake Industrial Park East, a joint industrial park located north of U.S. Highway 10 and west of Preusse Lake. Additionally, large tracts of land located east of County Road 43 and north of the Burlington Northern Santa Fe Railroad are being guided for industrial uses. The industrial areas are intended to provide a means of achieving a strong and diversified tax base for the community. As the City continues to grow both in population and area, planning for future business park and industrial development remains essential to expand the number of jobs and the commercial/industrial tax base for the community. Land near U.S. Highway 10 and the railroad offers physical and transportation facilities that will provide for excellent industrial opportunities. The industrial concept entails typical industrial uses surrounded by less intense industry or business park uses radiating out to commercial uses and to medium/high density

residential. The location and focus is to take advantage of the traffic levels, visibility and location of rail service.

Land Use Transition

The intensity of land uses should decrease as one moves away from an activity center. This concept may be referenced to future development along highways and certain County and/or collector roads, with their high traffic volumes and visibility. With this in mind, it is important that a land use transition take place between the higher intensity business uses and the lower intensity residential uses. As a means of maintaining the integrity of the residential neighborhoods, providing a population base for business activity, and providing an alternative housing type, medium and high density residential development should surround business uses.

Environmental Protection

A variety of benefits are associated with environmental protection in Big Lake. Environmentally sensitive development will create a more aesthetic living and working environment and minimize the need for future public investments for clean up or beautification.

The purpose of the City's Zoning Ordinance and environmental regulations is to protect the public health, safety, and welfare of the community. Through land use planning, the City wishes to establish standards, which will ensure that urban development will be compatible with the natural features of the land and that a high level of environmental quality will be maintained.

The environmental protection concepts, which form the basis of this Comprehensive Plan are as follows:

1. Encourage quality, environmentally sensitive development throughout the City and all future growth areas.

2. To the maximum extent possible, screen outdoor storage and unsightly uses, which are visible from public rights-of-way, or other properties.

3. Uphold standards in the commercial and industrial districts, which require quality development.

4. Stage development carefully to make effective use of existing public facilities infrastructure.

5. Protect Greenways and Open Space.

Urban Expansion Concept Plan

This plan includes extraterritorial land that is anticipated to be annexed into the City to accommodate the community's future growth. The timing of annexation and development within the extraterritorial land use area will depend on the following factors:

1. Development interest in the property.

2. The City's ability to provide utility service to the development sites at the developer's expense.

3. Area streets have the capacity to accommodate forecasted traffic.

4. The development site compliance with the City's growth management criteria.

INTRODUCTION

Based upon the foundation established by the Policy Plan and the Concept Plan, this section provides the framework to guide and direct future community growth and improvement. The Land Use Plan is a narrative and graphic description that provides the background and rationale for land use designations as represented on the Concept Land Use Plan Map. The plan has an educational and decision-making function, helping to improve the general understanding of how physical development in the City should take place.

BASIS OF THE COMMUNITY PLAN

Big Lake has taken a progressive planning attitude in regards to its Comprehensive Plan and the current planning process in order to direct land development in a manner that results in compatible land use patterns and efficient utilization of City services and utilities. The City's major planning objectives are to promote commercial/industrial development and to establish/maintain attractive, high quality living and working environments for community residents. In providing for these environments, the City recognizes the necessity of providing utilities and services that are demanded with urban development. Through the comprehensive planning process, the City has the ability to direct and focus development in a pattern that maximizes the utilization of existing utilities and services. This type of land use management assists the community in regulating and budgeting for investment in future public utility and service needs.
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PROJECTED GROWTH

The nature of Big Lake's future with respect to population growth will depend on a number of factors. 1) The ability of the City to provide adequate land within the municipal limits; 2) The ability to create a mix of housing opportunities; 3) provide utility and roadway extensions; and 4) the ability to expand local job opportunities. All of these factors will impact the rate of growth.

In projecting the year 2010/2020 populations for Big Lake, the future growth is assumed to follow existing development patterns with single family constructed as the dominant new housing type. That rate of housing growth is reflective of the late 1980's and 1990's characterized by economic expansion in the community. Although the level of single-family unit growth is expected to continue, the numbers of mid-density units are also expected to grow.
id-density units are also expected to grow.
d-density units are also expected to grow.

POPULATION AND HOUSEHOLD PROJECTIONS

The transformation of basic population counts into average annual increases, percentage changes and rates facilitates the understanding of both the scale and direction of population growth. Big Lake has demonstrated the ability to plat and develop large tracts of land within a relatively short period of time. The rate of growth is largely dependent upon market conditions, the supply of vacant land and the willingness of property owners to develop. The past five years of building activity within the City are testimony to this fact. To address current market conditions and historic land development trends within Big Lake, a strong community growth scenario is anticipated to continue.

Strong Growth Scenario

Under the strong growth scenario, it is assumed that Big Lake will maintain an annual average minimum development rate of 213 dwelling units per year through the year 2020. This development rate should result in a year 2020 population of approximately 17,856 residents.

POPULATION FORECASTS (Strong Growth Scenario)						
					Estimated	
	1970	1980	1990	2000	2010	2020
Population [3]	1,015	2,210	3,113	6,063	11,892	17,856
Households [1]	310	774	1,135	2,117	4,247[2]	6,377[2]
Household Size	3.27	2.86	2.74	2.86	2.80	2.80

[1] 1970, 1980, 1990, 2000 data is from the U.S. Census [2] The 2010 and 2020 household forecasts are based on the assumption that Big Lake will grow at an average of 213 units per year. This growth rate is reflective of the City growth between 2000 and 2005.
Source: U.S. Census 2000; NAC Inc.

In the development of its Comprehensive Plan, City Officials felt that the future growth potential of the community is much higher than the moderate growth scenario and as such, felt that a future growth projection should be based upon development rates experienced within the past five years. The strong community growth projections identified on the previous page, are intended to identify the ultimate growth potential of the community based upon continuation of current market conditions and development rates similar to that of the past five years. This growth scenario is based upon utilizing the average number of residential unit building permits issued from 2000 through 2005 (an average of 213 units per year), as a basis for future growth projections.

It is possible, that a greater increase may occur given the growth trend, which has been evidenced, by the number of building permits issued during the past couple of years and development trends within Sherburne County. Additionally, the land availability within Big Lake and the community's proximity to an expanding employment base in the western Twin Cities Metropolitan suburbs provides an attractive incentive for continued population and household growth.

The Big Lake strong growth scenario projections are based on suburban development densities. It is likely that some redevelopment strategies will have to be employed in conjunction with annexation of additional lands, to achieve the household and population projections. Factors including expansion of the Urban Expansion District, availability of public utilities, surge of residential platting, or the introduction of major employer to the community could result in a faster growth and development rate. It is also plausible that the growth rate may be less than the projections due to factors such as increasing interest rates, changes in fuel prices, a downturn of the market or other unforeseen factors. It will be important for the City to continually monitor development and adjust the population and household forecasts accordingly.

GROWTH MANAGEMENT

The timeliness and pace of growth is a community concern for Big Lake. Premature and rapid growth can negatively impact the City through increased utility demands, traffic generation, and the financial implications. Growth can also change the character and image of the community. To offset these potential negative impacts, the City will manage the pace and quality of growth.

In planning for development of vacant areas, the City must address the need for orderly growth that is promoted through the logical extension of streets and utilities. Existing development, property ownership patterns, and physical barriers will greatly influence land use patterns, however, development must occur in a manner that capitalizes on in-place infrastructure and the financing of new capital improvements. Future growth will be evaluated on both its physical and financial impact on the City.

Future growth must also be sensitive to the natural and environmental constraints of land. Local, state and federal regulations pertaining to floodplain, shoreland and wetland preservation will require the avoidance, mitigation and/or integration of the natural features into future subdivisions or site development. The key criteria for annexation that the City will use to determine the appropriateness of a request are depicted as the "Annexation Evaluation Criteria" following this section. As land is annexed, it will be designated with the least intensive land use designation.

Growth management efforts are intended to accomplish the following objectives:

1. To balance residential growth with economic development to maintain a broad tax base, provide local employment opportunities, and enhance the local economy.

2. To promote an orderly growth pattern that will capitalize on in-place investment and avoids premature extension of utilities and services. Future growth must be financially responsible for the extension of utilities.

3. To promote high quality architecture and subdivision design as a means to preserving the City's small town atmosphere, enhancing the City's identity, promoting long term durability, and expanding the local tax base.

The following growth management methods shall be implemented to manage the location and pace of growth in a manner that fulfills the stated growth management objectives:

1. Annexation. Annexation will be an essential feature to Big Lake's future growth. The decision to annex a property is discretionary on behalf of the City. In this regard, annexation represents a valuable growth management tool. Future annexation requests shall be evaluated under the following policies to determine if the land use and development timing of the annexation area is appropriate for the City:

   a. The City shall consider annexation by petition of the property owner. Said petition shall include but not be limited to the following items:

      - A completed petition form for annexation and associated fees.
      - Site survey.
      - Resource Inventory (including transportation systems, topography, wetlands, etc.).
      - Conceptual Subdivision/Development Plan (including general street layout, number and type of housing units, building size/placement, stormwater management provisions, environmental precautions, etc.).
      - Phasing Plan (if applicable).

   b. Annexations shall only occur within the land use and growth area boundaries of the City's Comprehensive Plan.

   c. The proposed land use within annexation areas shall be consistent with the long range land use plan of the Big Lake Comprehensive Plan.

   d. All new development within proposed annexation areas shall be served by public utilities:

      - The City shall have adequate sewer and water capacity to accommodate the proposed development.
      - The proposed development shall be responsible for the cost of extending utilities to and through the proposed annexation area.
      - On-site sewage systems and wells may continue to be utilized by existing homes in the annexation area so long as they continue to function properly and are in compliance with applicable laws and regulations governing these systems. The new development shall make provisions to allow these properties to connect to municipal utilities.

e. The annexation area shall be served by adequate roads and highways. Improvements to upgrade existing roadways to City standards is based on designated functional classification and the cost of roadway improvements shall be the responsibility of the development.

f. Developments within a proposed annexation area shall provide public improvements for parks, trails, and open space consistent with the Comprehensive Plan.

g. Development within proposed annexation areas shall not adversely impact environmentally sensitive areas or result in the disruption or destruction of a historically designated site.

Annexation petitions found not to meet the aforementioned policies shall be deemed premature and will not be brought into the community as an urban land use.

2. Phasing Plan. The City shall require a phasing plan with all new subdivision applications. The phasing plan shall illustrate the proposed sequence of a subdivision development. The City shall monitor the rate of residential growth within the community and require phasing plans to manage the rate of growth based on the City's ability to provide municipal services, utilities, and transportation improvements.

LAND USE COMPATIBILITY

Land use compatibility concerns exist primarily in the older sections of the community and between residential and commercial/industrial areas along the U.S. Highway 10 corridor. High density development, commercial/industrial uses located immediately adjacent to single family neighborhoods can intensify unwanted activity in the area and impose impacts on parking, traffic and noise that may be uncharacteristic of single family neighborhoods.

To respond to these land use compatibility concerns, the Comprehensive Plan establishes policies for screening, landscaping and buffering commercial/industrial and/or high-density residential uses near or within residential areas to minimize the impact on surrounding uses and enhance the neighborhood and community. Buffer and screening standards are also suggested for lands located adjacent to high traffic volume roads, the railroad, parking lots and other types of uses. The City, through its Comprehensive Plan, may determine that certain businesses should be relocated out of a neighborhood, or that a collection of homes no longer functions as a neighborhood and the area would be better suited for higher intensity uses. Such redevelopment

efforts are costly and in most cases, may need to be accomplished with the assistance of the City or its Economic Development Authority. Additionally, the Comprehensive Plan calls for the proper transition between high and low density residential development. The City, through its Plan and Zoning Ordinance, will transition residential development so as not to create negative living environments. Concentration of one type of housing style or density in areas can also create issues for the proper development of neighborhoods.

ANNEXATION EVALUATION CRITERIA

The City of Big Lake shall evaluate potential requests for annexation based upon physical, geographical, and chronological opportunities for development. This evaluation shall be required to avoid the premature extension of utilities as well as avoiding leapfrogging development patterns that may impact the overall health, safety, and public welfare of the City. Final decision as to whether an annexation is approved or denied is discretionary on behalf of the City Council. The following criteria are an evaluation aid and do not infer any right to be annexed.

	Yes	No
Location:		
a. Infill development adjoins City boundaries on two sides		
b. Share a common boundary with the City 300 feet or greater		
c. Shares a boundary less than 300 feet		
Infrastructure / Utilities:		
a. Falls within the capacity of the City's sanitary sewer treatment plan		
b. Falls within the capacity of the City's water system		
c. Provide a logical extension of the City's trunk sanitary sewer at developer's expense		
d. Provides a logical extension of the City's trunk water system at developer's expense		
e. Improves storm sewer infrastructure		
f. Low impact environmental design		
Infrastructure / Streets:		
a. Provides street connections with existing neighborhoods (does not result in an isolated neighborhood)		
b. Provides for the construction and improvement of a City collector or arterial street at the developer's expense		
c. Provides for the construction or improvements minor collector street		
d. Provides or contributes to traffic safety devices for the City		
Project Uniqueness / Aesthetics:		
a. Comprehensive Plan Consistency:		
1. Land use complies with the City's long range land use plan		
2. Subdivision concept is consistent with the City's land use plan goals and policies		
b. Land Use:		
1. Provide opportunity for commercial or industrial growth		
2. Provide for unique land use that fulfills a need for the City		
3. Provides a unique residential subdivision design or housing Product		
c. Unique Subdivision Design:		
1. Unique streetscape design		
2. Unique housing products		
3. Unique housing exterior finishes		
4. Porch or house forward housing product		
5. Overland trail system		
6. Unique park design		
7. Fulfill a park search area requirements		
Natural Environment:		
a. Preserves significant trees and tree stands		
b. Preserves floodplains from development encroachment		
c. Preserve or enhances on-site wetlands		
d. Create greenway corridors consistent with the Comprehensive Plan		
e. Improve area stormwater management (water quality and reduces rate of flow)		
Developer's Ability to Complete the Project		
a. A Developer's Agreement shall be required to ensure that all costs of development are borne at the developer's expense		
b. If the developer has existing projects within the City, those projects shall have historically been in good standing based upon approvals and conditions imposed by the City.		

GENERAL LAND USE PLAN ELEMENTS

Concept Land Use Plan

The Concept Land Use Plan takes applicable City policies and formulates a description of desirable locations for future land uses for the entire community. The Plan, when used in conjunction with the Policy Plan and ordinances, provides a graphic description of future land uses within the community. The Concept Land Use Plan should serve as a graphic guide in assessing development requests and how they effect or relate to the desired land use in a given area.

In the sections that follow, the specific land use categories are described in greater detail. The location of the various land use categories are identified on the Concept Land Use Plan Map located on the page following the land use descriptions. To further aid in the detailed analysis of land use, Big Lake and the study area has been divided into six planning districts. The narrative description of existing and proposed uses within the planning districts is presented in the last portion of this Development Framework along with a map depicting the specific district locations and proposed land uses.

Extraterritorial Areas

In planning for Big Lake's future growth, the City must address the need for orderly growth that promotes the logical extension of streets and utilities. In this report, the City has expanded its land use, transportation, and utility planning beyond the City's current boundaries. Existing development, property ownership patterns, and physical barriers will greatly influence land use patterns, however, development must occur in a manner that capitalizes on in-place infrastructure and helps in the financing of new capital improvements. Future growth will be evaluated on both its physical and financial impact on the City.

Open Space (O)

Open space is a resource many residents use in describing what they like about their community. Open space includes undeveloped sites that provide habitat, scenery and other community benefits. Open spaces can include areas such as farm fields, golf courses, utility corridors, wetlands, wooded areas, and unobstructed views (with no developments) or parkland. While Big Lake acknowledges that it cannot prohibit future development from occurring, it can create a plan that preserves resources that will continue to give residents a sense of open space within the community.

As noted in the Natural Environment section of the Inventory, there are areas of the community that are characterized by environmental constraints that complicate or limit

urban development. These areas are most evident by the lake complexes and the Elk and Snake Rivers in the northern part of the study area. With the existing supply of undeveloped land in Big Lake, the City will restrict development in environmentally sensitive areas including but not limited to areas of hydric soils, wetlands, steep slopes, drainageways, shorelands and floodplain areas.

The "O," Open Space land use category identifies areas that are described as being environmentally sensitive due to severe soil conditions, wetlands and drainageways. Generally, the "O" Open Space areas follow the natural drainage areas that traverse the City and drain to area lakes and rivers. In protecting these environmentally sensitive areas, the Land Use Plan proposes to implement greenways, scenic overlooks, public and/or private open space/trail system, and/or residential development that may occur on buildable land masses at the periphery of the natural areas. However, the wet areas, steep slopes, areas of poor soils, wooded and/or floodplain areas must be protected.

Greenway Corridor

The greenway corridor is planned to identify and connect Big Lake's natural systems and areas. Greenways are often defined as continuous corridors that provide for the movement of wildlife and protection of natural resources. They are generally vegetated, linear in shape, and following natural waterways or land features such as wetlands, slopes, valleys, and ridgelines. Greenways enhance the ecological function and aesthetic quality of natural areas and open spaces by interconnecting them, thereby countering habitat fragmentation and loss.

In Big Lake, the proposed greenway corridor serves to protect environmentally sensitive areas such as natural habitat, wetlands, tree canopy, drainage ways and excessive slopes and to provide a means for the public to have access to/view of community natural areas. While these remnant pieces of nature are presently disconnected, the opportunity exists to reconnect these systems through trails and re-vegetation to create a recreational system that will function more like natural systems, creating better habitats and water management systems.

Land within this corridor will be comprised of a combination of public and private open space. Development will not be prohibited within the greenway but will be reasonably restricted to ensure that development is carefully integrated with the natural environment. Establishing guidelines for this greenway corridor will be a first step in the goal of keeping natural systems intact and incorporating them into developments in an environmentally sensitive way. Special management guidelines will be developed to preserve and improve the habitat, natural functioning and scenic qualities of the greenway.

Not all important natural resources can be protected within the greenway boundaries. Natural resources such as clean water and air have no boundaries. Choices we make in how our City is developed and how we live our day-to-day lives affects the quality of our natural resources everywhere. Thus Big Lake establishes the following objectives to develop and reserve a greenway system for the community.

1. Support a greenway plan that works towards linking together areas of natural resources that include wetlands, slopes, tree canopies, drainage ways and other significant natural resources as to create a continuous greenway corridor.

2. Create mechanisms that allow landowners to achieve reasonable development on lands through which the greenway passes, while preserving a portion of the land as open space.

3. Allow opportunities for neighborhood parks to occur within or adjacent to the greenway corridor such as tot lots or nature observation areas. Physical development of a neighborhood park should minimize disturbance of natural resource areas.

4. Develop partnerships with non-profit or private organizations, neighborhood groups or other interested parties for the purpose of acquiring targeted open spaces, which may be part of the greenway.

5. Promote management efforts that work to improve the habitat and scenic qualities of the greenway corridor.

6. Create a livable community where future development respects and integrates the natural resources of Big Lake.

7. To have a continuous trail system / green corridor that connects existing natural resource areas, thus providing a more ecological system of open spaces.

8. Encourage re-vegetation and management of areas to restore native habitat and natural aesthetic qualities that contribute to environmental quality.

9. Encourage and support tree planting and restoration efforts.

10. Use open space areas as a structuring element linked to other park and open space areas whenever possible.

11. Ensure natural resource open space areas planned in conjunction with a PUD be coordinated with and contiguous to the open space areas of existing adjacent development. It shall be accessible to all units within the PUD.

12. Use natural resource open space to physically separate elements, which are incompatible by scale or function.

13. Encourage through development incentives, the preservation and management of natural resource amenities.

Rural (R)

This area is not intended for the extension of utilities in the near future. Urban annexation is not anticipated. Rural land use areas are intended to continue as agricultural and large lot unsewered residential development.

Residential

The Policy Plan promotes the development of a diversified housing stock and establishes guidelines to protect residential neighborhoods from encroachment or intrusion of incompatible, higher intensity uses through the use of buffers and appropriate land use transitions.

Rural Residential (RR)

In the Extra Territorial Area, there are numerous large lot rural subdivisions that were previously platted. The large lots and rural character of these areas are intended to be maintained. Further resubdivision may be considered in the future.

Estate Low Density Residential (LRE)

Within the Study Area, a variety of lots and home values are expected. In that the City has in the past allowed development of relatively small lot sizes and moderate valued homes, the new areas for development are programmed for larger lot developments, especially in those areas that transition to larger lots within the Township and/or areas that contain natural amenities. Land areas located within the shorelands of public waters are subject to the City Shoreland Management Ordinance, which require large lot sizes based upon the type of lake/river. The Estate Low Density Residential areas are generally located in parts of the community/study area that contain natural features including wooded areas, wetlands and slopes.

Low Density Residential (LR)

Low-density residential development represents one of the largest percentage of land use within the existing municipal boundaries of Big Lake. Residential housing in this category includes single-family detached dwellings and twin homes although other

forms of attached housing would be considered under the Planned Unit Development approach. The Low Density Residential and Estate Low Density Residential areas are guided for a gross density not to exceed three units per acre. The Land Use Plan Map illustrates the areas for continued low-density residential growth. As indicated previously, the City must continue its dialogue with representatives from Big Lake Township for negotiating orderly annexation agreements.

Low to Medium Density Residential (LMR)

The Land Use Plan illustrates a low to medium density land use category at various locations within the land use planning area. This land use category anticipates that a range of residential densities (1 to 9 units per acre) may be appropriate for this area pending adjoining development, patterns, traffic generation, environmental protection, and housing demand. The actual density that may be permitted will be defined through zoning.

The low to medium density residential land use areas may also offer opportunities for a mix of residential housing types within the same subdivision. The City's preferred density and housing type will be further defined through zoning.

Medium (MR) and High Density Residential (HR)

Through the next two decades, the housing needs of community residents will continue to change reflective of a maturing regional and local population. In this respect, the City has identified areas suggested for medium (from four up to nine units per acre) and high-density (from nine up to twenty units per acre) residential land uses. Medium and High-density housing is recognized as a community need however, there is a strong desire to ensure that these units are spread throughout the community as opposed to being clustered in large concentrations. Recognizing these land use issues, the City has incorporated the following strategies for planning locations for medium and high-density residential areas:

1. As illustrated on the Concept Land Use Plan, the medium density and high density residential locations are dispersed throughout the City to avoid a concentration of higher density residential land uses at a single location within the City.

2. The higher density residential areas have been indicated for areas at the periphery of low-density residential neighborhoods along higher functional classification streets in an effort to reduce traffic impacts on low-density residential areas.

3. Due to design capability, the higher density residential locations will be allowed only in those areas designed as Planned Unit Developments where land use transition between low density neighborhoods and more intense commercial/industrial or higher functional classification streets are present.

4. The majority of medium to high density residential land uses have been proposed in close proximity to the City's commercial and industrial locations as a means of providing convenient access to commercial goods and services, nearby market support for businesses and reduced traffic impacts between these land uses. Also, medium and high-density residential land uses have been located in close proximity to the City's industrial areas as a means of providing housing support for employees and businesses.

Manufactured Housing (MH)

This land use type is a valuable resource of affordable housing. The City's manufactured housing is located in one manufactured housing park located in the central part of the community. This designation is intended solely for the existing trailer park in the City and will remain as an area where housing of this type can be made available.

Commercial (C)

The intent of the Comprehensive Plan is to identify commercial locations within the City that will provide attractive shopping environments and convenient access to retail goods and services for community residents. The various commercial areas will serve different roles in the community's future. The commercial areas of the City include Town Center; the U.S. Highway 10 business corridor and a future commercial/retail center located in the area proposed for the future southerly U.S. Highway 10 bypass. This designation is intended for all types of businesses, which serve the public in retail sales and service, restaurants, offices and other similar uses. Different areas of the City will have different purposes and intent for their Commercial districts, which will be further defined via zoning.

It is integral to the success of the Big Lake Town Center that premature development of commercial areas be carefully staged and held in an interim agricultural basis until that time.

Industrial (I)

The Industrial Land Use category includes a full range of heavy industrial, manufacturing, and light industrial land uses which, because of the nature of its operation and/or product requires more isolation from less intense land uses.

Light Industrial (LI)

Light Industrial is intended to be a less intense industrial land use area that would allow for office warehouses, warehousing, light manufacturing, office parks, and limited retail that may cover a range of zoning. Light Industrial areas are intended to be characterized by environmentally sensitive development, higher architectural standards, and the preservation of green space. It will allow for uses which can compatibly coexist alongside lower intensity activities, general industrial activities, and environmentally sensitive areas.

This land use also provides large, contiguous land areas where planned business centers can be developed. This would be provide a potential long-term land reserve for planned large-scale business or commercial complex.

Public and Semi Public (P)

This land use category includes all the various public and semi-public facilities that are ancillary to an urban community. This includes government buildings, schools, churches, golf courses, parks, etc.

In looking to the future, there will be a need for additional public/semi-public land uses to serve the City's growing population. While this need is recognized, the Land Use Plan contemplates only generalized areas for such facilities. The City will plan for future public/semi-public land uses using the following strategies:

1. Public and semi-public facilities will be considered a conditional use within the base zoning districts of the City. This mechanism shall allow the City to evaluate the appropriateness of these uses in the context of the Comprehensive Plan policies without changing the zoning.

2. The City will monitor its public space needs and plan for building additions and/or new facilities within the context of its Capital Improvement Program.

3. The City will assist the school district affected by the City's growth through the following efforts:

    a. Share strategies to manage the rate of growth, taking into account the school district's capacity to provide facilities for children moving into the district. The shared goal is to maintain the reputation for quality K-12 education.

b. The City will work with the school district to identify appropriate sites and timing of school construction so that needed City infrastructure can be provided in a cost effective manner.

c. Discuss with the school district ways in which their plans for additional capacity can support the City's goals of enhancing community identity and the timetable for any infrastructure expansion.

d. Use existing public information resources to communicate with the community at large, including households without children.

e. The City will share data on community growth and planning.

f. The City will continue to pursue opportunities for shared facilities between the City, school district and non-governmental organizations. These efforts will serve to reduce duplication of facilities and services and allow for more prudent investment of limited financial resources.

INSERT CONCEPT LAND USE PLAN MAP HERE

The Transportation Plan is based upon a total transportation system and how it relates to and serves the land use patterns within the community. The transportation system encompasses several modes, which include automobile, pedestrian, bicycle, rail and public transit. The transportation system serves to tie together, and in some cases separate, the various land use activities in the community. The Transportation Plan will present the basis for programming and planning the extension of the community transportation system into undeveloped areas of the City and surrounding areas.

The effect of growth and expansion of the community on the existing roadway systems, especially those limited by existing rail, highway or river crossings, is also part of the Transportation Plan. Development of alternative or additional routes in developing areas will serve to lessen the impacts on the existing systems.

MAJOR TRANSPORTATION ISSUES

The City of Big Lake's existing transportation system is reflective of the community's historic development patterns utilizing regional routes and rail systems. Current U.S. 10 follows the former Red River Ox Trail. The rail system, which once brought vacationers to the Big Lake resort community and transported ice from area lakes to Minneapolis, is still a major transportation feature in the community. The Burlington Northern Santa Fe Railroad transports agricultural and industrial products and will soon provide commuter rail service between the St. Cloud and Twin Cities Metropolitan areas. S.T.H. 25 connects Big Lake (U.S. 10) to Interstate 94. Commercial development and residential subdivisions are heavily reliant on the City's major collector streets. These development patterns have contributed to concerns over growing traffic congestion at intersections along U.S. 10. An additional concern lies along U.S. 10, where strip commercial and industrial uses have initiated a need for access management and frontage/backage road systems. The numerous crossings/access points along U.S. 10 present congestion and safety concerns as well as compromise the function of the system to move traffic throughout the region.

Due to the lack of connecting local and collector roads within the City and surrounding Big Lake Township, concerns about speed, traffic volume, the inappropriate mix of local and regional traffic, truck traffic through residential areas, and other transportation system concerns have resulted. The provision of pedestrian and bicycle trails has also been a topic of recent discussion. The establishment of a trail system should be planned in advance of actual adjacent development. In addition to local concerns, the Sherburne County Transportation Plan (1997) lists the following major transportation issues for Big Lake and the Study area:

X **Traffic Volume Congestion**

Existing Condition The Sherburne County Transportation Plan identified S.T.H. 25 between the south County line and CSAH 14 (within Big Lake Township) as being near congestion level. Congested is defined as existing volume exceeds 105 percent of the threshold volume, indicating a high probability of operational problems due to volume of traffic on the facility. This is due to the recreational nature of this route where traffic volumes on summer weekdays are higher and the route becomes congested.

2020 Condition Potentially congested roadway segments are anticipated to be:

1. S.T.H. 25 between the Mississippi River and U.S. 10
2. CSAH 5 between U.S. 10 and Hiawatha Street

Roadway segments identified as being near capacity based upon 2020 forecast volume:

1. U.S. 10 between S.T.H. 25 and CSAH 5
2. CSAH 11 between S.T.H. 25 and County Road 50

X **Accident Frequency**

Existing Condition The intersection of S.T.H. 25 and U.S. 10 is identified as a high accident frequency location (intersection with 5 or more accidents per year). The following road segments are classified as high accident rate segments:

1. County Road 43 between U.S. 10 and County Road 83
2. U.S. 10 between County Road 43 in Big Lake and County Road 44 in Elk River
3. CSAH 11 between County Road 50 and U.S. 10

X **System Designation Changes**

Within the study area, the following routes are identified by the Sherburne County Transportation Plan as having the potential for transferring from County to City and/or Township jurisdictions. The County Plan identifies a “transfer priority” (from 1-5 with 1 being the highest priority), which follows the roadway designations identified below.

X County Road 68 from the southern boundary of the City to CSAH 14. (1 -

High Priority)

- X County Road 73 from 196th Street to Lakeshore Drive. (1 - High Priority)
- X County Road 81 from County Road 73 to U.S. 10. (4 - Low Priority) Access to be protected
- X County Road 83 from CSAH 15 to County Road 43. (3 - Medium Priority)
- X CSAH 50 from CSAH 11 to S.T.H. 25. (3 - Medium Priority) Protect collector function by limiting access, setbacks

The aforementioned matters and the concerns raised in the Issues Report regarding transportation, present the basis for programming and planning of the extension of the local street system into undeveloped areas of the City and the Study Area. Also, the need to identify future residential minor collector routes to relieve the traffic volumes on community major collector streets becomes apparent.

ACCESS MANAGEMENT

Minnesota Statutes outline the extent to which Mn/DOT may restrict access. Mn/DOT may restrict access to right-in/right-out only, or to a single-access point, but some form of access must be granted to every parcel (the State cannot force a land-locked situation). To restrict access to a greater degree, Mn/DOT must acquire the right through negotiation or eminent domain. Mn/DOT can also affect access throughout comments to local communities regarding plats and its driveway access permitting process.

Cities and counties may control access through zoning and subdivision regulations. Any number of means may be used to control access, including limiting the number of access points per land parcel and distance between access points. In fact, direct access may be prohibited altogether if an alternative, indirect access is available. The Sherburne County Transportation Plan identifies the following access management guidelines.

1. Align access points with existing access points.
2. Allow for adequate spacing to separate and reduce conflicts.
3. Encourage indirect access rather than direct access on high-speed, high-volume arterial routes.
4. Implement frontage roads, grade separated crossings, right-in/right-out entrances and exits to reduce the number of conflicts and accident potential.
5. Implement specific access guidelines for rural and urban arterial roads (Tables 1 and 2).
6. Minimize any new accesses while consolidating and/or reducing existing access points as redevelopment occurs.
7. Guidelines apply primarily to routes with an arterial functional classification but may

also be used on collector streets.

8. Encourage shared driveways and internal circulation plans.
9. Restrict turning movements to reduce conflicts. (If access points cannot be eliminated, consider turning movement restrictions (e.g., left-in only, or right-in/right-out only) through channelization including options for installation of raised medians or signing.
10. Develop parallel street system for carrying local traffic.
11. Develop proper secondary street spacing.
12. When reviewing plats and new development proposals, be sure they provide proper intersection spacing for future signals. As a guideline, signalized intersections should be limited to through streets with spacing between 1/4 mile and 2/3 mile depending upon the type of street. Collector streets should provide some continuity and connectivity with other street systems.
13. Develop proper setbacks for future frontage roads. If frontage roads cannot be justified make sure that proper building and parking lot setbacks are established so that future frontage roads can be installed with minimal impacts.
14. Encourage proper lot layout to minimize access points. Promote direct residential access points onto local routes, not arterials or major collectors. Direct residential access off arterial or collector routes can result in complaints when traffic levels increase. In rural areas, where farms have one access point per 40-acre entitlement and where they cluster lots in one portion of the farmstead, access should be encouraged off local roads, not high-speed, high-volume state or county roads.
15. Encourage connectivity between developments. Individual developments should align streets to provide access to existing developments or reserve right-of-way to provide for future connections to adjacent developments. This promotes neighborhood connectivity, good emergency services, and more efficient travel for mail, garbage, and bus services as well as street maintenance.
16. Consider official map process for important corridors. Important arterial corridors or future interchange areas that are located in development-prone areas can be protected through an official mapping process. Local agencies should revise zoning ordinances and subdivision regulations to provide for dedication of officially mapped corridors at the time of platting.

TRAFFIC VOLUMES

The Traffic Volume Map on the following page shows traffic volumes for major thoroughfares in the study area from 1995. Pursuant to the 2020 projection by Sherburne County and Mn/DOT, the following routes are identified as having the potential for substantial increases in traffic volume resulting in congested conditions:

- CSAH 5 from U.S. 10 to Hiawatha Street,
- S.T.H. 25 from the Monticello River Crossing to U.S. 10

- County Road 11 from S.T.H. 25 to County Road 50.

INSERT TRAFFIC VOLUME MAP HERE

FUNCTIONAL CLASSIFICATION SYSTEM

As with most municipalities, jurisdiction over the roadway system is shared among various levels of government including the state, the county and the City. The Minnesota Department of Transportation (Mn/DOT) maintains the U.S. Highway 10 and S.T.H. 25 on behalf of the state. Sherburne County maintains the County State-Aid Highway (CSAH) and County Road systems and the remaining streets and roadways are the responsibility of the City.

The transportation section of the Inventory illustrates the functional classes for those roadways within the existing boundaries of Big Lake and provides traffic counts and projections to the year 2020. The Transportation Plan Concept Map, found on the following page, indicates the proposed arterial, collector and local streets. The functional classification system is based on anticipate usage through the year 2020. This classification of roadways of Big Lake and the Planning Study area will be used to determine the number of access points on major roadways and the design relationship of local roads to other township, county and state highways.

Functional classification refers to the function each roadway should perform before determining street widths, speed limits, intersection controls or other design features. Functional classifications will be used in Big Lake's road network to determine the number of access points which should be permitted on major roads, and the design and relationship of local roads to other county, state and federal highway systems. The City of Big Lake, through its ordinances, has authority to approve developments contiguous to city streets. Access guidelines oriented toward strengthening existing access control standards should be adopted to the greatest extent possible. This should be done to preserve the public investment in the roadway system while making available to developers those regulations under which plan preparation can occur. At the same time, however, Sherburne County and Big Lake Township must be equally diligent about protecting access to major road facilities. The City of Big Lake will utilize the following two tables from the Sherburne County Transportation Plan (1987) to provide access spacing guidelines for various road functional classifications.

INSERT TRANSPORTATION PLAN CONCEPT MAP HERE

Table 1. Urban Arterial Access Spacing Guidelines

Type of Access Required	Type of Roadway and ADT Affected by Access (1) (9)					
	Controlled Access Arterial Freeway Facility	**Multi-Lane Divided Arterial or Collector Over 10,000**	**Multi-Lane Undivided Arterial or Collector 8,000 – 25,000**	**Two – Lane Arterial or Collector 3,000 – 10,000**	**Two – Lane Arterial and Major collector Less than 3,000**	**Two – Lane Minor collector or Local Roads Less than 3,000**
A. Private Residential or Business Access	No Direct Access	No Direct Access (4)	No Direct Access (6) (7)	1/8 mile spacing (7)	1/8 mile spacing (7)	1/16 mile spacing
B. Low-Volume, Non-Continuous Streets (2) (3) or Shared Driveways	No Direct Access	¼ mile spacing with no median opening (4)	¼ mile spacing (6) (7) with turn lanes	1/8 mile spacing (7) with turn lanes	1/8 mile spacing (7)	1/16 mile spacing
C. Medium-volume Non-Continuous Streets (2) (3)	No Direct Access	½ mile spacing with signals and turn lanes (5)	¼ mile spacing with signals and turn lanes (6)	¼ mile spacing (7) with turn lanes	1/8 mile spacing with turn lanes	1/8 mile spacing with turn lanes
D. Low-Medium Volume Through Streets (2)	No Direct Access	½ mile spacing with signals and turn lanes (5)	¼ mile spacing with signals and turn lanes	¼ mile spacing with signals and turn lanes	¼ mile spacing with turn lanes	1/8 mile spacing with turn lanes
E. Medium-High Volume Through Streets (2)	1 mile spacing (interchange)	½ mile spacing with signals and turn lanes	½ mile spacing with signals and turn lanes	½ mile spacing with signals and turn lanes	½ mile spacing with signals and turn lanes	¼ mile spacing with signals and turn lanes
F. High Volume Arterials and Expressways (2)	1 – 2 Mile Spacing (interchange)	1 mile spacing with signals and turn lanes	1 mile spacing with signals and turn lanes	1 mile spacing with signals and turn lanes	1 mile spacing with signals and turn lanes	½ mile spacing with signals and turn lanes

NOTES:

1. The urban access guidelines are applicable to Mn/DOT, County and City roads. Shaded areas are guidelines that may be modified (see notes).
2. All Volumes represent 20-year forecasts. "Low Volume" < 5,000; "Medium volume" = 5,000 to 10,000; and "High Volume" > 10,000.
3. Non-continuous streets refer to cul-de-sac or short length local streets (less than ½ mile) which do not necessarily cross the roadway in question.
4. Additional access may be permitted in the form of right-in/right-out if the corridor extends through a mature small town CBD or if the facility is under the jurisdiction of the County or City. These areas should be evaluated on a case-by-case basis.
5. For four-lane county or city roads, the guidelines may be relaxed to ¼ mile spacing.
6. When retrofitting an existing corridor, direct access may be permitted after considering tuning conflicts, speed, accident history and capacity issues.
7. Continuous left turn lanes or a raised median with left turn lanes may be considered if retrofitting an existing corridor and access guid3elines cannot be achieved.
8. Property access off of arterial streets shall be minimized.
9. All access locations should have adequate stopping sight distance, drainage, spacing from adjacent access, and alignment.

Table 2. Rural and Developing Areas Access Spacing Guidelines

Type of Access Required	Type of Roadway and ADT Affected by Access (1)					
	Controlled Access Arterial Freeway Facility	**Multi-Lane Divided Arterial or Collector Over 10,000**	**Two –Lane Arterial or Collector 10,000 – 15,000**	**Two – Lane Arterial or Collector 5,000 – 10,000**	**Two – Lane Arterial or Collector Less than 5,000**	**Two – Lane Local Road Less than 5,000**
A. Field Access	No Direct Access	No Direct Access (4)	Spacing based on other criteria (5) (1 per 40 acre or ¼ mile spacing)	Spacing based on other criteria (5) (1 per 40 acre or ¼ mile spacing)	Spacing based on other criteria (5) (1 per 40 acre or ¼ mile spacing)	Spacing based on other criteria (5) (1 per 40 acre or ¼ mile spacing)
B. Private Residential or Business Access	No Direct Access	No Direct Access (4)	1/2mile spacing (6)	1/4 mile spacing (7)	1/8 mile spacing (6)	1/16 mile spacing
C. Low-Volume, Non-continuous Streets (2) (3) or Shared Driveways	No Direct Access	½ mile spacing with no median opening (4)	½ mile spacing (6) with turn lanes	¼ mile spacing (7) with turn lanes	1/8 mile spacing (6)	1/16 mile spacing
D. Medium-volume Non-Continuous Streets (2) (3)	No Direct Access	1 mile spacing with signals and turn lanes	1/2 mile spacing with signals and turn lanes	1/2 mile spacing with turn lanes	1/4 mile spacing with turn lanes	1/8 mile spacing with turn lanes
E. Low-Medium Volume Through Streets (2)	No Direct Access	1 mile spacing with signals and turn lanes	1 mile spacing with signals and turn lanes	1/2 mile spacing with signals and turn lanes	1/2 mile spacing with turn lanes	1/4 mile spacing with turn lanes
F. Medium-High Volume Through Streets (2)	3 – 5 mile spacing (interchange)	2 mile spacing with signals and turn lanes	2 mile spacing with signals and turn lanes	1 mile spacing with signals and turn lanes	1 mile spacing with signals and turn lanes	1/2 mile spacing with signals and turn lanes
G. High Volume Arterials and Expressways (2)	6 – 12 Mile Spacing (interchange)	5+ mile spacing with signals and turn lanes	5+ mile spacing with signals and turn lanes	2 mile spacing with signals and turn lanes	1 - 2 mile spacing with signals and turn lanes	1 – 2 mile spacing with signals and turn lanes

1. Rural and developing area access guidelines are applicable to Mn/DOT, County and City roads. Shaded areas are guidelines that may be modified (see Notes).
2. All Volumes represent 20-year forecasts. "Lot volume" < 5,000; "Medium Volume" = 5,000 to 10,000; and "High Volume" > 10,000.
3. Non-continuous streets refer to cul-de-sac or short length local streets (less than ½ mile) which do not necessarily cross the roadway in question.
4. Additional access may be permitted in the form of right-in/right-out (1/4 mile spacing) if there is no other feasible local road access point.
5. Access criteria should be based on factors such as stopping sight distance, drainage, and spacing and alignment with other access points.
6. Access spacing may be reduced on county facilities to ¼ mile.
7. Access spacing may be reduced on county facilities to 1/8 mile.
8. Local land access off of collector and arterial streets should be minimized
9. All access locations should have adequate stopping sight distance, drainage, spacing from adjacent access and alignment.

Principal Arterial Streets:
Principal arterials are major transportation arteries that function to connect large population centers to cities in other portions of the state. These roadways are designed for high-speed traffic movement and for high vehicle volumes, including commercial traffic, and are intended to serve longer trips. The principal arterial roadway within the City of Big Lake is U.S. 10, which represents the backbone of the City's transportation system and also serves as the major transportation artery connecting the Twin Cities to St. Cloud.

The designation of this roadway as a principal arterial is consistent with the Sherburne County Transportation Plan. This road provides the most direct connection between the Twin Cities and St. Cloud as well as the connection of the major cities within Sherburne County.

1997 U.S. 10 Access Management Study: *(Sherburne County Transportation Plan, 1997)*
U.S. 10 serves as a vital link for the movement of goods and services as well as providing convenient access for commuters to the St. Cloud or the Twin Cities metropolitan area. In addition, this route serves a larger statewide purpose linking small towns and larger urban areas with recreational areas in Northern Minnesota. It is an economic necessity to the County and State that these routes continue to function at a high level of service. As traffic volumes continue to grow, Mn/DOT will look to control of access locations as the primary tool to maintain a high-level of service and safety for the corridor. An access management study, to develop an overall concept plan for access to U.S. 10, has been undertaken by Mn/DOT and the communities located along the corridor. The goal of the access plan is to provide a good level of service and safe route for users of the trunk highway system and to provide adequate access to serve adjacent land use along the corridor.

The access study included an inventory of existing access locations along the U.S. 10 corridor, their function, current and potential use, adjacent land use and location of the access with respect to future regional Mississippi River crossing alternatives.

Desirable spacing criterion in urban and developing areas is considered to be one-half to two-thirds mile. In rural areas, the spacing was increased to one to two miles. A greater spacing in the rural areas provides the traveling public with a safer and more efficient highway. Based upon the aforementioned criteria, access focal points were identified and are shown on the following map. These access points should be considered as the approximate locations where future full access intersections would be provided to U.S. 10. As traffic levels increase in the corridor and as development occurs, communities and local governments should plan to focus their local street and traffic patterns to the locations identified by the study. The plan should be viewed as a

long-term guideline for corridor access with implementation to occur as opportunities present themselves.

1999 U.S. 10 Highway Corridor Study:

Mn/DOT is currently in the process of coordinating a U.S. 10 Highway Corridor Study to address issues of mobility (conflict between through traffic and local traffic), proliferation of signals, access, development (coordination of land use and transportation decisions) and safety along the corridor. The section of U.S. 10 under study includes that area between the Cities of Elk River and Becker, of which, the City of Big Lake is a part. As a principal arterial, the interest of the State is to maintain speed and the through movement of traffic along U.S. 10. Unfortunately, the strip development that has occurred along the highway in Big Lake and the Study Area has allowed the communities to inappropriately utilize the arterial system for local trips and the section of highway now also serves as a local "main street" for Big Lake. U.S. Highway 10 serves a dual function of providing intra-community circulation for the City as well as regional access for people traveling between the Twin Cities and northern Minnesota. Because of the three major lakes around which the City has developed (Big, Mitchell and Keller Lake), U.S. 10 is the only continuous roadway in the City that trends east to west. Topography and existing development patterns make it difficult to establish a parallel facility. As a result, there is increased demand for signalization and other improvements to support the continued development/expansion of the commercial/industrial strip along U.S.10.

The emphasis of this Comprehensive Plan is to deter future development patterns that further compromise the U.S. 10 corridor. The City has set forth goals and policies to limit further strip expansion in favor of developing nodes for future development. In an ideal setting, full access to a facility of this type would be limited to one-half mile intervals. However, the topography of the immediate vicinity and the existing development prevent the implementation of this ideal spacing. What is important is that traffic be allowed to move through the area as efficiently as possible, minimizing vehicle conflicts that lead to congestion.

This plan seeks to minimize future access to U.S. 10 through coordinated land use planning and the use of frontage/backage roads and alternative local transportation routes. It is important to note however, that Sherburne County and Big Lake Township Comprehensive Plans and Ordinances must be developed that limit premature conversion of farm/agricultural land to higher uses along the Highway. A coordinated planning approach is required between the City, County and Township to either limit development or adopt higher standards that require installation of parallel side street connections that provide motorists with the chance to avoid using U.S. 10. There are many places where existing development makes the establishment of parallel roadways impossible. However, redevelopment of properties along U.S. 10 may create

opportunities that cannot be foreseen now. The City, County and Township should remain alert to any possibility of creating a frontage road and/or a continuous route one or two blocks away from U.S. 10.

Minor Arterial Streets:

Big Lake is serviced by S.T.H. 25 and CSAH 5, which are classified as minor arterial roadways. S.T.H. 25 provides significant access through Big Lake and connections to the Cities of Monticello, Becker and other communities to the northwest of Big Lake. CSAH 5 provides significant access through the City of Big Lake to Big Lake Township and northern areas of Sherburne County. Minor arterials are also designed to emphasize mobility over land access, serving to connect the City with adjacent communities and the regional highway system. Minor arterial roads typically connect major business concentrations and other important traffic generators. They may also provide relief for congestion on parallel principal arterials.

CSAH 5 has been upgraded from a major collector to a minor arterial road due to its function in carrying large amounts of traffic directly north of Big Lake to areas of Big Lake Township and Orrock Township. This road will continue to carry high amounts of traffic, which will impact the single-family homes (with direct driveway access) that have developed over time, within the City of Big Lake. Access restrictions will be implemented along CSAH 5 in areas of new development and the City will work with Sherburne County to eliminate existing access where possible. However, it is important to note that much of the existing development within the City will continue to maintain direct access, as redevelopment options are limited.

Both minor arterial roads will provide the major access from land development activities in the Planning Study area. No extension or new minor arterial roadways are projected within the Planning Study area with the exception of the possible re-route of 200th Street from its current intersection with U.S. 10, to an alternate location. There are three alignment options identified in the Sherburne County Transportation Plan.

The City of Big Lake supports the most westerly alignment option as this would allow for the most potential to acquire right-of-way and the lands around the proposed intersection are currently not developed. The easterly and the alignment option that continues 200th Street directly north are both encumbered by existing residential development and natural features. The westerly alignment would allow for the opportunity to create a business park area that could be designed with limited direct access. Again, the potential to serve this area and plan for coordinated land/transportation development patterns rests on the ability of Sherburne County, Big Lake Township and the City to effectively plan this area. It will be critical to limit strip development along both U.S. 10 and the 200th Street realignment route. This area is a valuable resource only to the extent that large, undeveloped tracts of land are retained

as rural/agricultural use. If developed prematurely without appropriate land use controls and urban services, the area will cease to be a valuable resource and become yet another problematic intersection along U.S. 10.

Major Collector Streets:

A system of major and minor collector streets are suggested that would serve to connect individual neighborhoods to the minor arterial system. Each planning district is served by at least one collector. The designation of collector streets is intended to focus traffic entering or leaving the neighborhoods onto particular access points on the arterial system, and thereby promoting greater efficiency on the higher capacity roadways.

Major collectors are roadways, which place emphasis on both mobility and land access. Major collector streets typically connect neighborhoods within and between sub-regions. The Sherburne County Transportation Plan does not designate any of the roads within the City of Big Lake as major collectors. It is possible that future major collector status may be assigned to certain roads as development within Sherburne County and the City continues. Within the Study Area, both CSAH 14 and CSAH 11 are classified as Major/Urban Collectors by the Sherburne County Transportation Plan (1987).

Minor Collector Streets:

Minor collector streets provide service between major collector and minor arterial streets to provide critical connections to sub-regions to relieve local streets of heavy traffic, but also provide for limited direct lot access when necessary. Existing minor collector streets within the City include County Roads 81and 43.

The Transportation Plan Concept Map indicates the interest of the City to develop a parkway system that would form a community loop roadway and trail system. The parkway would be designed to function as a minor collector street and would contain landscaped medians/boulevards and a sidewalk/trail system. The specific design guidelines for the parkway will need to be further developed by the City. The parkway will provide an alternative to U.S. 10 for local short trips and serve to connect the greenway along the Elk River to other natural features areas and the Mississippi River corridor. The minor collector status proposed for the parkway is identified in the plan to provide an alternative route for commercial and industrial traffic that will be generated by industrial development contemplated for the southeast part of the community.

Local Streets:

Local streets are all those that are not classified as arterial or collector. These streets are for access to adjacent property and designed as low speed, low capacity facilities. Long distance travel is purposefully directed away from these streets to the collector and arterial system. Local streets primarily serve residential areas.

All other roadways that do not fall under the functional classifications discussed earlier are designated as local roadways. These streets are primarily designed to provide property access. The Transportation Plan Concept indicates several areas where local street extension and/or connections are needed. As development occurs, placement of local streets will be determined by the existing and proposed collector and arterial streets in that particular area.

In the past, the community developed without a definitive plan for through streets and allowed dead-end and cul-de-sac streets in those areas where it is not necessitated by features such as wetlands. Cul-de-sac streets should not be permitted as the development norm but only as a way to accommodate existing natural or physical features. Local street networks developed without dead-ends will serve to improve traffic circulation patterns, reduce the City's reliance on its collector and arterial streets and economize on the provision of local public services, including public transit.

1993 Big Lake Street Study

The City of Big Lake commissioned a study in 1993 to review and develop a maintenance program for existing roadways, provide a framework for reconstruction of roads approaching the end of their useful life, and to establish design standards for future road development and construction. The consulting firm, Short Elliott Hendrickson Inc. (SEH), prepared the "1993 Street Study for the City of Big Lake" and the elements applicable to the Comprehensive Plan are summarized in the following paragraphs.

The majority of roadways within Big Lake were reconstructed in 1980 when sanitary sewer was installed throughout the community and where water mains were constructed. Street construction, at that time, was considered surface restoration following sewer and water main installation. Roads were simply reconstructed to their previous widths of 18-24 feet with little or no budget available to widen, provide concrete curb and gutter, or to meet drainage needs. A major exception to this pattern was Eagle Lake Road from U.S. 10 to Park Avenue, which was constructed to a 44-foot width with concrete curb and gutter and storm sewer.

In 1987 the City began constructing new streets in developing areas with wider sections to accommodate parking and pedestrian needs, and began requiring concrete curb and gutter to define the limits of the street, to provide positive drainage, and to protect the edges from gradual destruction. Storm sewer was provided where necessary, and a retention pond was constructed north of Lake Shopping Center.

In 1988 and 1989, Humboldt Drive was constructed as a Frontage Road along the south side of U.S. 10. In 1992, Rose Drive was constructed along the north side of U.S. 10

from Phyllis Street to County Road 43. During the early 1990's, Mn/DOT proposed to reconstruct U.S. 10 from Lake Shore Drive to County Road 43. As part of the original project, Mn/DOT proposed to install a raised median from Lake Shore Drive to Eagle Lake Road, which generated much controversy from the business community. The raised median was proposed in an attempt to control access and turning movements along U.S. 10 within the City of Big Lake. Ultimately, Mn/DOT abandoned the reconstruction proposal settling for a maintenance fix of mill and overlay. A center two way left turn lane was provided to ease congestion, and signals were installed at Eagle Lake Road. S.T.H. 25 was completely reconstructed from Norwood Drive to the railroad tracks, and also included a center two way left turn lane.[1] The reconstruction of U.S. 10 and S.T.H. 25 was completed in 1993.

Development activity between 1980 and 1992 was moderate. Habitat Addition (77 lots) located on Fair Meadows Drive near Ormsbee Street was platted in 1982, but streets were not constructed until 1997. In 1992, preliminary plats were submitted for McDowall Farm Estates (potential capacity of over 200 lots); development of 18 lots along Hiawatha Avenue, Lake Ridge Addition (66 lots). This rapid acceleration in housing will have a significant impact on existing City Streets.

Future street extensions must integrate with the existing street networks and provide future access to undeveloped areas in the City and Planning Study Area. Local street construction will be developed in conjunction with the orderly extension of utilities and in accordance with the Subdivision Ordinance and City Policies.

The Sherburne County Transportation Plan indicates the functional classification of County Road 68 as a local road. This classification is reflective of the County's desire to turn back County Road 68 to the City of Big Lake.

DESIGN STANDARDS

Development of a safe, efficient and functional street network depends on the design standards and construction quality. Dimensions, parking access control and speeds are all aspects of the design standards for Big Lake and the Planning Study Area. Table 3 on the following page provides suggested design standards for each functional class road type:

[1] 1993 Street Study for the City of Big Lake, p. 2.

Table 3. Suggested Street Design Standards

Street Classification	Minimum Right-of-Way	Pavement	Curb Parking	Design Characteristics
Principal Arterial	100' to 300'	2-4 lanes	Ban if necessary	Grade separations for major cross streets; limited number of grade intersections; controlled access.
Minor Arterial	Desired 80' to 100' – 80' minimum	2-4 lanes	Ban if necessary	Intersections at grade; access controlled where feasible; 30-40 mph operating speed.
Major Collector	Desired 80' – 66' minimum	2 lanes; 44' pavement width	Ban if necessary	Alignment to discourage cross town movements; access restricted; 30 mph operating speed
Minor Collector	Desired 66' minimum	2 lanes; 36' pavement width	Ban if necessary	Alignment to discourage cross town movements; access controlled; 30 mph operating speed.
Local	Desired 60' minimum	2 lanes; 36' pavement width	Ban if necessary	Curved, relatively short, and conducive to neighborhood traffic, 30-mph speed; light volumes; through trucks banned.
Cul-de-sac	66' r-o-w with 60' minimum radius*	2 lanes; 36' pavement width; 45' cul-de-sac width	Yes, but not in turning lanes	500 foot maximum length; adequate turning diameter; usually 120-foot property line diameter, proper provisions for emergency vehicles and snow removal.
Service	50' r-o-w minimum	28' pavement width	Yes, but not in turning lanes	

RAILROADS

Big Lake is served by the Burlington Northern Santa Fe (BNSF) Railroad, which runs through the south central part of the City bisecting the community. Its alignment is directly adjacent to and south of U.S. 10, west of the Lake of Big Lake. Near the intersection of S.T.H. 25, U.S. 10 and the railroad begin to separate and part of the City's downtown area lies between the two corridors. At the eastern City limits, the separation distance between the highway and railroad approximates five hundred (500) feet.

BNSF currently carries an average of 50 to 60 trains per day, with a maximum of about 70 trains during peak shipping seasons. The primary commodities shipped are coal to the SHERCO Power Plant in Becker, agricultural and industrial commodities between Chicago and the West Coast, and general freight.[2]

The future of the BNSF includes several changes. First, the single track between Clear Lake and Big Lake will be upgraded to two tracks by 2003. This improvement has not been assigned for a definite program year. Also the BNSF expects train traffic to increase up to 80 trains per day, although no definite time line has been identified.[3]

The results of Mn/DOT's Northstar Rail Study, which is underway, could significantly impact this rail line, as it has been identified as a corridor for commuter rail traffic. Access management plans for U.S. 10 could also significantly affect rail grade crossing activity, as limited access on U.S. 10 could add traffic on routes currently crossing the railroad track.[4]

AIRPORTS

A small private airport that historically operated in southern Big Lake Township is located west of S.T.H. 25, about two miles south of the City. The facility operates under a Conditional Use Permit granted years ago and has a grass runway approximately 2,500 feet in length. A 1997 storm caused severe damage to aircraft and the hanger facilities. Since that time, the grass runway has not been maintained and Township Officials indicate that there has been little, if any airport related activity at the site.

Air service for small aircraft is provided by Buffalo Municipal Airport a local/regional facility, which is located approximately eleven miles from the City of Big Lake. Air service is also provided via the St. Cloud Municipal Airport, which contains two runways. The airport is primarily used for small corporate and private planes. There are about 100-150 flights per day at this facility. Northwest/Messabi has ten arrivals and ten departures daily and is the only commercial airline, which utilizes the facility. Minneapolis/St. Paul International Airport is located approximately forty-five miles southeast of the City and offers a full array of flight services.

[2]Sherburne County Transportation Plan, 1997, p. 17.

[3]Sherburne County Transportation Plan, 1997, p. 18.

[4]Ibid., p. 18.

TRANSIT

Transit service is currently provided via Sherburne County "RiverRider" which has been in operation since 1979. It provides door-to-door service on a dial-a-ride/flexible semi-fixed service. In 1995, it expanded its service to Wright County, connecting Sherburne County to Buffalo, Cokato, Howard Lake, Montrose and Waverly. Trips served by River Rider include health programs, medical appointments and shopping. Disabled and elderly persons comprise about 85 percent of the ridership.[5]

The future of transit service in Sherburne County could be enhanced by two recent initiatives created by the McKnight Foundation and Mn/DOT in response to welfare reform and the Northstar Corridor Study. Sherburne County and the St. Cloud MTC in concert with Sterns, Benton and Wright Counties have received a two-year grant from the McKnight Foundation for enhancing transportation services for persons who are in the transition process from welfare to work. Beginning in 1998, the McKnight grant will support the creation of a new regional Commuter Services Coordinator pilot program to link the counties, employers and employees with transportation services such as rideshare and transit service, including funds for increasing transportation services throughout the County and region. In addition, the Minnesota Legislature also appropriated funds for welfare to work transportation enhancements, which could also be used to assist in providing additional transportation services throughout the County and region. Sherburne County will need to explore ways to provide additional transportation services and coordinate with other transportation providers in response to welfare to work initiatives and growth in the County's current transportation and transit systems.[6]

The Northstar Corridor is a 70-mile transportation corridor, which runs along U.S. 10/47 from downtown Minneapolis to St. Cloud. This is the fastest growing corridor in the state and has been identified by Mn/DOT as one of the corridors with the highest potential for successful commuter rail service. The Northstar Corridor Development Authority (NCDA) is the joint powers board studying future transportation options for the Northstar Corridor. The Northstar Corridor Commuter Rail is expected to have intermodal connections to existing bus service within the corridor and to the future Hiawatha Light Rail Transit (LRT) Corridor. The Hiawatha Corridor continues to the Minneapolis/St. Paul Airport and the Mall of America.

The Northstar Corridor Commuter Rail will utilize existing BNSF rail lines and have intermodal connections to existing bus service within the corridor as well as to future LRT Corridors. The NCDA has secured federal and state authorization to study, design

[5] Sherburne County Transportation Plan, 1997, p. 18.

[6] Ibid., p 19.

and construct the potential commuter rail system and other transportation improvements. The intersection of County Road 43 and the railroad (northwest corner) in the City of Big Lake has been identified as a train station location. The NCDA is in the process of working with the City to develop a specific station area planning, design, and land use plan for the corridor and the site. Discussions with neighborhoods, community staff and elected officials, interest groups and the general public will identify actions necessary to link commuter rail to current and future land uses. It is anticipated that a site plan for each station will be prepared. The plan will show access for cars, busses, bikes, and pedestrians to the rail station as well as the passenger waiting and train boarding facilities. In addition, land use plans for the area and one-half mile around the station will be developed in cooperation with the communities.[7]

ROADWAY IMPROVEMENTS/MAINTENANCE

Since 1980 when most streets were reconstructed in Big Lake, the policy for new street construction has been done on a "build as we go" basis. There has been no specific plan and as such, street widths and structural sections have been determined with a short-term estimate of future traffic and land use. This plan provides the first step in the development of a comprehensive transportation system in that it provides for a functional classification system and access guidelines for major road facilities. However, the City will also need to develop a design guideline manual to set forth pavement, street and trail section and construction designs, which properly represent the type and volume of traffic to be carried. Additionally, it will be necessary to develop a budget and Capital Improvement Plan process to establish funding mechanisms and priority schedules for community transportation improvements.

While this Transportation Plan addresses the City's roadway system in regard to functional adequacy, it must be realized that the success of the system goes no farther than the condition of the streets. Hence, active and preventative maintenance of the City's street system is considered to be of prime importance. The City will need to prepare annual updates to the Capital Improvement Plan, to address transportation facilities and maintenance, in order to assure successful implementation of the comprehensive transportation system.

An overall strategy of improvements, tempered by fiscal constraints, begins with an analysis of key intersection capacity improvement projects, safety improvements and the protection of access by establishing strict standards and by designating necessary right-of-way. Identifying future needs for facility rights-of-way followed by timely "set-aside" programs will, in the long run, save the community much in the way of financial resources.

[7] Northstar News, Northstar Corridor Development Authority, Number 5, April 1999, pages 2-3.

Roadway improvements should also be geared toward providing for transit needs, particularly in the area of meeting turning radii, traffic signals and adequate roadway structure. It should be pointed out that non-motorized travel needs also must be carefully considered. Big Lake will develop a policy for designating sufficient right-of-way to provide for sidewalk and/or bikeway needs.

MSA System

Prior to 1999, the City's population was less than 5,000 people and Big Lake was not eligible to establish a Municipal State Aid Street System. The City will be working to establish its MSA system in 2000, which will make the community eligible to receive state funding for maintenance and construction of the streets. The MSA system normally consists of the more heavily traveled collector and arterial streets, and connects with county roads and trunk highways. Funding is apportioned on the basis of construction needs, population and the construction must meet certain established design standards. As of 1999, a typical City the size of Big Lake received approximately $150,000 for maintenance construction annually. With the population of Big Lake increasing rapidly, it is prudent to plan for this future street system so that reconstruction can be timed with eventual funding.

In order to create the proposed roadway system out of the existing system, the City will have to encourage a series of capacity improvement projects between now and the year 2020. Many of these projects are on state or county highways and therefore not under the complete control of the City. Nevertheless, by identifying these projects, the City is establishing its position in regards to improvements on these roadways.

This Comprehensive Plan places an emphasis on continuing to develop and add to the City's trail system. The City is interested in creating a well-planned and efficient system of bicycle, pedestrian and trailway improvements within the community through the implementation of this plan. The trail system concept provides for he interconnection of planning districts, major parks, the lakes and rivers, schools and commercial areas. Emphasis shall be placed on a trail system that provides a community loop system that connects to the trails along U.S. 10, S.T.H. 25 and a future system, which connects the lakes and Town Center areas with the greenway system along the Elk River and a southern parkway.

This plan sets forth the concept for a community loop trail system and greenway however, it is anticipated that more detailed planning and engineering studies will be required to establish the corridor routes, standards and funding/implementation mechanisms. The community loop pedestrian/bicycle system emphasizes the following priorities:

1. Include trail routes within and interconnections to the areas planned for annexation.

2. Connections to and linking neighborhoods with the commercial and industrial/business areas of the City.

3. Trail routs along major streets that have the most direct access to primary pedestrian destinations.

4. Where trails will connect neighborhoods to schools.

5. Where trails will serve commuter destinations (Northstar Train Station Site).

6. Where trails lead to community parks, play fields, the lakes, the Elk and Mississippi Rivers, the Big Lake Greenway, Parkway and Town Center.

7. Where trails will link together separate portions of the Big Lake sidewalk and trail systems with each other.

8. Where trails provide access to transit and bus stops.

PEDESTRIAN/BICYCLE FACILITIES

Within the Study Area, the only separated bike/pedestrian trails in existence are located within the City of Big Lake. The existing City trail system consists of a series of paved

(bituminous) trails and cement sidewalks, the majority of which are located in the vicinity of the downtown. A bituminous trail connects Lakeside Park to Fern Street providing bike and pedestrian access to the downtown and commercial/retail area located north of U.S. 10. A pedestrian sidewalk system also connects the areas between S.T.H. 25 and on the south side of U.S. 10. A pedestrian sidewalk is located along the east side of S.T.H. 25 from the southern City limits to U.S. 10. The City of Monticello, in Wright County, has a separated trail way system that ends after crossing the S.T.H. 25 Bridge into Big Lake Township. The Shores of Lake Mitchell development will contain approximately three miles of trails (11,000 feet of bituminous and 5,000 feet of gravel trails) upon completion of the project.

The City of Big Lake conducted a "Walking/Bicycle Trail Survey" in the fall of 1998 wherein 1,475 citizens were requested to provide feedback regarding walking paths and bicycle trail systems within the community. Seventy-one percent of the people (200 of 282 residents), who returned the survey, indicated that they ride their bikes or walk at least weekly around the lake. However, a number of respondents indicated that they do not utilize the lakefront areas for walking/biking because they feel it is "too dangerous." The respondents were asked to indicate their support for a trail system around Big and Mitchell Lakes. An overwhelming majority of the respondents (220 out of 282) indicated their support for a trail located on the lakeside of the road.

As of the result of the survey, the City has developed a potential trail routing concept plan, which shows a trail system loop connecting McDowall, Mitchell and Big Lakes. The trail concept plan follows the alignment of Lakeside Drive/Hiawatha Avenue and connects to the existing 8-foot bituminous trail located along the north side of U.S. 10. The concept trail system follows Lake Street on the east side of the lakes and connects to Hiawatha Avenue to the north and the future McDowall Lake trail systems. A series of overlook areas are located along the east shore of Big Lake, utilizing public street rights-of-way. The concept plan also shows a potential future trail link between the lake loop and I.S.D. 727 School Campus utilizing Washington Avenue right-of-way. The lake loop trail system concept is identified on the Community Facilities Map located in the Inventory section of the Comprehensive Plan.

The Sherburne County Comprehensive Park, Trail & Open Space Plan (1996) indicates that trails should be provided along the following routes in order to provide pedestrian and bicycle links to major parks, communities and to link historic and natural resource areas of the County. Within the study area on-road or detached off-road trails are shown along County Road 14 and along that part of County Road 43, located south of U.S. 10. Detached off-road trails are shown along County Road 11 and S.T.H. 25. On Road Trails are shown for County Roads 11, and 5/75.

The Trail/Parks Concept Map located on the following page illustrates the location of existing parks and future park search area sites. A series of trail systems are shown utilizing County Road, Minor Arterial and collector street corridors as well as a future parkway and several local street corridors. Many of the trails are suggested for locations that will extend the existing trail system. Other trails are suggested for areas with high amenity natural features such as the Elk River and Mississippi River corridors and adjacent to lakes and large wetland complexes. The intent of the comprehensive trail system concept is to provide for pedestrian and bicycle connections with major parks, the I.S.D. 727 School Campus, business and industrial areas. Additionally, the trail system provides a connection between the greenway area proposed in the northern part of the community (adjacent to the Elk River), with the central lakes loop trail system and the Mississippi River. The trail and park concept system is designed to provide recreation opportunities throughout the community and to create an overall recreation atmosphere that is based upon public access and view of the predominant lake features of Big Lake.

It is anticipated that parts of the system will be constructed at the time of future road upgrades while local trail segments will be constructed at the time of subdivision development. The trail segments within local right-of-way may be constructed by allowing individual developments to construct narrower streets provided sidewalks and/or asphalt trails are constructed as part of the project. The City will investigate the use of grant and/or other mechanisms to fund the trail system in addition to implementation of the Municipal State Aid (MSA) system.

Snowmobile Trails

The Sherburne County Grant-In-Aid Snowmobile trail runs through portions of Big Lake Township and provides snowmobile access throughout the County. These trails run through private property and the DNR trails and waterways unit publishes the routes. The Sand Dunes State Forest, located in northern Sherburne County is a popular snowmobile destination. The Grant-In-Aid Trail requires private landowners permission, which could be significantly altered by residential growth in the study area.

INSERT TRAIL / PARKS CONCEPT MAP HERE

INTRODUCTION

To facilitate detailed examination of development prospects for all areas of the community, Big Lake and the area within two miles of the current corporate City boundaries have been divided into six planning districts. The location of these planning districts is illustrated on the map that follows and has also been described below. The planning district boundaries were established mainly using the location of similar land uses and by physical barriers such as highways and water bodies, which naturally separate each from other portions of the City. This section of the Development Framework outlines the land use and development objectives for each individual planning district. The Concept Planning District Land Use Map that is located at the end of this chapter identifies the proposed land use within the areas bounded by the various planning districts.

District One encompasses the northwestern part of the City, including the recently annexed McDowall Oaks and Shores of Lake Mitchell neighborhoods. It is bounded by the Elk River on the north and east, the west by County Road 50 and the south by Hiawatha Avenue. The majority of this district is comprised of the most recent subdivisions and Planned Unit Developments, which have been approved by the City of Big Lake. The district includes some Big Lake Township properties south and east of Landis Lake, for the purpose of addressing future area planning and urban expansion.

District Two encompasses the older residential neighborhoods of the community that were constructed primarily along the shores of Big and Mitchell Lakes. There is little vacant land within this district with the exception of future phases of lands that have already been approved for subdivision. This district is bounded by Hiawatha Avenue to the north, County Road 5 to the east, the small lot subdivision adjacent to County Road 73 (Lakeshore Drive) to the west and the U.S. 10 commercial corridor to the south.

District Three is comprised of land area that is for the most part, outside of the corporate limits of Big Lake. This district is bounded on the north by the Elk River, the west by County Road 5 and the south by the U.S. 10 commercial/industrial corridor. The eastern extent of the planning district is about ¼ mile east of and parallel with 173rd Street NW. This district contains about 940 acres of land including the I.S.D. 727 school campus, older residential neighborhoods surrounding the school site and the established commercial and industrial uses adjacent to County Roads 5 and 43 and U.S. 10. This district will likely provide area for the future eastward expansion of the City based upon the location of the existing Urban Expansion District boundary (about ¼ mile east of and parallel with County Road 43) and the fact that northern expansion may be limited by the Elk River.

District Four represents the U.S. 10 corridor and lands generally within ¼ to ½ mile of the highway, which are, for the most part, designated for commercial and industrial development. This district has been identified separately due to the predominant role that the highway has on the community with regard to transportation and land use (commercial and industrial activities) that occur primarily due to the proximity and access to U.S. 10.

District Five is located directly south of Planning District 4 and consists of existing residential neighborhoods and agricultural areas, some of which are under the jurisdiction of Big Lake Township. The district is bisected by S.T.H. 25 and contains the general land areas adjacent to the current corporate boundaries of the City where landowners have inquired or expressed an interest in pursuing future urban level development of their properties. The southern boundary of Planning District 5 is that area of agricultural lands within Big Lake Township, which are not irrigated. The south boundary was also drawn to include the pump station (located near Ormsbee Street) within the corporate limits of Big Lake.

District Six comprises land areas, which are currently totally outside of the City of Big Lake. This planning district was defined in order to address the fact that the City's wastewater treatment facilities are located about two miles south of the corporate limits of Big Lake (along the Mississippi River). The Big Lake Township and Sherburne County plans indicate that long-term agricultural use is planned for the majority of District 6, (located north of County Road 14). The City of Big Lake also strongly promotes agricultural use within this district as a means to stave off premature development without municipal sewer and water. However, it is recognized that development and market pressure will likely increase in the future, prompting owners to seek the conversion of their lands to some higher use than agriculture. It is of the highest importance that either no additional development or very minimal development occurs within the sewer service area unless it is served with urban services including public sewer, water, streets, park and trails and storm water management systems.

DISTRICT ONE

The existing land uses within District One are a combination of single family and rural residential (within that part of the district under the jurisdiction of Big Lake Township). The natural features located within and surrounding this district (Elk River, Blacks, Thompson and McDowall Lakes as well as the wetlands complex of Beulah Pond) make this an attractive area for existing as well as future residential neighborhoods. There are approximately 635 acres of developable (land outside of rivers, floodplains, lakes and wetlands pursuant to the National Wetlands Inventory Map), within the district.

District One Issues:

- Lack of master planning objectives between City and Township
- Infrastructure capacity unknown
- Nonconforming development patterns
- Internal vehicular and pedestrian circulation
- Realignment of CSAH 81/200th Street
- Lack of collector roads
- Limited public access to natural features
- Floodplain management
- Lack of park and recreation facilities

District One Objectives:

The primary objective for this district is for the City, Township and/or Sherburne County to come to an agreement as to the extent of the Urban Expansion District boundaries. Fundamental to this objective are the issues associated with compatible and consistent land use transition and the logical, economical and planned extension of urban infrastructure into these areas. The district recommendations that follow this section outline a concept land use and transportation system based upon the objectives of the City outlined within the Policy Plan, Land Use and Transportation elements of this Comprehensive Plan.

Proposed land uses include low-density single family residential across the majority of the district. The land areas that do not include natural features are proposed to be developed as single-family residential utilizing 12,000 square foot lot sizes with 85 feet of lot width. The introduction of a new residential zoning district governing single-family development in areas with or adjacent to water bodies and wooded is proposed. To encourage preservation of natural features, the use of larger (15,000 square foot) lots and increased lot widths (90 feet) is contemplated. Additionally, standards requiring a minimum building area (80% of the lot area requirement) above the ordinary-high-water mark of water bodies will be implemented along with minimum structure setbacks from

wetlands and storm water management ponds. The Zoning Ordinance Planned Unit Development (PUD) standards will also establish objective criteria for the preservation of natural features and public access, as minimum expectations for the grant of PUD status. These changes are desired to attract larger, more executive "move-up" style homes to compliment the "starter" homes prevalent in other areas of the community and to aid in the preservation of natural resources, including wetlands and wooded areas located within the district.

In addition to the low-density residential areas, medium density residential land uses have been planned adjacent to Beulah Pond, adjacent to existing CSAH 81 and as a transition between low density and a potential long-term commercial area described in the following paragraph. Specific areas for high-density residential development have not been identified within this Planning District due to a desire of Big Lake to intersperse these units throughout the community. High-density residential units will be considered if part of a Planned Unit Development.

A long-term business park is identified within District One to the extent that the City will be able to acquire large land holdings adjacent to the future 200th Street crossing with U.S. Highway 10. The preferred option is the westerly alignment of 200th Street as that location provides the best potential to assemble large parcels and contains the least amount of adjacent development. The westerly alignment option also provides for adequate access spacing along U.S. Highway 10. The City supports the development of commercial nodes as opposed to continued linear expansion of strip commercial along the U.S. 10 corridor. To the extent that Big Lake Township and Sherburne County are willing to work with the City to assure that the land areas adjacent to the intersection are not developed without sewer and water, the Comprehensive Plan supports this area as a long-term business land reserve. However, if there is no support from the Township and County, the lands adjacent to the intersection should be utilized for agriculture/rural use and limited to a development density of 4 units per quarter/quarter section.

All development along County Roads and planned collector streets will need to be planned in a manner that includes greater setbacks, longer lots and an emphasis on screening residential structures from the potential negative influences (traffic, noise, litter) that tends to be associated with these higher traffic volume facilities. A series of private roadways or limited public roadways with controlled access will be necessary along CSAH 81 in order to prevent vehicular congestion along the County Road and to maintain proper spacing guidelines. Local road connections including pedestrian ways will be planned to allow traffic between and among neighborhoods, connection to the trail system and parks located adjacent to Big and Mitchell Lakes as well as local service connections to the commercial areas located within the U.S. Highway 10 Corridor.

District One Recommendations:

1. The City will work cooperatively with Sherburne County and Big Lake Township to establish urban expansion district boundaries consistent with the boundaries of District One.

2. The City will work cooperatively with the Township and County to limit and/or plan development within the urban expansion district areas, to allow for future subdivision and the planned, logical and economical extension of utilities within the urban expansion district.

3. All development proposals within the urban expansion district shall at a minimum provide a redevelopment plan (ghost plat) that indicates how the parcel can be divided in the future, consistent with City Zoning and Subdivision Ordinance controls.

4. The vacant land areas within District One should be used for rural/agricultural purposes and be considered "holding areas" until such a time as they are annexed to the City and provided with urban services including sewer, water, road, park and trails and storm water management infrastructure.

5. Large lot, low-density residential land uses will be promoted within the areas of the district that contain woodlands and water bodies. A new zoning district will be created to accommodate 15,000 square foot lot sizes with minimum lot widths of 90 feet. Minimum buildable yard area and setback standards from water bodies will be required as well. These new standards are intended to provide for more diversity in housing choices and preservation of natural features.

6. Planned Unit Developments that provide public access, view and exposure to natural features and provide community recreation amenities are will be encouraged within this district.

7. Medium density development will be promoted adjacent to Beulah Pond and in areas adjacent to CSAH 81. A series of private driveways or limited public roadways with controlled access will be necessary in these locations to prevent vehicular congestion onto County Road 81. Medium density requests should ensure compatibility with adjacent uses and should satisfy the City's varying housing needs.

8. High-density development may occur within the district provided it is part of a Planned Unit Development and that the units are consistent with the exterior materials, underground parking, recreational amenities and other provisions of the Comprehensive Plan.

9. A long-term business park node is contemplated for the areas surrounding the future intersection of the westerly realignment of 200th Street and U.S. Highway 10. The purpose of this center would be to provide long-term land reserve for a planned business park. Development within this area would not occur until such a time as other commercial lands within the City are occupied. The intent of this area would be to provide the opportunity for a large-scale business or commercial complex as opposed to continuation of strip commercial along U.S. 10. Implementation of this concept is totally dependent upon cooperation between Big Lake Township and Sherburne County to support land use restrictions to reserve this area as open space until such a time as market conditions occur to support such a venture and public sewer and water service are available.

10. Increased setbacks, lot depth and buffer yards shall be provided along all County Roads and collector streets, to provide separation and screening between the residential units and roadways.

11. Major improvements, including the construction of a main sewer line along CSAH 81 are required to provide adequate service to the northwest part of the City. Subdivision and development requests should be evaluated individually by the City Engineer as they are submitted to determine the best means of utility construction, hook-up and the need for over sizing of utilities to serve adjacent lands.

12. A study to determine the extent to which areas within District One can be served by existing City sanitary sewer and water services will be undertaken with the City Engineer.

13. Until such a time as the City develops an urban service area staging plan and/or sanitary sewer service district, all future development proposals will be reviewed to determine the need for over sizing of utilities. The objective of this review is to consider in advance, if over sizing is needed and to what extent they should be provided to accommodate future growth of the City.

14. All future development proposals will be reviewed to ensure that connections to existing streets are made and that local access connections between neighborhoods occur.

15. The westerly realignment of 200th Street is intended to provide for inter regional traffic and are the designated major collector streets within the district. Future development proposals will be reviewed to minimize and/or eliminate direct lot access to these roadways and to ensure adequate spacing occurs between intersections.

16. Existing CSAH 81 is planned to serve as a minor collector road and to provide inter-neighborhood connection between U.S. Highway 10 and CSAH 5. Other minor collector roads within the district include Lakeshore Drive/Hiawatha Avenue and County Road 73.

17. A pedestrian walkway system connecting to the Lakeshore Drive/Hiawatha Avenue trail will be provided along the minor collector road system and integrated into the community greenway system.

18. Future community park search areas are identified both east and west of the CSAH 81 major collector street. Community parks should contain between 10 – 15 acres of land for the purpose of developing active recreation amenities including ball fields, skating rinks, tennis courts, playground equipment and picnic shelters. Community parks should be located in areas with natural amenities if possible.

19. A linear greenway system will be established along the Elk River corridor and floodplain. This area will be utilized as public and/or private open space with public trail systems and view areas for the enjoyment of the riverfront. The Elk River greenway will be connected to the Big/Mitchell Lakes trail loop and park system.

DISTRICT TWO

District Two encompasses areas adjacent to Big and Mitchell Lakes, which were among the earliest to develop. This district is characterized by some of the community's oldest subdivisions dating back to the early 1900's. The majority of this district has been developed with small cabins and single-family homes, which are located at various setbacks from local roads. Scattered multi-family apartment and townhome units are located in the southern part of the district. This district also encompasses the majority of substandard sized lots and uses within the Shoreland Management Districts of Big and Mitchell Lakes.

Within this district, there is an area of large deep lots that is bound by County Road 5 on the east, Washington Avenue to the north, Lake Street to the west and Minnesota/Montana Avenues to the south. This is one of the few areas of the community, which contains both municipal services and lots with sufficient depth and width to accommodate a possible future residential redevelopment project. Other areas in the vicinity of Idaho Avenue and close to Town Center may also be target areas for potential redevelopment efforts.

The areas east of Lakeshore Drive are, for the most part, public. There are also a number of dedicated road right-of-ways adjacent to Big and Mitchell Lakes that are not improved. Unfortunately, there is a misperception by adjacent single-family lot owners that these areas are private and over time, private docks, boat lifts, stairs, landings and other structures have been installed along the lakeshore. As a result, community residents do not perceive the lakeshore and rights-of-way as public. Further adding to this misperception is the inappropriate "no trespassing" and "private property" signage that has been installed in these public areas.

To address the inappropriate privatization of public lakeshore and access, the City plans to develop a loop trail system around Big and Mitchell Lakes. Efforts should be made to advertise this community loop trail system as part of the overall City park and recreation system. Coordinated trail signage combined with public view platforms, benches and/or street lighting will help to identify the trail corridor and lakeshore areas as public. A publicity campaign and code enforcement may also be required to establish the "public" nature of these areas and to discourage further efforts by adjacent land owners to use these areas for private purposes. All public access points adjacent to the lakes should remain public and be developed and linked to a citywide trail and open space system. The access points should also be identified by coordinated sign programs and landscaping so that residents easily identify the areas as part of the City park and recreation system. The majority of the access areas are not intended to contain parking

facilities, but rather, will include park benches and/or view platforms that residents could utilize to view the lakes.

The major roads within the district are County Road 5 as well as Hiawatha Avenue/Lakeshore Drive and Glenwood Avenue. There are compatibility problems within the district due to the lack of a coordinated street system to provide access within the district and to other areas of the community. Lakeshore Avenue, Hiawatha Avenue and County Road 5 serve as the major routes for traffic within and through the district to newly developing areas of the City located to the north. The volume and speed of traffic utilizing these streets is problematic due to the fact that residential development has been allowed to occur within close proximity of the roadways. The primary issues associated with District Two are identified below:

District Two Issues:

- Nonconforming development patterns
- Internal vehicular and pedestrian circulation
- Lack of collector roads
- Limited public access to natural features
- Private use of public lakeshore areas
- Narrow right-of-way width
- Lack of controlled access and multiple, direct driveway access onto the collector streets
- Existing development patterns with structures located too close to the collector streets
- Predominance of natural features which limit transportation options
- Lack of trails throughout the district to separate pedestrian/bike traffic from vehicular traffic
- Lack of an overall, coordinated street system
- Poor transition between different types of land uses
- Other issues associated with this district include lack of storm water management facilities, and redevelopment difficulties associated with the application of current zoning and Shoreland Management regulations to small, substandard lots of record, and parking/exterior storage limitations.

District Two Objectives:

Since the time of the early plats, the zoning of the City into various land use districts has occurred as well as ever increasing lot size, development and environmental protection standards. The result of this situation is that a significant amount of the originally recorded lots are grossly substandard. It is not uncommon to find lots of 4,000 to 6,000 square feet or less with 40 feet of frontage, within this district. These lots fall far short of

meeting current subdivision and zoning requirements or State Department of Natural Resources Shoreland Regulations. This problem is compounded by divisions of ownership, which have occurred over the years.

A further complication of the older subdivision practices is the existence of substandard, dedicated streets/alleys that are typically narrow, contain questionable surface materials and typically do not serve to contain or direct storm water. Many of the older plats did not reflect topographic constraints or the existence of lakebeds and wetlands. As a result, it is often difficult to provide and/or retrofit access, storm water drainage, grading and other improvements within the older platted areas of the community. Many of the older plats contain right-of-way dedications ranging from 15 to 50 feet. The current right-of-way standards range from 50 to 80 feet with required pavement widths (28-44 feet), wider than the total right-of-way dedicated in the earlier subdivisions.

Another problem common to lake communities is the existence of substandard residential units. Following the early platting of the lake areas, summer cottages were constructed on the minimal sized lots. Over time, the majority of these units have been converted in a piecemeal process to year round residences and/or allowed to deteriorate. The small lots typically do not allow for modern development applications such as garage units, decks, porches and/or other improvements.

Based upon the aforementioned issues, Planning District Two has been established to respond to the problems noted and to serve as a guide for future development and redevelopment efforts. Specific policies and recommendations for implementing redevelopment efforts are provided herein.

Current zoning standards for the majority of the lots within District Two require lakeshore lots of 15,000 square feet and 75 feet of lot width and non-lakeshore lots of 10,000 square feet and 75 feet of lot width. Impervious surface standards range between 40 percent for lots under 6,000 square feet to 25 percent for lots which are 10,000 square feet or larger. The Zoning Ordinance does allow for development of substandard lots down to 9,000 square feet with 60 feet of lot width for those lots platted prior to September 13. 1979.

District Two Recommendations

1. Utilize vacant parcels to create new buildable parcels where possible or in combination with developed lots to provide homeowners the opportunity for upgrade to minimum lot size requirements.

2. Where alteration of lot lines or reconfiguration is necessary, strive to accomplish lots that meet minimum lot size standards, through land trade or purchase.

3. Utilize existing rights-of-way and vacant land to the extent possible for the upgrade of old and/or construction of new streets.

4. Maintain the maximum setback distance possible between new/widened roadways and existing homes.

5. Whenever possible, provide for future subdivision access and roadway extensions between neighborhoods.

6. Restrict or regulate expansions of any existing development where environmental damage may unintentionally result.

7. Prohibit development on or alteration of natural drainage system components where storm water can be adequately managed without construction of storm sewer.

8. Where structures are allowed to be built on substandard lots, the structures shall be designed for and integrated into the site.

9. Restrict or regulate expansions of any existing development where environmental damage may unintentionally result.

10. Prohibit development on or alteration of natural drainage system components where storm water can be adequately managed without construction of storm sewer.

11. Where feasible for park and recreational or open space uses, acquire or require dedication of environmentally sensitive areas.

12. Establish performance standards that will require sufficient buffering and screening between different land use types and between residential structures and major roadways.

13. Promote redevelopment efforts that will remove or renovate older, obsolete buildings and/or provide residential densities, which support commercial areas of Town Center and the U.S. 10 corridor.

14. The City will pursue the construction of a trail/sidewalk system around Big and Mitchell Lakes.

15. A coordinated signage, landscaping and lighting plan concept will be established along with literature to identify and promote the Big/Mitchell Lakes loop trail system as part of the City's park and recreation system.

16. Alternatives for providing street access and improvements to the neighborhoods located west of Big and Mitchell Lakes will be investigated.

17. Encourage infill residential development in existing single-family neighborhoods. Future expansion of low-density residential uses should be contiguous and integrated with existing development.

18. Opportunities for redevelopment of older neighborhoods containing substandard homes and/or inadequate "dead-end" street systems will be investigated.

19. The City will investigate opportunities to increase areas for natural infiltration of storm water within this district. Possible areas include the water tower site located near the intersection of Lake Street and Glenwood Avenue and the area immediately south of Manitou Street.

20. The major collector street within this district is County Road 5. Hiawatha Avenue/Lakeshore Drive, Glenwood Avenue and the future connection between CSAH 73 and County Road 5 serve as the minor collector roads functioning to move traffic between neighborhoods. The majority of land adjacent to the collector streets has been developed with direct lot access. Future development and redevelopment proposals should seek to combine access points wherever possible and reserve adequate right of way for these transportation corridors.

DISTRICT THREE

The existing land uses within District Three include apartment buildings in the southwestern part of the district, the School District 727 campus and single-family development. The southeastern most corner of the district is developed with industrial uses. Similar to District One, much of this district is currently under the jurisdiction of Big Lake Township. The predominant natural features associated with District Three are the Elk River corridor and Preusse Lake, which is a Natural Environment Lake, located in the southeast corner of the district. The river corridor is an attractive area for the development of future residential neighborhoods and continuation of a greenway system. There are approximately 715 acres of developable (land outside of rivers, floodplains, lakes and wetlands pursuant to the National Wetlands Inventory Map), within the district.

District Three Issues:

- Lack of master planning objectives between City and Township
- Infrastructure capacity unknown
- Nonconforming development patterns
- Internal vehicular and pedestrian circulation
- Lack of collector roads
- Limited public access to natural features
- Floodplain management
- Lack of park and recreation facilities

District Three Objectives:

The primary objective for this district is for the City, Township and/or Sherburne County to come to an agreement as to the extent of the Urban Expansion District boundaries. Fundamental to this objective are the issues associated with compatible and consistent land use transition and the logical, economical and planned extension of municipal infrastructure into these areas. The district recommendations that follow this section outline a land use and transportation system based upon the objectives of the City outlined within the Policy Plan, Land Use and Transportation elements of this Comprehensive Plan.

Proposed land uses include low-density single family residential across the majority of the district. The land areas that do not include natural features are proposed to be developed as single-family residential utilizing 12,000 square foot lot sizes with 85 feet of lot width. The introduction of a new residential zoning district governing single-family development in areas with or adjacent to water bodies and wooded areas is proposed.

To encourage preservation of natural features, the use of larger (15,000 square foot) lots and increased lot widths (90 feet) is contemplated. Additionally, standards requiring a minimum building area (80% of the lot area requirement) above the ordinary-high-water mark of water bodies will be implemented along with minimum structure setbacks from wetlands and storm water management ponds. The Zoning Ordinance Planned Unit Development (PUD) standards will also establish objective criteria for the preservation of natural features and public access, as minimum expectations for the grant of PUD status. These changes are desired to attract larger, more executive "move-up" style homes to compliment the "starter" homes prevalent in other areas of the community and to aid in the preservation of natural resources, including wetlands and wooded areas located within the district.

As part of the Comprehensive Plan process, the City recognizes that the existing School District campus is landlocked with little expansion opportunities. This being the case, a future school campus search area has been identified within the area of the district bounded by Glenwood Avenue, County Road 43, and 173rd Street NW and north of U.S. Highway 10. The School District has not indicated any future expansion plans to date. However, the City is aware of the tremendous growth within the School District and accordingly deems it appropriate to consider the potential for expansion of District 727 facilities in a location proximate to the existing campus. A possible location for school facilities would be in the area northwest of Preusse Lake. The opportunity to develop joint recreation facilities in conjunction with school buildings exists. Such a venture could serve to provide a transition area between the Big Lake Industrial Park and low density residential uses to the north. The opportunity also exists to further expand industrial and commercial land uses in this part of District Three.

The land use plan for District Three outlines areas of high and medium density residential land use that could serve as transition between either commercial/industrial and/or school campus types of uses in the southern part of the district and single family areas to the north. It is intended that all future high-density residential uses be interspersed throughout the community as opposed to being concentrated in high numbers. High-density residential units will be considered only if part of a Planned Unit Development project.

The major transportation facilities within District Three include County Road 43 and 173rd Street NW, which are planned as major collector streets. The easterly continuation of Glenwood Avenue (205th Avenue NW) will serve as the districts only minor collector road. U.S. Highway 10 borders part of the southeast corner of the district and is classified as an arterial road.

All development along County Roads and planned collector streets will need to be planned in a manner that includes greater setbacks, longer lots and an emphasis on

screening residential structures from the potential negative influences (traffic, noise, litter) that tends to be associated with these higher traffic volume facilities. A series of private roadways or limited public roadways with controlled access will be necessary along the proposed collector streets in order to prevent vehicular congestion along the roads and to maintain proper intersection spacing. Local road connections including pedestrian ways shall be planned to allow traffic between and among neighborhoods, connection to the trail system and parks located adjacent to Big and Mitchell Lakes as well as local service connections to the commercial areas located within the U.S. Highway 10 Corridor.

District Three Recommendations:

1. The City will work cooperatively with Sherburne County and Big Lake Township to establish urban expansion district boundaries consistent with the boundaries of District One.

2. The City will work cooperatively with the Township and County to limit and/or plan development within the urban expansion district areas, to allow for future subdivision and the planned, logical and economical extension of utilities within the urban expansion district.

3. All development proposals within the urban expansion district shall at a minimum provide a redevelopment plan (ghost plat) that indicates how the parcel can be divided in the future, consistent with City Zoning and Subdivision Ordinance controls.

4. The vacant land areas within District Three should be used for rural/agricultural purposes and be considered "holding areas" until such a time as they are annexed to the City and provided with municipal utility services.

5. Large lot, low density residential land uses will be promoted within the areas of the district that contain woodlands and water bodies including the Elk River corridor. A new zoning district will be created to accommodate 15,000 square foot lot sizes with minimum lot widths of 90 feet. Minimum buildable yard area and setback standards from water bodies will be required as well. These new standards are intended to provide for more diversity in housing choices and preservation of natural features.

6. Planned Unit Developments that provide public access, view and exposure to natural features and provide community recreation amenities are will be encouraged within this district.

7. Medium density development will be promoted as a transition area between the industrial and commercial uses to the south and the low density residential uses in planned for the northern part of the district.

8. High-density residential development may occur within the district provided it is part of a Planned Unit Development and that the units are consistent with the exterior materials, underground parking, recreational amenities and other provisions of the Comprehensive Plan.

9. A series of private driveways or limited public roadways with controlled access will be necessary in the medium and high density areas of the district to prevent vehicular congestion on the collector and arterial street systems. Medium and high-density requests should ensure compatibility with adjacent uses and should satisfy the City's varying housing needs.

10. A school search area and combined community park facility is contemplated for the area northwest of Preusse Lake. The purpose of identifying a future school/park search area is to identify that the City is cognizant of the fact that the School District will likely need to expand facilities at some future date. It is important to note that the School District has not identified expansion plans nor has it requested the City to incorporate a search area within its Comprehensive Plan.

11. In the event that future school expansion sites are not needed, the land areas currently shown as school search site could be utilized for additional commercial and/or industrial expansion opportunities.

12. Increased setbacks, lot depth and buffer yards shall be provided along all County Roads, arterial and collector streets, to provide separation and screening between the residential units and roadways.

13. All subdivision and development requests will be evaluated by the City Engineer to determine the best means of utility construction, hook-up and the need for over sizing of utilities to serve adjacent lands.

14. A study to determine the extent to which areas within District Three can be served by existing City sanitary sewer and water services will be undertaken with the City Engineer.

15. Until such a time as the City develops an urban service area staging plan and/or sanitary sewer service district, all future development proposals will be reviewed to determine the need for over sizing of utilities. The objective of this review is to

consider in advance, if over sizing is needed and to what extent they should be provided to accommodate future growth of the City.

16. All future development proposals will be reviewed to ensure that connections to existing streets are made and that local access connections between neighborhoods occur.

17. Future development proposals will be reviewed to minimize and/or eliminate direct lot access to these roadways and to ensure adequate spacing occurs between intersections.

18. Existing County Road 43 and 173rd Street NW are planned to serve as the major collector roads and to provide inter-regional connections. The easterly extension of Glenwood Avenue (205th Avenue NW) is planned as a minor collector facility intended to provide inter-neighborhood connections.

19. A pedestrian walkway system connecting to the Lakeshore Drive/Hiawatha Avenue trail will be provided along the minor collector road system.

20. Future community and neighborhood park search areas are identified both north and south of Glenwood Avenue (205th Avenue NW). Community parks should contain between 10 – 15 acres of land for the purpose of developing active recreation amenities including ball fields, skating rinks, tennis courts, playground equipment and picnic shelters. Community parks should be located in areas with natural amenities if possible.

21. A linear greenway system will be established along the Elk River corridor and floodplain. This area will be utilized as public and/or private open space with public trail systems and view areas for the enjoyment of the riverfront. The Elk River greenway will be connected to the Big/Mitchell Lakes trail loop and park system.

22. A north/south greenway connection will be made linking the Elk River corridor to Preusse Lake and the commercial/industrial nodes along the U.S. 10 Corridor.

DISTRICT FOUR

District Four is comprised of primarily the commercial and industrial uses and lands adjacent to the U.S. 10 corridor. The depth of the corridor along the south side of U.S. 10 is constrained by the railroad. There is approximately 670 acres of buildable land (areas outside of lakes and wetlands, as identified on the National Wetland Inventory Map), within this district. U.S. Highway 10 is an arterial road facility with the primary function being to provide for inter-regional traffic between the Twin Cities and St. Cloud Metropolitan Areas. Incongruent with the planned transportation purpose for U.S. 10 is the fact that the City has evolved over time to utilize the highway as a local "main street." The dual use of the arterial facility has resulted in conflicts associated with traffic movement, access, signalization, commercial and industrial development. Furthermore, U.S. Highway 10 bisects the community and from a land use planning perspective is viewed as a barrier to be overcome concerning efforts to interconnect neighborhoods and to provide functional, self-sufficient business development. The City will continue to face issues associated with the dual use of U.S. Highway 10 as well as continued pressure from the business community to further expand along its corridor.

District Four Issues

- Lack of master planning objectives between City, Township, Sherburne County and MnDOT
- Strip commercial/industrial sprawl along the corridor
- Shallow depth of commercial/industrial lands due to railroad location
- Nonconforming development patterns and uses
- Poor visual impression
- Redevelopment opportunities
- Historic preservation of former school structure
- Lack of frontage road systems
- Intersection spacing & signalization
- Internal vehicular and pedestrian circulation
- Realignment of 200th Street
- Lack of collector roads
- Insufficient transition/buffer areas between differing land uses, S.T.H. 25, County Roads and the Burlington Northern Santa Fe Railroad tracks.
- Future Northstar Corridor commuter train station site

District Four Objectives

Due to the investment that the community has in its existing commercial and industrial areas, a primary objective for this district is to ensure the viability of the business areas while maintaining and/or improving the function of U.S. Highway 10. There are a number of competing interests involved and therefore, the City will need to take a leadership role in coordinating development and redevelopment decisions. To this end, efforts to promote infill development and redevelopment will be encouraged by the City provided that accompanying improvements are made to traffic and pedestrian circulation.

It is critical that the City, Township and/or Sherburne County to come to an agreement as to the extent of the Urban Expansion District boundaries along the corridor. Fundamental to this objective are the issues associated with compatible and consistent land use transition and the logical, economical and planned extension of municipal infrastructure into these areas. The City supports the creation of commercial and industrial nodes as opposed to continued linear expansion of strip commercial and industrial development. To accomplish this additional areas for commercial and industrial expansion are identified on both sides of the corridor. The additional land areas are shown in locations where good access is provided along major collector streets and where additional depth to accommodate larger scale developments is available. All commercial and industrial development should be connected to municipal sewer and water and be located on frontage road or other collector type of facilities that are interconnected, signalized, and constructed to standards to accommodate heavy truck and traffic use.

The City and Township have made significant investments in the existing business areas and Big Lake Industrial Park East, and as such, future development should be directed to these areas of the community. If infill development and/or redevelopment efforts are to be effective, further commercial and industrial expansion without utilities and associated transportation facilities must not be allowed to occur. This type of development only undermines the ability of the Big Lake Economic Development Authority and City to locate business and industry in areas with utilities. Piecemeal development along the major transportation corridors also undermines the ability to assemble large parcels and provide for the transportation links and systems needed to support business ventures. The City supports the development of commercial nodes as opposed to continued linear expansion of strip commercial along the U.S. 10 corridor. To the extent that Big Lake Township and Sherburne County are willing to work with the City to discourage premature development along U.S. 10 and other collector streets, without urban services, the Comprehensive Plan supports these areas for commercial and industrial lands. However, if there is no support from the Township and County, the

lands adjacent to these major transportation facilities should be utilized for agriculture use.

All development along U.S. 10, S.T.H. 25, County Roads and collector streets will need to be planned in a manner that includes greater setbacks, longer lots and an emphasis on screening residential structures from the potential negative influences (traffic, noise, litter) that tends to be associated with these higher traffic volume facilities. A series of private roadways or limited public roadways with controlled access will be necessary along U.S. 10 and the other major collector street systems in order to prevent vehicular congestion and to maintain proper spacing guidelines. Local road connections including pedestrian ways will be planned to allow traffic between and among neighborhoods, connection to the trail system and parks located adjacent to Big and Mitchell Lakes as well as local service connections to the commercial areas located within the U.S. Highway 10 Corridor. Development of frontage road systems and alternative routes other than U.S. 10 will be a priority for all development within this district.

Another objective for District Four concerns improving the visual character of development. New commercial and industrial uses will be required to plat their sites in order to ensure that adequate storm water controls, access, easements, right-of-way and dimensional standards are met. The platting process will also require a review of adjacent lands to ensure roads are constructed to align and to provide areas for storm water ponding, drainage and to assure all uses have frontage on public streets. Additionally, consistent standards for parking lots, driveways, landscaping, exterior materials, signage and other site specific criteria will be applied to new development and building additions/redevelopment. Exterior storage will be regulated and standards for enclosing and screening equipment, trash dumpsters and other items commonly associated with commercial and industrial development will be implemented.

Special attention will be given to site landscaping and screening between different land uses. Opportunities to relocate inappropriate and non-conforming uses from both the commercial and industrial districts will be investigated and pursued. The Zoning Ordinance standards for permitted and conditional uses will also be evaluated on a periodic basis to provide opportunities for grouping specialized and/or similar land uses within districts. When discussing the overall appearance of the commercial and industrial areas, it is important to recognize that structures such as pole buildings do not lend themselves to long-term maximum investment potential for landowners or the City. These structures do not hold their value over time, are not conducive to attracting higher quality development and do not generate the level of taxes that other forms of construction do. Certain industrial areas within the district may be suitable for pole barns however, if the City is to maximize its commercial/industrial base, it will be important to provide for higher forms of construction and business opportunities as well.

The opportunity exists within this district to provide a unique connection between the historic Town Center, Keller Lake and the Big/Mitchell Lake trail system. The Town Center is located at the crossroads of U.S. Highway 10, S.T.H. 25 and the railroad. It is also located within close proximity to Big Lake and Keller Lake. A mixed development designed to integrate commercial, civic, recreation, entertainment and perhaps high-density residential components could occur in this area. There is an opportunity to provide a link between Town Center, Keller Lake and a unique business atmosphere that could be supported by local residents. This opportunity will be further explored as a means to enhance both the business community as well as provide for a unique recreational experience. The re-routing of 200th Street could serve as an impetus to spur a redevelopment project with the Town Center/Keller Lake connection as a basis for the development. This area could provide the "civic center" for the City of Big Lake.

Within the U.S. 10 corridor, areas of medium density residential development are contemplated. High-density residential development may also occur within the corridor provided it is not concentrated on one location, is part of an overall Planned Unit Development and is consistent with the site development/building design objectives of the Comprehensive Plan. The areas where medium and/or high-density residential uses are called out are those areas south of the railroad tracks. The largest multi-family area is located west of Keller Lake. This area will provide for a transition between the railroad tracks and planned single family residential uses further to the south. The higher density housing will support commercial uses along the corridor and may be incorporated as part of the Town Center/Civic Center concept described above. It is also contemplated that the higher density development will allow for the continuation of the 193rd Street parkway and community park described further under District Five.

A second medium density residential area is suggested west of County Road 43 to provide transition between the commercial uses and railroad tracks to the north and single-family development planned for the south. This area may also contain high-density residential units provided they meet the criteria outlined above. The higher density residential areas will also support the Northstar commuter rail station planned southwest of the intersection of U.S. 10 and County Road 43. It will be important to ensure that the design of the train station will be compatible with commercial and planned residential developments and that good access and parking lot design are incorporated into the site plan.

District Four Recommendations

1. The City will work cooperatively with Sherburne County and Big Lake Township to establish urban expansion district boundaries consistent with the boundaries of District Four.

2. The City will work cooperatively with the Township and County to limit and/or plan development within the urban expansion district areas, to allow for future subdivision and the planned, logical and economical extension of utilities within the urban expansion district.

3. All development proposals within the urban expansion district shall at a minimum provide a redevelopment plan (ghost plat) that indicates how the parcel can be divided in the future, consistent with City Zoning and Subdivision Ordinance controls.

4. The vacant land areas within District Four should be used for rural/agricultural purposes and be considered "holding areas" until such a time as they are annexed to the City and provided with municipal utility services.

5. The City will develop a commercial corridor plan designed to improve the function, compactness, image, multiple use and circulation of commercial and industrial areas. Attention will be given to grouping specialized and/or similar land uses into identifiable nodes.

6. The City will work with Big Lake Township, Sherburne County and MnDOT to improve circulation systems with efficient frontage roads, traffic signals, secondary access roads, organized and structured parking lots and to provide pedestrian links throughout the district and to neighboring residential neighborhoods.

7. Infill development will be promoted provided that accompanying improvements are made to traffic and pedestrian circulation systems.

8. Further lineal expansion of the commercial and industrial uses along U.S. 10, S.T.H. 25 and/or any of the other major transportation systems will be strongly discouraged. The City supports the creation of commercial and industrial nodes as opposed to continued linear expansion of strip commercial and industrial development.

9. All commercial and industrial development should be connected to municipal sewer and water and be located on frontage road or connected to collector facilities that are interconnected, signalized, and constructed to standards to accommodate heavy truck and traffic use.

10. All development along U.S. 10, S.T.H. 25, County Roads and collector streets will need to be planned in a manner that includes greater setbacks, longer lots and an emphasis on screening residential structures from the potential negative influences (traffic, noise, litter) that tends to be associated with these higher traffic volume facilities.

11. A frontage road system will be developed along both sides of U.S. Highway 10 to serve existing and future commercial and industrial developments.

12. Local road connections including pedestrian ways will be required to allow traffic between and among neighborhoods, connection to the trail system and parks located adjacent to Big and Mitchell Lakes as well as local service connections to the commercial areas located within the U.S. Highway 10 Corridor.

13. Planned Unit Developments that provide public access, view and exposure to natural features and provide community recreation amenities are will be encouraged within this district.

14. Medium density development will be promoted in certain areas south of the railroad to support commercial uses along the corridor, the Town Center/Civic Center concept, industrial land uses and the Northstar Corridor commuter train station. A series of private driveways or limited public roadways with controlled access will be necessary in these locations to prevent vehicular congestion onto county roads, collector facilities, S.T.H. 25 and U.S. 10. Medium density requests should ensure compatibility with adjacent uses and should satisfy the City's varying housing needs.

15. High-density development may occur within the district provided it is part of a Planned Unit Development and that the units are consistent with the exterior materials, underground parking, recreational amenities and other provisions of the Comprehensive Plan.

16. Consistent standards for parking lots, driveways, landscaping, exterior materials, signage and lighting will be developed and applied to all commercial/industrial development and redevelopment projects within the district.

17. All areas where exterior storage of materials is permitted will be required to be screened with dense landscaping materials and/or fencing. Exterior storage will be regulated and standards for enclosing and screening equipment, trash dumpsters and other items commonly associated with commercial and industrial development will be required for all development within the district.

18. A landscape ordinance will be developed setting forth landscape and screening requirements for commercial, industrial and medium/high density residential uses.

19. Opportunities to relocate inappropriate and non-conforming uses from both commercial and industrial districts will be pursued including removal of residential structures from the business districts.

20. Pole buildings will be restricted to specialized industrial locations within the City. The use of metal pole buildings will be restricted in other commercial and industrial areas.

21. A long-term business park node is contemplated for the areas south of U.S. 10 and the westerly realignment of 200th Street. The purpose of this center would be to provide long-term land reserve for planned business park and/or retail shopping center. Development within this area would not occur until such a time as other commercial lands within the City are occupied. The intent of this area would be to provide the opportunity for a large-scale business or commercial complex as opposed to continuation of strip commercial along U.S. 10. Implementation of this concept is totally dependent upon cooperation between Big Lake Township and Sherburne County to support land use restrictions to reserve this area as open space until such a time as market conditions occur to support such a venture and public sewer and water service are available.

22. Increased setbacks, lot depth and buffer yards shall be provided along all County Roads, collector streets, the railroad, S.T.H. 25 and U.S. Highway 10 to provide separation and screening between the buildings and roadways.

23. All future commercial and industrial sites will be required to be platted in order to ensure adequate systems are in place for storm water management, access, ponding, and to provide pedestrian and transportation links to adjacent lands.

24. Subdivision and development requests should be evaluated individually by the City Engineer as they are submitted to determine the best means of utility construction, hook-up and the need for over sizing of utilities to serve adjacent lands.

25. A study to determine the extent to which areas within District Four can be served by existing City sanitary sewer and water services will be undertaken with the City Engineer.

26. Until such a time as the City develops an urban service area staging plan and/or sanitary sewer service district, all future development proposals will be reviewed to determine the need for over sizing of utilities. The objective of this review is to consider in advance, if over sizing is needed and to what extent they should be provided to accommodate future growth of the City.

27. The westerly realignment of 200th Street will be monitored closely by the City. Opportunities for access improvements and/or redevelopment options will be pursued for the Town Center area.

28. U.S. 10, S.T.H. 25, County Roads 81, 73, 5, 43 and 173rd Streets are intended to provide for inter regional traffic and are the designated major collector streets within the district. Future development proposals will be reviewed to minimize and/or eliminate direct lot access to these roadways and to ensure adequate spacing occurs between intersections. The City will continue to work with other government jurisdictions to improve safety and provide for good vehicular and pedestrian movements along these roadways.

29. A Town Center/Civic Center redevelopment concept to provide a unique economic development and community recreation area/link will be further investigated for the areas east of Keller Lake and proximate to the intersection of U.S. 10, S.T.H. 25 and the railroad.

DISTRICT FIVE

The land areas within this district comprise the southern most areas of the City of Big Lake. Lands located directly south of District Five are considered to be prime agricultural lands by Big Lake Township and therefore are planned to remain rural. This district contains a variety of land uses including a mobile home park, senior housing complex, low, medium and high density residential uses as well as public park areas. The predominant natural features within the district include Keller Lake, which is a General Development Lake and a series of small wetland complexes located in the central part of the district. There are approximately 470 acres of developable (land outside of lakes and wetlands pursuant to the National Wetlands Inventory Map), within the district.

District Five Issues:

- Lack of master planning objectives between City and Township
- Insufficient transition/buffer areas between differing land uses, S.T.H. 25 and County Roads.
- Infrastructure capacity unknown
- Areas with high water table
- Redevelopment opportunities
- Internal vehicular and pedestrian circulation
- Lack of collector roads
- Realignment potential for 200TH Street
- Potential turn-back of part of County Road 68 to the City
- Limited public access to natural features
- Lack of park and recreation facilities

District Five Objectives:

As with districts one and three, a primary objective for this district is for the City, Township and/or Sherburne County to come to an agreement as to the extent of the Urban Expansion District boundaries. Fundamental to this objective are the issues associated with compatible and consistent land use transition and the logical, economical and planned extension of municipal infrastructure into these areas. The district recommendations that follow this section outline a land use and transportation system based upon the objectives of the City outlined within the Policy Plan, Land Use and Transportation elements of this Comprehensive Plan.

Proposed land uses include a combination of low, medium and high-density residential across the majority of the district. The land areas that do not include natural features

are proposed to be developed as single-family residential utilizing 12,000 square foot lot sizes with 85 feet of lot width. The introduction of a new residential zoning district governing single-family development in areas with or adjacent to Keller Lake is proposed. To encourage preservation of natural features, the use of larger (15,000 square foot) lots and increased lot widths (90 feet) is contemplated. Additionally, standards requiring a minimum building area (80% of the lot area requirement) above the ordinary-high-water mark of water bodies will be implemented along with minimum structure setbacks from wetlands and storm water management ponds. The Zoning Ordinance Planned Unit Development (PUD) standards will also establish objective criteria for the preservation of natural features and public access, as minimum expectations for the grant of PUD status. These changes are desired to attract larger, more executive "move-up" style homes to compliment the "starter" homes prevalent in other areas of the community and to aid in the preservation of natural resources, including wetlands and wooded areas located within the district.

The land use plan for District Five outlines areas of high and medium density residential land use that could serve as transition between either commercial/industrial land uses and/or major collector roads including County Road 43 and S.T.H. 25. It is intended that all future high-density residential uses be interspersed throughout the community as opposed to being concentrated in high numbers. High-density residential units will be considered only if part of a Planned Unit Development project. There is a need to provide transition areas and/or a means to buffer high intensity uses such as multi-family, commercial and industrial uses from low-density single-family homes. Future development adjacent to the mobile home park will be needed, as the density of that development is high. Redevelopment opportunities also exist within the district including the area of Sleepy Hollow North and Habitat Additions. However, it has been noted by past engineering reports that there may be high water table issues in the vicinity of Habitat Addition that will require special planning efforts.

A long-term industrial expansion area is also planned east of County Road 43 and south of the Burlington Northern Santa Fe railroad tracks. As with the long-term business park concept identified for Districts One and Four, the ability to accomplish a long-term industrial complex is dependent upon cooperation with Big Lake Township and Sherburne County. The area identified for long-term industrial potential was chosen because of its favorable topographic characteristics, access to rail facilities, close proximity to the U.S. 10 arterial road system and existing industrial uses. The area consists of large, vacant tracts of land with few owners that if maintained, will enable the City and/or private developers to acquire the large land holdings needed to support industrial complexes. The City supports the development of industrial nodes as opposed to continued linear expansion of strip industrial along the U.S. 10 corridor. An industrial complex in this area could be served by a minor collector facility (Fair Meadows Drive), along the southern edge. A mix of high and medium density development is planned to

surround the industrial complex west of County Road 43 and in the area south of the collector road (easterly extension of Fair Meadows Drive). The medium and high density housing would serve as a transition area between the industrial and planned low density residential uses as well as provide for a population and employment base to support the industrial uses and commercial nodes along the U.S. 10 Corridor.

To the extent that Big Lake Township and Sherburne County are willing to work with the City to assure that the land areas adjacent to the railroad and County Road 43 are not developed without urban level infrastructure including sewer, water, roads, parks and trails and storm water management facilities, the Comprehensive Plan supports this area as a long-term industrial land reserve. However, if there is no support from the Township and County, the lands adjacent to the railroad and east of County Road 43 should be utilized for agricultural use.

The major transportation facilities within District Five include County Roads 43 and 68 as well as S.T.H. 25, which are planned as, major collector streets. This district is does not contain an east/west collector road. Furthermore, options for and east/west collector road within the developed areas are severely limited because the plats were developed as separate, self-contained developments and did not provide for interconnections between neighborhoods. As a result, the objective for new development within this district will be to provide connections to existing streets, to the extent possible. This may require the City to consider purchasing right-of-way and/or pursuing condemnation in certain locations to provide inter-neighborhood connections. A new major east/west collector road is contemplated for this district connecting S.T.H. 25 to 193rd Avenue NW. Additionally, the easterly extension of Fair Meadows Drive should serve as a minor collector, which will provide a secondary east/west route connecting S.T.H. 25 to 173rd Street NW.

All development along County Roads, S.T.H. 25 and collector streets will need to be planned in a manner that includes greater setbacks, longer lots and an emphasis on screening residential structures from the potential negative influences (traffic, noise, litter) that tends to be associated with these higher traffic volume facilities. A series of private roadways or limited public roadways with controlled access will be necessary along the proposed collector streets in order to prevent vehicular congestion along the roads and to maintain proper intersection spacing. Local road connections including pedestrian ways shall be planned to allow traffic between and among neighborhoods. Additionally, it is important to continue the sidewalk system along S.T.H. 25 as this provides a vital connection between neighborhoods and the Town Center area of the City as well as a connection to the Big/Mitchell Lake loop trail system.

District Five currently contains only one public park, which is located within the Big Lake Senior Apartment plat, along the southeast shore of Keller Lake. There is a need to

provide additional community park facilities within this district to serve the existing and future population. This district contains a wide variety of land uses and residential mix of low, medium and high-density housing. An objective for the district is to provide for a minimum of two community park facilities, one located along Keller Lake and the other north west of County Road 43 and north of the proposed 193rd Street major collector road. Additionally, a southerly waterfront passage greenway is proposed to connect the Keller Lake area to the wetland complex located in the center part of the district and a large wetland complex in District Six.

The opportunity exists to provide either a separate southerly parkway system to complement the greenway planned along the Elk River or to connect the two systems to form a larger community loop trail/open space facility. To accomplish a southerly parkway system, a trail/open space corridor following the 193rd Street collector system could be developed. The option would be to design the 193rd Street collector as a parkway with landscaped medians and sidewalk/trail systems. The parkway would connect the large wetland complex (and neighborhood park) in District Six, to the community park planned near the wetland complexes within the central part of the district. The parkway system would continue west along 193rd Street, cross S.T.H. 25 and connect to a community park complex adjacent to Keller Lake. The Keller Lake community park complex would also be connected to the Town Center area and the westerly realignment of County Road 81 in District Four.

The possibility exists to provide a connection of the southerly parkway with the Elk River greenway via continued parkway and/or trail systems along the westerly realignment of County Road 81 and a trail system along 173rd Street NW. This parkway/greenway loop would also be connected to the Big/Mitchell Lake loop trail system via the sidewalk system along S.T.H. 25, the trail along the north side of U.S. 10, the trail systems within the McDowall Oaks park and proposed future trails along County Road 73 and Glenwood Avenue.

District Five Recommendations:

1. The City will work cooperatively with Sherburne County and Big Lake Township to establish urban expansion district boundaries consistent with the boundaries of District Five.

2. The City will work cooperatively with the Township and County to limit and/or plan development within the urban expansion district areas, to allow for future subdivision and the planned, logical and economical extension of utilities within the urban expansion district.

3. All development proposals within the urban expansion district shall at a minimum provide a redevelopment plan (ghost plat) that indicates how the parcel can be divided in the future, consistent with City Zoning and Subdivision Ordinance controls.

4. The vacant land areas within District Five should be used for rural/agricultural purposes and be considered "holding areas" until such a time as they are annexed to the City and provided with municipal utility services.

5. Large lot, low-density residential land uses will be promoted within the areas of the district that contain water bodies and along Keller Lake. A new zoning district will be created to accommodate 15,000 square foot lot sizes with minimum lot widths of 90 feet. Minimum buildable yard area and setback standards from water bodies will be required as well. These new standards are intended to provide for more diversity in housing choices and preservation of natural features.

6. Planned Unit Developments that provide public access, view and exposure to natural features and provide community recreation amenities are will be encouraged within this district.

7. Opportunities exist for redevelopment of the Sleepy Hollow Addition in conjunction with lands currently located south of the City limits. Should this occur, efforts should be made to provide for the 193rd Street Parkway. Additionally, north/south local street access should also be provided to provide connections among other neighborhoods.

8. Opportunities exist for redevelopment of parts of the Habitat Addition area of the community. Previous engineering reports have indicated the possibility of high water table issues in the vicinity of this plat therefore any future development will need to plan accordingly to address this matter.

9. Medium density development will be promoted south of the railroad tracks, south and west of the long-term industrial reserve area, and adjacent to S.T.H. 25. A series of private driveways or limited public roadways with controlled access will be necessary in these locations to prevent vehicular congestion onto S.T.H. 25 and County Road 43. Medium density requests should ensure compatibility with adjacent uses and should satisfy the City's varying housing needs.

10. High-density development is planned south of the long-term industrial reserve area and east of County road 43. Additional high-density development may occur within the district provided it is part of a Planned Unit Development and that the units are consistent with the exterior materials, underground parking, recreational amenities and other provisions of the Comprehensive Plan.

11. A long-term industrial reserve node is contemplated for the areas south of the railroad tracks and east of County Road 43. The purpose of this industrial node would be to provide long-term land reserve for planned industrial/business park. Development within this area would not occur until such a time as other industrial lands within the City are occupied. The intent of this area would be to provide the opportunity for large-scale industrial users as opposed to continuation of strip industrial along U.S. 10. Implementation of this concept is totally dependent upon cooperation between Big Lake Township and Sherburne County to support land use restrictions to reserve this area as open space until such a time as market conditions occur to support such a venture and public sewer and water service are available.

12. Increased setbacks, lot depth and buffer yards shall be provided along all County Roads, collector streets and S.T.H. 25 to provide separation and screening between the residential units and roadways.

13. Subdivision and development requests will be evaluated by the City Engineer to determine the best means of utility construction, hook-up and the need for over sizing of utilities to serve adjacent lands.

14. A study to determine the extent to which areas within District Five can be served by existing City sanitary sewer and water services will be undertaken with the City Engineer.

15. Until such a time as the City develops an urban service area staging plan and/or sanitary sewer service district, all future development proposals will be reviewed to determine the need for over sizing of utilities. The objective of this review is to consider in advance, if over sizing is needed and to what extent they should be provided to accommodate future growth of the City.

16. All future development proposals will be reviewed to ensure that connections to existing streets are made and that local access connections between neighborhoods occur.

17. County Roads 68, 43, S.T.H. 25 and 173rd Street are intended to provide for inter regional traffic and are the designated major collector streets within the district. Future development proposals will be reviewed to minimize and/or eliminate direct lot access to these roadways and to ensure adequate spacing occurs between intersections.

18. A new major collector is proposed (193rd Street extension), to connect S.T.H. 25 to 173rd Street and beyond. The section west of 173rd Street is planned as a parkway

and will be designed with a landscaped median and pedestrian trail/sidewalk system. Future development proposals will be reviewed to minimize and/or eliminate direct lot access to these roadways and to ensure adequate spacing occurs between intersections. It is anticipated that the 193rd Street parkway will continue west of S.T.H. 25 to connect the planed Keller Lake community park complex to the westerly realignment of County Road 81.

19. Existing Fair Meadows Drive is planned as a minor collector road and to provide access to the long-term industrial complex as well as inter-neighborhood connection between S.T.H. 25 and 173rd Street. Additional minor north south collector roads are anticipated between County roads 68 and 43 and between County road 68 and S.T.H. 25.

20. The planned continuation of the sidewalk system along S.T.H. 25 is contemplated. Additional pedestrian systems are planned along the 193rd Street parkway, along County Road 43, 173rd Street, the easterly extension of Fair Meadows Drive and along the minor north/south collector streets.

21. Future community park search areas are identified both east and west of S.T.H. 25 adjacent to Keller Lake and the wetland complexes located n the central part of the district. It is anticipated that additional smaller neighborhood parks and/or private recreation areas will also be developed within the district and connecting to the 193rd Street Parkway. Community parks should contain between 10 – 15 acres of land for the purpose of developing active recreation amenities including ball fields, skating rinks, tennis courts, playground equipment and picnic shelters. Community parks should be located in areas with natural amenities if possible.

22. A linear parkway system will be established along the 193rd Street major collector corridor to link the large wetland complexes and Keller Lake as well as community park facilities within the district. The parkway will serve the dual purpose of providing for east/west neighborhood connections and to link park facilities/open space systems in the southern part of the City.

23. The 193rd Street parkway will provide a connection between the westerly realignment of 200th Street and 173rd Street. The parkway and Elk River greenway will be connected via pedestrian systems along County Roads 81 and 173rd Street. These systems will also be connected to the Big/Mitchell Lakes trail loop via the pedestrian systems along S.T.H. 25, U.S. 10 and trail systems within the McDowall Oaks Park. Additional pedestrian systems will be needed along the east/west sections of County Road 73 and Glenwood Avenue (both of which are planned minor collector streets).

DISTRICT SIX

The land areas within this district comprise the southern most area of the Planning Study Area. District Six consists of the land areas located directly south of District Five, which are under the jurisdiction of Big Lake Township. The area of District Six is considered to be prime agricultural lands by Big Lake Township and are therefore planned to remain rural. This district contains a variety of land uses located on either side of County Roads 14, 11, 50 and S.T.H. 25, adjacent to the Mississippi River. Generally, the lands adjacent to the River are developed as low-density single-family homes. However, limited commercial and semi-public uses are located intermittently along the County Roads and S.T.H. 25. The City of Big Lake wastewater treatment facility is located within this district. The predominant natural features within the district include the Mississippi River and a large wetland complex located in Sections 28 and 29. There are approximately 3,940 acres of developable (land outside of lakes and wetlands pursuant to the National Wetlands Inventory Map), within the district.

District Six Issues:

- Lack of master planning objectives between City and Township
- Insufficient transition/buffer areas between differing land uses, S.T.H. 25 and County Roads.
- Infrastructure capacity unknown
- Areas with high water table
- Internal vehicular and pedestrian circulation
- Lack of collector roads
- Realignment potential for S.T.H. 25
- Potential turn-back of part of County Road 68 to the City
- Limited public access to natural features
- Lack of park and recreation facilities
- Limited expansion area for wastewater treatment facilities
- Premature development without public sewer and water
- Ned for expansion area for Waste Water Treatment Facility

District Six Objectives:

As with districts One, Three and Four, a primary objective for this district is for the City, Township and/or Sherburne County to come to an agreement as to the extent of the Urban Expansion District boundaries. Fundamental to this objective are the issues associated with compatible and consistent land use transition and the logical, economical and planned extension of municipal infrastructure into these areas. It is the desire of the City to work with both Big Lake Township and Sherburne County to

develop a master plan for this District, which outlines the extent of the Urban Expansion District and contemplates phased development consistent with the infrastructure capacity of the City's wastewater treatment plant. The district recommendations that follow this section outline a land use and transportation system based upon the objectives of the City outlined within the Policy Plan, Land Use and Transportation elements of this Comprehensive Plan

The desired land use for District 6 from the City's perspective is to remain agricultural with a maximum one unit per quarter/quarter section density of development. No further commercial, industrial or residential expansion should occur within District Six until such a time as urban services including sewer, water, streets, parks and trails and storm water management systems can be extended to the areas. The lands within District Six are within the closest proximity to the Big Lake wastewater treatment facility and as such, should be planned and developed only if municipal services are installed concurrently with development.

To the extent that Big Lake Township and Sherburne County are willing to work with the City to assure that the land areas within District Six will not developed without sewer and water, the Comprehensive Plan supports this area as long-term agricultural use. This part of the Township contains the largest areas of contiguous and uninterrupted farmlands and the preservation of the agricultural use is of the utmost importance. It should be noted however that the City does not believe that the existing provisions of the Sherburne County Zoning/Subdivision Ordinance are sufficient to maintain the areas of District Six for agricultural/rural use and suggests that the appropriate modifications be made to ward against premature conversion of these agricultural lands to higher intensity uses.

While the County's Zoning Ordinance does, to some degree, preserve such lands for agricultural purposes, the provisions of the Urban Expansion District work contrary to such objectives. The Urban Expansion District allows single family and multiple family housing, commercial, industrial and public/semi-public development. Residential lot sizes down to as small as 20,000 square feet are permitted within the Urban Expansion District. The intensity of land uses and the small lot size/density standards allowed in the Urban Expansion District not only disrupt the ability of individuals to farm but also create situations whereby the future introduction of municipal utilities is often cost prohibitive or extremely difficult.

To more effectively preserve productive agricultural lands within the district until such a time as they are annexed to the City, or provided with urban services and provided with urban level services, it is recommended that a maximum density of one unit per quarter/quarter section be instituted for the land areas of District Six. The conservative development density suggested for this area is intended to accomplish both the City and

Township objectives to maintain this area in its rural status. More importantly, the land areas adjacent to the Mississippi River should also be subject to the same density standard to avoid premature development (with septic systems), within the river corridor. It is the City's position that the uses permitted within District Six should be limited to farm related uses with no industrial or commercial operations permitted without municipal streets, sewer and water service. To the extent that Big Lake Township and Sherburne County are willing to work with the City of Big Lake concerning the preservation of the lands within District Six for agricultural and rural uses, the City will not actively pursue annexation. However, if there is not support from the Township and County to effectuate more restrictive zoning controls to ensure premature development will not occur, the City will pursue the means necessary to effectively protect and plan its future utility service area. To this end, the City may look to adopt policies to limit the extension of sanitary sewer, water and/or other municipal services to lands that are prematurely developed.

The major transportation facilities within District Six include County Roads 14, 50, 11, 43 and 68 as well as S.T.H. 25. It is important for right-of-way for the logical extension of the existing roads to be reserved. The Transportation Plan Concept for District Six includes the introduction of a parkway to connect the westerly re-alignment of 200th Street with U.S. 10. The parkway concept is proposed to provide a loop trail/greenway system for the area, which will allow for pedestrian/bicycle access to major natural features and planned park and open space areas as well as to the lakes and Mississippi River Corridor. It is important that development occur in a manner, which provides for the road connections and corridors in order to accomplish the fullest use of existing infrastructure. The Parkway also includes an extension along County Road 43 to the Mississippi River where a future public park could be developed. The parkway will connect to the S.T.H. 25 and U.S. 10 trail systems as well as the Big/Mitchell/Keller Lakes loop trail system, City business districts and I.S.D. 727 School Campus. It will likewise be important to ensure that areas are developed with road and trail interconnections that will allow local trips throughout the community without utilizing the arterial street systems (S.T.H. 25 and U.S. Highway 10).

All development along County Roads, S.T.H. 25 and collector streets will need to be planned in a manner that includes greater setbacks, longer lots and an emphasis on screening residential structures from the potential negative influences (traffic, noise, litter) that tends to be associated with these higher traffic volume facilities. A series of private roadways or limited public roadways with controlled access will be necessary along the proposed collector streets in order to prevent vehicular congestion along the roads and to maintain proper intersection spacing. Local road connections including pedestrian ways should be planned to allow traffic between and among neighborhoods. Additionally, it is important to continue the sidewalk system along S.T.H. 25 as this provides a vital connection between neighborhoods and the Town Center area of the

City as well as a connection to the Big/Mitchell Lake loop trail system and Mississippi River.

District Six does not currently contain park facilities. There is a need to provide additional community park facilities within this district to serve the existing and future population. An objective for the district is to provide for a minimum of three community park facilities, one located along the Mississippi River, one located adjacent to the large wetland complex and one located east of Sunset Estates.

District Six Recommendations:

1. The City will work cooperatively with Sherburne County and Big Lake Township to establish a Comprehensive Master Plan for the areas within District Six to ensure that any future development is planned with infrastructure and to reserve right-of-way connections.

2. The City will work cooperatively with the Township and County to develop acceptable provisions for the Urban Expansion District that will ensure the protection of agricultural land uses, limit premature commercial, industrial and residential development and limit development to a maximum one unit per quarter/quarter section.

3. The vacant land areas within District Six should be used for rural/agricultural purposes and be considered "holding areas" until such a time as they are annexed to the City and/or provided with urban level services. An orderly annexation agreement process should be developed with Big Lake Township to address orderly, phased growth and development.

4. Increased setbacks, lot depth and buffer yards shall be provided along all County Roads, collector streets and S.T.H. 25 to provide separation and screening between the residential units and roadways.

5. A study to determine the extent to which areas within District Six can be served by existing City sanitary sewer and water services will be undertaken with the City Engineer.

6. All future development proposals will be reviewed to ensure that connections to existing streets are made and that local access connections between neighborhoods occur on roads that are not part of the arterial system (S.T.H. 25 and U.S. Highway 10).

7. County Roads 14, 11, 43, S.T.H. 25 and a new parkway connecting U.S. 10 to the future westerly re-alignment of 200th Street are the major roads intended to provide traffic circulation within this District. Future development proposals will be reviewed to minimize and/or eliminate direct lot access to these roadways, to ensure adequate spacing occurs between intersections and to reserve adequate right-of-way for these facilities.

8. A new (parkway)/major collector is proposed (173rd Street extension), to connect S.T.H. 25 to U.S. 10 and beyond. Part of 173rd Street is planned as a parkway and will be designed with a landscaped median and/or pedestrian trail/sidewalk system. Future development proposals will be reviewed to minimize and/or eliminate direct lot access to the parkway and other major roads and to ensure adequate spacing occurs between intersections.

9. The planned continuation of the sidewalk system along S.T.H. 25 is contemplated. Additional pedestrian systems are planned along the 173rd Street parkway, along County Road 43, 11, 14 and 193rd Street.

10. Future community park search areas are identified west of the wetland complex located within Sections 28 and 29, along the shore of the Mississippi River and east of Sunset Estates. Community parks should contain between 10 – 15 acres of land for the purpose of developing active recreation amenities including ball fields, skating rinks, tennis courts, playground equipment and picnic shelters. Community parks should be located in areas with natural amenities if possible.

11. A linear parkway system will be established along the 173rd Street corridor to link the large wetland complex to the S.T.H. 25 trails and Keller Lake as well as community park facilities within the City. The parkway will serve the dual purpose of providing for east/west neighborhood connections and to link park facilities/open space systems in the southern part of the City. A school search site has also been identified adjacent to the wetland complex wherein a joint-powers park/recreation area could be developed with a future school campus expansion. (School District 727 has not identified that a future school site is needed. The search area has been shown by the City of Big Lake in order to identify that the potential exists, based upon the population estimates through the year 2020, for additional school facilities. The type and location of school facilities, if needed by District 727 will be coordinated at some future date).

12. The City wastewater treatment plant area has been identified as potentially needing further expansion room above and beyond the current site. The size and need for such an expansion will be determined at a future date based upon further study and analysis by the City Engineer.

The degree to which the Comprehensive Plan will be successful in guiding community development is highly dependent upon the ability of the community to draft ordinances, policies and procedures to implement the Plan. The methods devised to implement the Comprehensive Plan are equally as important as the development of the Plan itself. In essence, unless the plan and related development tools are constantly referred to and utilized in combination, as well as long-range community decision-making, the efforts spent in their development become futile and wasted. In this chapter of the Comprehensive Plan, a summary of strategies for plan implementation is offered.

ENVIRONMENT

The Comprehensive Plan emphasizes the need for proper environmental protections and performance standards mandating future development be respectful of existing natural environment within the City. In response to these objectives, the City will implement the following strategies:

1. Use the Comprehensive Plan Inventory to identify environmentally sensitive areas and as a guide for future environmental preservation efforts.

2. The natural resource areas identified in the Inventory will be used to establish priorities for protection of sensitive or unique habitats and to determine appropriate standards for any future development. The inventory should be used to:

    a. Identify special natural areas for permanent protection, either by private or public action.

    b. Identify opportunities for restoration of degraded streams and wetlands.

    c. Determine appropriate locations for greenway corridors.

    d. Determine opportunities for protecting storm water infiltration areas or using alternative storm water management practices.

    e. Identify potential park and open spaces that must be preserved (either through acquisition or conservation easements).

3. The City will re-evaluate and amend development regulations pertaining to the following items:

    a. Establish zoning standards that outline the conditions for the creation of greenway corridors. Standards will include development densities, clustering,

open space protection, buffer areas, increased setbacks, wetland preservation, floodplain protection, park and trail dedication.

b. Develop regulations for site lighting to avoid glare or light spillage to adjoining properties, rights-of-way, skyward and over lake and river resource areas.

c. Create landscape and tree preservation regulations to address issues related to woodland protection, provision of native vegetation, control of invasive or exotic plant species and to address soil preparation for new development to insure deep rooting of new landscape materials with minimal irrigation.

d. Modify subdivision regulations to address issues related to poor soils and high water tables.

e. Outline development performance standards for storm water management emphasizing infiltration and bio-retention.

f. Provide for vegetative buffers along lakes, wetlands, creeks, and drainageways.

g. Continue to enforce shoreland and floodplain regulations.

a. Prohibit subdivisions in floodplain areas that require filling for the creation of building pads.

GROWTH MANAGEMENT

The Comprehensive Plan outlines a managed growth philosophy intended to control the pace of growth within the limits of the City's service capacity. The following strategies are offered to implement the City's growth management objectives:

1. Evaluate new development with regard to environmental impact, development quality, consistency with the Comprehensive Plan, and fiscal impact.

2. Aggressively pursue economic development within the City's designated commercial and industrial areas. Utilize available economic development programs to keep Big Lake competitive with other cities.

3. Continue the City's policy of infill development within the City's staged utility service areas avoid premature extension of utilities and urban land use into rural areas.

4. Re-evaluate City utility plans to develop a master plan for infrastructure improvements including an analysis of the ultimate service area boundaries and financial implications.

5. Utilize a street improvement fund to allow the City to proceed to declining street conditions.

6. Continue City policy of requiring new development to pay for its infrastructure costs.

7. Establish a proactive City public facilities maintenance program to avoid significant disrepair or breakdown.

8. Establish a five-year Capital Improvement Plan that identifies needed public capital improvements, assigns costs and schedules implementation based on project priority and funding availability.

9. Pursue intergovernmental cooperation for sharing public services and facilities, to avoid duplication and economize on City investments.

10. Pursue available county, state and federal grants and aids as appropriate to facilitate community improvements and programs.

11. Annually review the City's development fees (i.e., development application, utility connections, park dedication, storm water fees) to insure that they are sufficient to cover the costs associated with development.

ORDINANCES

As a means of implementing the stated land use goals for Big Lake, the City will pursue and implement, as deemed necessary, the following changes to City ordinances:

1. Zoning Ordinance

    a. Establish greenway performance standards.

    b. Establish environmental protections related to wetland, shoreland and floodplain protections. Establish vegetative buffers along lakes, creeks, wetlands, and water courses.

    c. Re-examine the City's landscape requirements to address:

(1) Screening between incompatible land uses.
(2) Screening along major arterial and collector streets, or railroad corridors.
(3) Requirements for native vegetation.
(4) Requirements for site preparation to promote deep rooting new landscaping.

d. Periodically examine City parking standards to determine if they adequately address land use needs.

(1) Consider proof of parking standards to reduce impervious surface.

e. Establish lighting standards to avoid glare or light spillage to adjoining properties or skyward.

f. Examine potential for rural zoning districts in the event of an orderly annexation agreement with Big Lake Township:

(1) Define the range of uses within the rural areas.
(2) Establish protections for active farms.
(3) Rural residential densities and standards for non-sewered properties.

g. Examine the low-density residential zoning district:

(1) Diversify the single family zoning districts to add a greater variety of lot sizes.
(2) Establish an urban lot clustering performance-zoning district that establishes permanent open space protections.

h. Examine the City's medium and high-density residential zoning districts:

(1) Re-examine the district lot area and density standards.
(2) Establish performance standards for architectural design, site amenities, green space, setbacks, guest parking, landscaping, and buffering.

i. Examine commercial zoning district:

(1) Diversify the commercial zoning districts.
(2) Define the CBD commercial zoning and related performance standards.

(3) Establish architectural performance standards for new commercial development.
(4) Establish a streamlined process for site plan reviews.

j. Examine industrial zoning districts:

(1) Establish architectural performance standards for new industrial development.
(2) Examine industrial performance standards and consider necessary amendments that may promote in-place expansion.
(3) Establish a streamlined process for site plan reviews.

k. Examine PUD standards to:

(1) Establish qualifiers for the application of planned unit development.
(2) Establish performance standards related to amenities in exchange for design flexibility within a PUD.
(3) Establish procedures for concept plan reviews.
(4) Develop a standard PUD agreement that ties proposed improvements to financial securities to ensure that the ultimate development is constructed as planned and approved.

2. Subdivision Ordinance.

a. Establish tree preservation standards.

b. Require soil information as part of plat submissions along with development strategies for addressing poor soils or high water tables.

c. Consider adoption of best management practices for grading, erosion control and storm water management.

d. Establish storm water management performance standards that promote storm water infiltration or bio-retention.

e. Establish a design guideline manual setting forth the design and construction requirements for streets, utilities, parking lots, trails, sidewalks and other site improvements.

d. Re-examine standards for parkland dedication to insure standards cover anticipated City needs and to require parks to be installed at the same time as the development.

e. Establish criteria for trail and sidewalk development.

f. Establish standards for premature subdivisions.

g. Establish standards to require all commercial and industrial sites to be platted to assure provision is made for site drainage, grading and road facilities.

3. Sign Ordinance. Examine Sign Code and make revisions reflective of the City's design goals for its commercial and industrial areas.

4. Housing Maintenance. The City will investigate the establishment of a housing maintenance code as a means of maintaining the City's housing stock in good repair.

COMMUNITY SERVICES

To maintain the delivery of quality services to Big Lake residents, the City will implement the following strategies:

1. Require that all development and/or redevelopment that occurs in the community be in accordance with the Comprehensive Plan and utility planning. The Comprehensive Plan, utility plans and related ordinances should be periodically reviewed and amended as necessary to reflect changing community needs and priorities.

2. Pursue ongoing City staff and advisory committees training and education in order to maintain the delivery of high quality services to Big Lake residents.

3. Continue to allowance administrative and improvement costs to those generating the demand or utilizing the service.

4. Maintain a strong level of confidence in the City's advisory committees, member selection, committee continuing education, and open lines of communication between the committees and City Council.

5. Pursue cooperative intergovernmental arrangements for sharing facilities and services to avoid duplication and provide for the cost effective delivery of services.

6. Remain proactive in the pursuits and utilization of new technologies that may contribute to more effective City operation and delivery of community services.

7. Maintain high standards for proactive communication with City residents and businesses on City issues and services through direct contact, open meetings, television, newsletters, news releases, and the Internet.

8. Utilize periodic community-wide surveys to obtain citizen feedback on community development and other local issues.

ECONOMIC DEVELOPMENT

1. Initiate a study of the U.S. Highway 10 / S.T.H. 25 commercial/industrial corridor to determine what market demands are present in the community and to evaluate redevelopment options including building renovation, access management, sign and landscape standards.

2. Establish a streamlined process for review of commercial/industrial proposals that involve public financing and/or development within the joint industrial park.

ADMINISTRATION

1. Continue to meet with Big Lake School District, Big Lake Township, Sherburne County, Minnesota Departments of Transportation and Natural Resources to maintain open communications and to work cooperatively on mutual planning and infrastructure issues.

2. Review and develop policies and a streamlined procedure for annexation proposals.

3. Work with Big Lake Township and Sherburne County to develop Urban Expansion District zoning and subdivision controls that will allow for the efficient, economical and practical extension of municipal services within areas that are within the City's facility service areas.

4. Establish a mechanism for periodic review of the Comprehensive Plan and to tie the planning process in with the City CIP and budget process where appropriate.