

A Comprehensive Plan
for the
Village of Tower Lakes,
Illinois



Offered by
The Tower Lakes Plan Commission
October, 2010



PREFACE

Tower Lakes is our village; it's where residents build lifelong relationships, a community of people who care about each other, a peaceful place where generations of families grow and prosper. Over the years the residents of Tower Lakes have created a genuine bond of community and spirit.

This document is the Village of Tower Lakes' Comprehensive Plan. Its goal is to ensure that, for years to come, our community remains a vibrant and growing family friendly village for all our residents. The Comprehensive Plan is a living document composed from well-considered research; it develops manageable goals that will forward the growth and development of our village. It is a road map for future village leaders. The Comprehensive Plan will be a motivator for change, an initiator of action, and a resource to manage Tower Lakes for future generations.

The Comprehensive Plan is an official Village of Tower Lakes Document; as such it shall be available for public review and reference. Copies of the plan will be available at the Village Hall as well as electronically on the village web site: <http://www.villageoftowerlakes.com>.

The Comprehensive Plan is respectfully submitted by the Tower Lakes Plan Commission to the Tower Lakes Village Board for approval and adoption.

This 18 day of October, 2010



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ACKNOWLEDGMENT

The Village of Tower Lakes began the preparation of this Comprehensive Plan 2007. The final plan was presented to and adopted by the Village Board in October of 2010. This plan was developed as a revision of the previous plan created in 2002. Over the course of two years beginning in 2007 a collaborative effort facilitated by the Village Board, the Village Plan Commission, the previous Plan Commission, dedicated citizen participants in Village meetings and participants in the Village Residents Survey of 2008, this Comprehensive Plan began to take shape. The planning process included extensive research and analysis, Community Action Committee Meetings, Plan Commission meetings and exhaustive review with village departments and public servants.

The Plan Commission would like to and thank the members of the community who gave their time to be a part of the research and visioning process. We hope that this document reflects the true meaning of your thoughts and beliefs.

Additional acknowledgement is due those whose outstanding civic contribution over the years and forward-looking vision laid the groundwork to develop and visualize this plan and deliver it to its forward-looking conclusions. Without the following people's support, this Comprehensive Plan would never have been completed.

CITIZENS ADVISORY PARTICIPANTS

The Participants in the
Tower Lakes CAC Visioning Meetings

The Citizens who participated in the
Tower Lakes Residents Survey of 2008

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Additional Support and Help

Brian Gidley (Past President), Tom Kubala, Rick Hoffman, Tom Fitzgibbons, Kathy Pettengale
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HISTORY

Native Americans, most recently the Potawatomi, used the land now occupied by the Village of Tower Lakes as hunting and farming land. In 1833, after the Blackhawk War, the Potawatomi and other Indian nations ceded all Northern Illinois land to the United States.



The first settlers arrived in 1834, enticed by United States Land Office offers of cheap land. By the mid-1800s, the land was occupied by the farms of three of these pioneer families. Hugh Davlin of Troy, New York, arrived around 1836 and built a log cabin near the location of the present Village Office at the intersection of two main Indian trails. The 1860s Davlin farmhouse still stands today on East Tower Drive. The one-room Davlin School was built around 1857 north of the farmhouse. It was destroyed by fire and replaced in 1927. Classes were

held there until 1947; it is now a private home. Irish immigrant John Murray also arrived in the 1830s and bought government land west of the Davlin's. The Rev. John Lewis Brooks of Massachusetts bought a 120-acre farm in 1857 north of the Murray's. This area was known as Davlin's Corners in the late 1800s.

In 1924, 70 acres of the Brooks farm, owned by son-in-law William Paddock, was sold to a partnership called D&B (Detrick and Brooks). This partnership had the idea of creating a lake, with the help of Vincent Davlin and his son, Charles, by building an earthen dam between a pair of hills along Mud Creek which ran through the three farms. D&B subdivided the Paddock farm into small lots and began to sell summer cottages by the new lake. They called this resort development Tower Lake Park, after the steel observation tower they built atop the highest hill on the west shore.



Tower Lakes then became the center of a promotional plan by radio evangelist Paul Rader, who started using the land as a revival camp for his Chicago Gospel Tabernacle religious group. In 1925, he purchased the 70-acre D&B Tower Lake Park property, plus much of the Davlin farm, the rest of the Paddock farm, and the entire Murray farm. His followers filled the grounds on summer weekends in 1925. Plans called for a 5000-seat tabernacle, hundreds of cottages, a radio station, and a welcoming beacon light atop the 68-foot high namesake steel tower.

These plans were not completed. Instead, an Armenian immigrant named Nazareth Barsumian discovered the area in the fall of 1925. A group of Evanston partners, led by Barsumian, purchased the land from Rader, planning to convert it into a residential subdivision called Tower Lakes Estates. Development proceeded to the point that a governing agency was needed, and the



Tower Lakes Improvement Association (TLIA) was formed in 1930. Around 1939, another dam was constructed on farmland north of the main lake, and the 6.5-acre North Lake was formed. In the 1940s and 50s, the move to convert summer cottages to year-round use accelerated. Eventually, Mr. Barsumian deeded the lakes and all community parklands to the TLIA. Mr. Barsumian died in 1963. His family and Khoren Hussissian completed the development of the remaining undeveloped lands in the original 400-acre Tower Lakes Estates area.



On September 12, 1966, Tower Lakes' residents voted to incorporate as a Village. Subdivision development brought additional areas and home sites into the community, along with three additional homeowners' associations. The additional areas continued to match the original plan of the community for open-space preservation and recreational use. The Barsumian heirs donated more than 30 acres of additional open-space to the TLIA and to the Village in 1969.

In 1995, the Village purchased the residence being used as an office building at 400 North Route 59 in the center of Tower Lakes, establishing the first permanent Village Office and Police Station. Also in 1995, the Village entered the utility business by purchasing the Tower Lakes Water Company's delivery system from private owners.





1. INTRODUCTION

1.1 Purpose of the Comprehensive Plan

The Comprehensive Plan is required by state statute as a basis for zoning and must include objectives and policies for future land-use development and development of public ways, places, land, structures and utilities. A Comprehensive Plan is also required by a number of state and federal grants programs. However, a Comprehensive Plan can be much more to this community. Preparation of a plan offers the opportunity for the residents to work with Village leaders and community organizations to develop a vision for the development of the Village.

In Tower Lakes, this Comprehensive Plan is attempting to be more than a series of policy statements. It is intended to be a detailed guide for preservation and development, which contains policies, maps, text and critical areas. The plan offers the most appropriate land-use recommendations for all parcels of land in Tower Lakes and adjoining unincorporated areas, and explains the basis for those recommendations. The Plan was initially adopted in 1977 and has been updated in roughly seven to ten year increments, with the most recent update occurring in 2002.

The Comprehensive Plan for Tower Lakes is a policy guide for the development of the community. The purpose of the Plan is:

- To improve the quality of the physical environment of the community in response to social, economic, and physical realities and forecasts
- To provide for the well-being of the entire residential community
- To act as a guide in the formation of additional plans
- To promote community goals, objectives, and policies
- To coordinate the political and technical aspects of community development in order to eliminate conflict or duplication of public and private projects
- To insert long-range considerations of goals in decisions about short-range actions; and
- To enhance citizen participation in community development and provide citizens with a sense of security and civic pride

1.2 Current Plan Format

This document will be focused around direct action steps recommended to and approved by the Tower Lakes Village Board. These future planning steps, defined as “**Policy Objectives**,” are based upon a complete and thorough consideration of resident input, data research, and trustee interviews (See Public Participation and Shareholder input Sec.1.6), and can be located at the end of each section of the plan. The content of each section is intended to provide background and support for the Policy Objectives.



In some cases the Policy Objectives simply state areas that urgently require exploration, deliberation, and serious consideration. Other Policy Objectives more clearly allow the Village to begin steps in the direction of more immediate implementation. The Policy Objectives are considered essential in assisting and directing the Village future plans in accordance with its community vision. If Policy Objectives are in conflict and the Village Board is not in consensus on the resolution then the Planning Commission will hold a public hearing for input toward resolution of the conflict.

1.3 Sustainability

Throughout this document the reader will be reminded of the importance of using effective planning and management to create and maintain a sustainable community. Although many understand the term sustainability, it is important here to define sustainability and how it fits within the future of Tower Lakes.

Sustainability is a concept for ensuring a high quality of life for future generations. As a practical matter, finite resources, coupled with a significant desire to better support a diverse and sustainable community, require the Village to make choices about how best to use its natural, social, economic, and human resources. Sustainability within the Comprehensive Plan details how the Village should ensure that it continue to meet its current and ongoing environmental, social and economic needs without compromising the future for succeeding generations.

A Sustainable Plan is intended, in its most important form, as a plan of action that benefits the Village today and in the future. Recognizing that sustainability programs require ongoing diligence to maintain, metrics or measurements of progress should be established as part of a regular review and monitored to ensure achieving sustainable goals. Achievement of these goals will require the leadership of the Village Board and community involvement.

Applying sustainability methods in Tower Lakes has been woven into the *Alternative* processes explored and encouraged in this plan, and incorporated within the *Policy Objectives* at the end of each individual section.

1.4 Planning Area and Village Development

In the 1960's, neighboring villages were rapidly expanding their territory. TLIA leaders concluded that incorporation was the best avenue to protect their interests, particularly to provide more options to fund road improvements and control building and zoning. On September 12, 1966, another cherished goal of Mr. Barsumian (founder of Tower Lakes) was realized when Tower Lakes residents voted to incorporate as a Village. TLIA President Cyril C. Wagner was elected the first Village President, a post he held for 13 years. Subdivision development and annexation brought additional areas into the community over the next 30 years, including South Hills, Marian Hills, West Hills, Fenview Estates, Country Club Estates and Timber Trails. The latter two subdivisions are on the former Davlin farmland east of IL Rt. 59/Barrington Rd. Other parcels were added to square off Village boundaries. The additional areas continued to match the original plan of the community for open space preservation and recreational use. The Barsumian successors donated over 30 acres of additional open space to TLIA and to the Village in 1969.



Fig. 1 Village Hall

From its inception in 1966 until 1991, Village government operations and records, including the Police Department, were run out of the homes of the various officials. Meetings were held at the former Gooch/Baird & Warner real estate office on Rt. 59, a building which had served in earlier decades as Mr. Barsumian's community administration building. In 1991, the Village obtained temporary storage and meeting space in the neighboring village of Lake Barrington at their former Park District building on Kelsey Rd. In March 1992, the Village leased office space in the Market Place shopping center in Lake Barrington. In 1995, the Village purchased the Baird & Warner real estate office at 400 N. Rt. 59 in the center of Tower Lakes, establishing the first permanent Village Office and Police Station. The community's focal point had returned to "Davlin's Corners" though at the same time its only remaining commercial place of business closed.

1.5 Planning History and Review of Prior Plans

The Village of Tower Lakes adopted its initial Comprehensive Plan on January 17, 1977 as Ordinance No. 77- 44.1 and filed it in Lake County Illinois. This plan included recommendations by Robert B. Teska Associates dated August 1976 and the Plan Commission dated October 1976. The plan also included the area-wide Comprehensive Plan adopted by the Barrington Area Council of Governments (BACOG) on July 29, 1975 as an amendment. The Comprehensive Plan was updated in 1996, and then again in 2002.

1.6 Public Participation and Stakeholder Input

The Plan Commission based the research and information for this Comprehensive Plan on three forms of public participation and stakeholder input, the Citizens Advisory Committee, Resident Survey, and multiple interviews with village trustees.

1.6.1 The Citizens Advisory Committee and the Visioning Process

The committee was intended to represent a cross section of the residential population of Tower Lakes. More importantly, it represents those residents that have had an opportunity to listen and learn from the research and information gathered and provides direct feedback, ultimately helping to write the village Comprehensive Plan.



Roughly 30 residents, chosen randomly, volunteered their time over (2) three hour meetings, were required to absorb a certain amount of information, information that had been prepared in a neutral and unbiased way, and then respond as honestly and openly as possible, as to where they wish to see the community in the next ten years.

The Visioning Process was designed to be forward looking. The process requires the participants to imagine a little, but remain grounded in the reality of the dollars and cents required to provide for that vision. Much of this work involved acknowledging the current state of village affairs and choosing or prioritizing what they see as important going forward.

1.6.2 The 2008 Resident Survey

As part of the data collection tools for this Comprehensive Plan, the Plan Commission prepared and launched a thorough survey to all residents of Tower Lakes. One survey was mailed per household. The survey received a 40% response rate, strong by industry standards.

1.6.3 Trustee Interviews

Beginning in 2007, with the interview of past president Brian Gidley, the Plan Commission set out to respond to the directive to create a Comprehensive Plan with “teeth” that would guide the village vision going forward.

To this end, the commission members began interviewing each trustee individually, with questions directed at understanding the governmental processes operating within the village. The trustees were candid and completely transparent on all issues under their oversight, specifically pertaining to the history, present circumstances, and vision of the future.

As the process has moved forward during the past two calendar years, the Plan Commission has reached out numerous times to the trustees for clarification of facts and data, as well as to keep the plan content updated, reflecting current conditions, budgets, and planning.

1.7 Executive Summary Excerpts

An Executive Summary was prepared following the careful analysis of the survey results. It is divided by the various areas of responsibility within the Village including Budget & Finance, Utilities, Storm Water Management, Police, Urban Forestry, Building and Zoning, and Roads & Right of Way. Within each section, the survey asks the level of satisfaction for a given set of questions. Action item questions are asked as well to rate the level of support for funding and budgetary prioritization. A listing of the topic areas surveyed and a very brief summary of results follows:

1.7.1 Budget & Finance

The highest priority was placed on the water system followed by general repair and maintenance services for roads, snow, ice, garbage collection and mosquito spray. Medium priority was placed on maintaining village property, waste pick up services and the tree program. The lowest priority was given to general village office hours and technology upgrades and street aesthetics such as lighting and street signs.



1.7.2 Utilities

Residents believe all the water and utility services are important. Many residents are generally satisfied with the services but there is much room for improvement based upon the percentages of not satisfied. Residents were particularly not satisfied with the color and the cost of water, presence of utility poles, and the lengths of power outages.

1.7.3 Storm Water Management

Residents generally do not support new development ordinances that are less restrictive than current ordinances. There is support to divert monies from other budgets toward additional maintenance of water receiving structures (catch basins and culverts).

1.7.4 Police

This is one section in the survey where there is clear consensus by residents that the Tower Lakes Police Department is very valued. The level of importance for police services is ranked high and there are few unanswered responses for this category.

1.7.5 Urban Forestry

Residents are satisfied with the urban forestry services and feel the services are important. However there are opportunities for awareness and education including for insect control and buckthorn elimination. Leaf burning is supported by the majority of residents. However, the survey reflects a willingness by residents to consider alternatives to leaf burning.

1.7.6 Building and Zoning

Residents feel these areas are important and many rate each question as satisfactory. There is a high percentage of unanswered responses, either because they do not understand the building and zoning process, or have not worked through such a process as of yet.

1.7.7 Zoning

Residents support annexation, open space and additional residential development (single family homes) if it adds to the revenue stream for the Village. There is some support for commercial as well. Residents do not support cell towers, light industrial, multi-family residential or affordable housing in the priority mix.

1.7.8 Roads and Right of Way (ROW)

The majority of residents prefer to maintain status quo for expenditures for this section of the survey. Except over 30% of residents agree we should increase expenditures for curbs, street lights and pedestrian walkways. 25% of residents feel we should reduce expenditures for road replacement and 41% feel we should reduce expenditure for road maintenance.



1.8 Parcel Mapping

Parcel mapping combines property and tax information with digitally mapped outlines of surveyed lots, parcels, and platted subdivisions. This information was invaluable in helping the Plan Commission to efficiently track growth and development over time, analyze and select sites suitable for different uses, and generate more targeted maps. Lake County and BACOG have created parcel mapping for the entire County, as well as the Tower Lakes area specifically.

1.9 Comprehensive Plan Approval

This Comprehensive Plan is a guiding document for future village decisions and actions. The Village Board and staff will be responsible for implementing the strategies contained in the plan through direct leadership, organizing, monitoring, and additional long-term planning; however, they will need the continued involvement of concerned residents to make all of the strategies a reality. Tower Lakes is run and operates completely by volunteers. The increasing number of retired and semi-retired individuals in the area provides a solid base of experience and knowledge to draw upon. Many young and working-age people also have a vested interest in the area and are looking for opportunities to make a difference in the community.

In order to achieve the goals contained within this plan, the Village shall work closely with TLIA, volunteer groups, the surrounding townships, municipalities, Lake County, and other public and private partners to ensure success.

An important step in implementing this Comprehensive Plan will entail close review and updating of the Village's current Land Usage Ordinances to ensure that all subdivision controls, storm water management code, zoning code, and the zoning map are consistent with the approved Comprehensive Plan.

This Comprehensive Plan was reviewed and approved by a consensus of the Plan Commission, examined by the residents during open public hearings, and then approved and adopted by the Village Board.



2. COMMUNITY DEMOGRAPHICS

2.1. Demographic Profile of the Village¹

2.1.1 Population: current characteristics

The Village of Tower Lakes has a naturally rich diversity of residents representing a wide span of age, gender, ethnicity, socio-economic, and cultural backgrounds. The Village has evolved from what was originally a remote rural landscape, into a community of unique individuals desiring a place to live that lacks the uniformity found in most lands subdivided and platted for residential purposes.

2.1.2 Households: current characteristics

As a result of this diversity, the community does not identify itself with a specific “image”, such as for families, or seniors, or singles. Community planning requires complete consideration of the patch quilt of residential needs. However, most often, it is families that move to Tower Lakes; to raise children in a natural environment, ever so slightly removed from the more accessible influences found in the urban, and many suburban localities.

2.1.3 Age: current characteristics

It is not surprising, considering the diversity, that the average age of residents in Tower Lakes would fall in the center of the age spectrum. This bodes well for the youthful vitality and approach to the community planning. Many of the activities held on the common grounds are directed at creating a fun and social environment for the kids.

Median Age	Years
Tower Lakes	41.5
Illinois	34.7

Table 2

POPULATION	TOTAL	%
MALES	636	48.6%
FEMALES	673	51.4%
HOUSEHOLD SIZE		
TOWER LAKES	2.9 people	
ILLINOIS	2.6 people	
% OF FAMILY HOUSEHOLDS		
TOWER LAKES		86.9%
ILLINOIS		67.6%

Table 1

¹ 2000 U.S. Census



2.1.4 Education Levels

Table 4 details the educational levels of Village residents. The educational background of the residents allows the Village to tap into the diverse resources of the community.

2.1.5 Income Levels

Estimated median household income in 2007: \$151,533 (it was \$130,388 in 2000)²

Income Levels	2007 Stats
Tower Lakes Median	\$151,533.00
Illinois Median	\$54,124.00

Table 3

<i>POPULATION OVER 25 YEARS & OVER</i>	<i>% IN TOWER LAKES</i>	<i>POPULATION OVER 25 YEARS & OVER</i>	<i>% IN TOWER LAKES</i>
Never Married	18.8%	Mean Travel Time to Workplace	41.6 Min.
Currently Married	74.3%	Unemployed	2.2%
Separated	0.5%	Graduate or Professional Degree	28.1%
Widowed	3.2%	BA Degree or Higher	64.5%
Divorced	3.3%	High School Education or Higher	98.7%

Table 4

² Data based on 2000 census and compiled by City-Data.com



2.2. Government, Ownership and Cooperation through Consensus Building

2.2.1 The Community

The Village of Tower Lakes is located in the southwest corner of Lake County, Illinois, USA. The Village is in the northwest suburbs of Chicago, 45 miles from Chicago's downtown Loop. The population is just over 1,310. Originally developed in the 1920's as a recreational summer-home community, the Village is centered on two scenic private lakes, totaling over 85 acres.

Tower Lakes occupies approximately 1.1 square miles and presently contains just over 430 single-family homes and no commercial business buildings, schools, churches or post office. The Village is within the award-winning Barrington Community Unit School District 220. Student test scores regularly rank near the top nationally and over 90% of the graduating seniors go on to attend college. Grade school children attend the North Barrington School, less than one mile south of Tower Lakes. Private schools for grades K-8 are also available in Barrington. The Village of Tower Lakes shares the post office and zip code with Barrington (60010). Home prices in 2005 averaged a little over \$450,000 with a range of approximately \$300,000 to over \$1,000,000. Residents commute to jobs in nearby suburbs as well as to Chicago. Frequent commuter rail service is available from the Barrington or Fox River Grove stations; both are approximately seven miles away.

2.2.2 Community Leadership Structure

The Village of Tower Lakes is governed and managed by the Tower Lakes Village Board. In addition, there are a number of home owners associations (see Sec. 6.1) which provide a forum to address the needs, issues and concerns, and social events for the areas they represent. The largest of the homeowners associations is the Tower Lakes Improvement Association (TLIA). TLIA is unique within the Village, as it privately owns the Lakes, a significant portion of the shoreline property, and a number of parks and recreational areas. As the largest private property owner in the Village and due to its significant influence on the community and its character, additional information on TLIA is presented in this plan. One reason for the continued legal separation of TLIA and the Village is to maintain the private ownership of the lakes and parks. (see Sec. 2.2.2 and 2.2.3)

2.2.3 Village Structure

The elected governing body consists of the Village President and a Board of six Trustees, each with four-year terms of office. None of the elected officials receive a salary, most governing activities are performed by resident volunteers.

Municipal elections are held on the first Tuesday of April in odd numbered years. The polling place for these and all other elections is at the Lake Barrington Village Hall (Cuba Township Precinct 66), near the intersection of Kelsey Rd & Old Barrington Rd.



Trustees volunteer to accept the responsibility for the following areas; Roads and Grounds, Finance, Police, Building and Zoning, Storm Water Management, Health and Sanitation, Mosquito Abatement, Utilities and Urban Forestry.

In addition to the elected officials, various officials and officers are appointed by the Village President and confirmed by the Board of Trustees. These include the seven member Village Plan Commission (2 year terms), seven member Zoning Board of Appeals (5 year terms), Village Clerk, Deputy Clerk, Office Manager, Building Officer, Emergency Management Agency (EMA) Director, Arborist, seven (7) member Tree Commission, Treasurer and Village Attorney (1 year each). All of the above are unpaid volunteers, with the exception of Village Clerk, Office Manager, Treasurer, Building Officer, and Attorney, who are paid on a part-time or hourly basis.

The Village also provides a professional police force, consisting of a Police Chief, Commander, and several other part time officers. The Village presently has no full time employees.

2.2.4 Homeowner Associations

Tower Lakes Improvement Association (TLIA)

TLIA is an active association of more than 350 member families. TLIA and Village government have a shared influence on community life in Tower Lakes.

TLIA, chartered in February 1930, was the governing body of Tower Lakes until the community incorporated in 1966. It has always privately held the deeds and titles to the lakes, ponds and other park and recreational properties in the community.

The Association has an elected Board of Governors. Each officer and member-at-large is elected for a two-year term at an annual meeting held in November. Duties and functions are carefully set forth in the Association By-Laws. Dues are levied in an amount established by the By-Laws as deemed necessary to fulfill the Association's obligations.

Certain homeowners' properties in the Village are deeded into TLIA and are required to pay annual dues. All residents of the Village not deeded into TLIA have the opportunity to pay a yearly fee to use TLIA facilities and participate in TLIA events. The Association is responsible for the preservation, administration and continuing maintenance of these private properties which include the lakes, suspension bridges, soccer field, tennis courts, children's parks/playgrounds, many other parks and natural areas. TLIA is funded by the member's annual dues and managed by a volunteer TLIA board and other resident volunteers.

TLIA does not accept funding from any public entity, including the Village, in order to preserve its private status. If it did, all properties owned by TLIA would be accessible and available to the public. This would have an impact on the privacy of the residents, community resources and association facilities.

TLIA has a number of volunteer committees that oversee and have responsibility for the following areas:



- Beach, including facilities and maintenance, lifeguards and swim lessons
- Finance, the annual budget
- Grounds, maintenance of greenways, paths, play-fields, beautification, reforestation, etc.
- Lake, weed and algae control, water testing, and semi-annual lake clean up
- Legal
- Long Range Planning
- Public Relations, newsletter, website
- Social

Fenview Estates Property Owners Association

This association consists of 35 homes. The association maintains entry structures and lighting at Fenview Drive and Kelsey Road.

Country Club Estates Homeowners Association

There are 39 homes within this association. The association maintains lighting and entry structures at Indian Trail Road as it intersects at Pebble Creek Drive and at Rolling Green Drive.

Tower Trails Homeowners Association

This association consisting of three homes is currently inactive.

2.2.5 Inter-governmental Structure

The Village of Tower Lakes is a charter member of the Barrington Area Council of Governments (BACOG). This is an intergovernmental body founded in 1970 whose mission is to foster discussion and study of area needs and to promote coordination of activities to solve problems of a regional nature. Its membership consists of the Village Presidents of Barrington, South Barrington, Barrington Hills, North Barrington, Lake Barrington, Deer Park, and Tower Lakes, plus Supervisors of Barrington and Cuba Townships, and an Executive Director. Its planning area covers some 95 square miles.

Tower Lakes is also a member of the Illinois Municipal League. The IML provides a lobbying voice for Illinois municipalities on legislative issues and provides services and programs to promote competence in municipal government administration.

Tower Lakes contributes to the Chicago Metropolitan Agency for Planning (CMAP). CMAP is an intergovernmental commission which conducts regional planning for the seven county Chicago metropolitan area. Their scope includes issues such as housing, transportation, land-use,



JURISDICTIONAL BOUNDARY AGREEMENT MAP

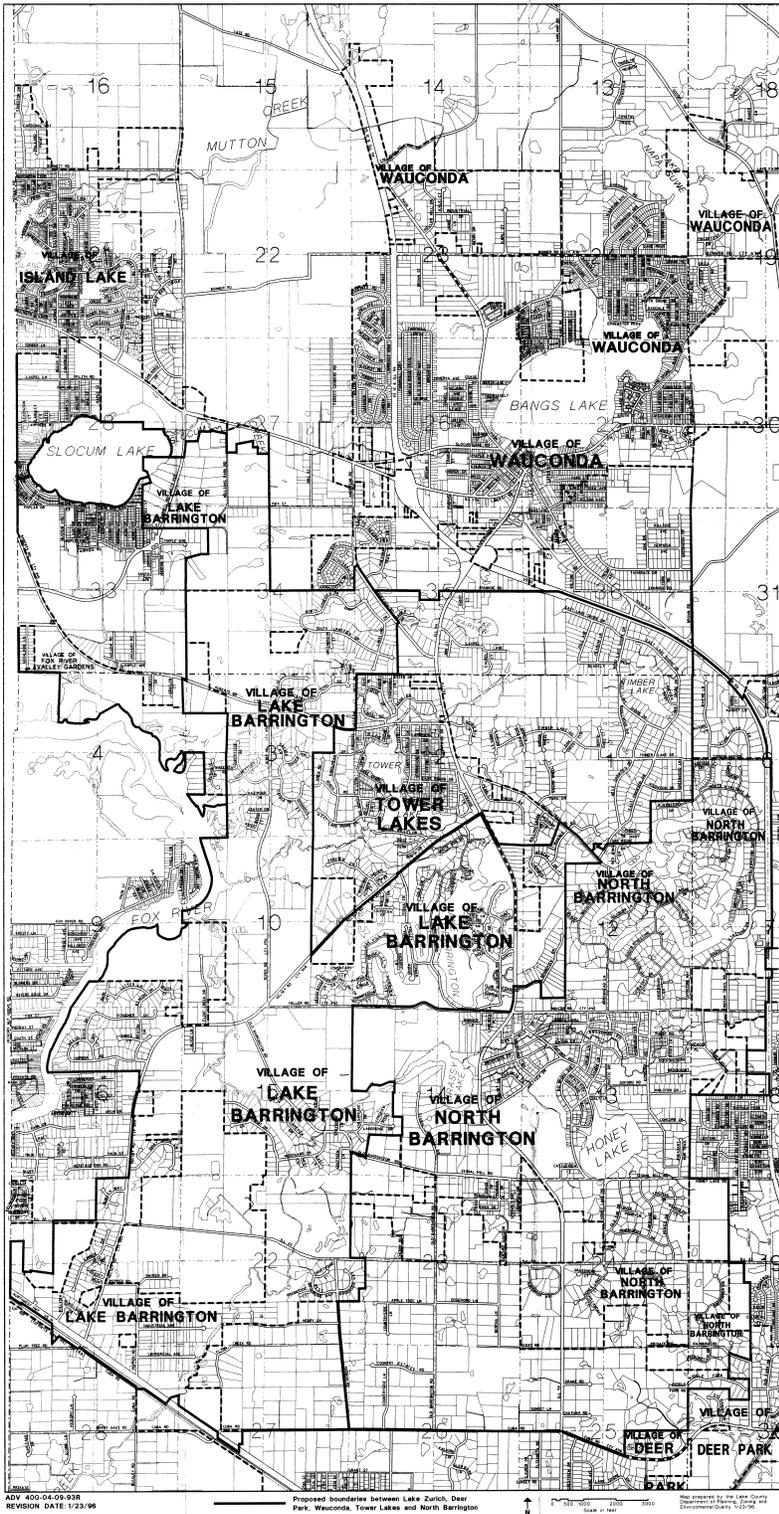


Fig. 2

environmental preservation, sustainable growth, responsible development, water resources and flood control.

The Village of Tower Lakes is signatory, along with the Villages of Wauconda, Port Barrington, Island Lake, Lake Barrington, and North Barrington to an Inter-Governmental Agreement (IGA).

The signatory villages entered into the IGA because they recognized and agreed that there is a substantial amount of unincorporated territory lying within the overlapping jurisdictions of their respective comprehensive plans. The villages recognize that development of this boundary territory will place significantly higher demands on their respective police and other municipal services, which will affect their residents' safety, welfare, and enjoyment of the area.

The IGA expires in 2013, by state law. The villages will have to execute a new agreement in order to continue this protective service. Negotiations have commenced to begin this process.



2.2.6 Mutual Interests

Both the Village Government and homeowners associations have a mutual interest and common cause in supporting and preserving the community assets, history, and the loyal citizenry.

The joint cooperation between these bodies is essential to the future stewardship of the Tower Lakes community.

2.2.7 Building Consensus Going Forward

Consensus building describes a number of collaborative decision-making techniques in which a facilitator or mediator is used to assist diverse or competing interest groups to reach agreement on policy matters, environmental conflicts, or other issues in controversy affecting the community at large. It's typically used to foster dialogue, clarify areas of agreement and disagreement, improve the information on which a decision may be based, and resolve controversial issues in ways that all interests find acceptable.

The goal is to open up discussions, improving communication and mutual understanding, exploring the issues in controversy to see if participants' different viewpoints can be distilled into general recommendations, and trying to reach agreement on a proposed policy standard.

For example, the quality of the lakes is important to all the residents, members, and officials. Without joint cooperation with regard to rules and regulations, ordinances and best management practices (BMP), this most valuable asset has fragmented protection, and conflicted policy agendas for future planning and effective stewardship. This is not acceptable going forward.

As an ongoing process, consensus building has the potential to build community capacity in such areas as conflict management, leadership and future decision making. It is highly recommended that discussions between homeowner associations and the Village be held on an ongoing basis in order to bring a level of cooperation and consensus to the issues examined within this document.



3. LAND-USE

The purpose of this plan's land-use element is to compile an inventory of existing land-use and establish the recommendations and policies which will be used to guide public actions concerning future land-use and development. These recommendations and policies express ideas that are consistent with the desired character of the community and the other elements of this Comprehensive Plan.

3.1 Land-Use Philosophy, Goals and Objectives

A compilation of recommendations, policies, goals, maps and programs are needed to guide the future development and redevelopment of public and private property. It should contain a listing of the amount, type, intensity and net density of existing uses of land in Tower Lakes, such as residential, commercial, and other public and private uses. It should also analyze opportunities for redevelopment of existing and potential land-use conflicts. A series of maps should show current and future land uses that indicate natural limitations for building site development, floodplains, wetlands and other environmentally sensitive lands, as well as the boundaries of areas to which services of public utilities and community facilities are currently, or will eventually be available.

Most importantly, it should provide Policy Objectives that embody the current wishes of residents, and the vision of the appointed members of governing bodies, as to the future expansion or retention of land and use within the village boundaries.

The land-use Objectives outlined in this section are intended to direct future Village Board decisions regarding the preservation, development and uses of lands within the current village limits, as well as potential annexed lands. Policy Objectives have been established in this document by members of the Plan Commission and are based upon a series of interviews with past and present trustees, the resident survey results, and the community visioning sessions.

3.2 Definitions and Understandings

3.2.1 Land-Use

Land-use covers all areas in the village as well as those areas within 1.5 miles of the legal boundaries of the Village of Tower Lakes, based upon the current 20 year Intergovernmental Boundary Agreement which ends in 2013.

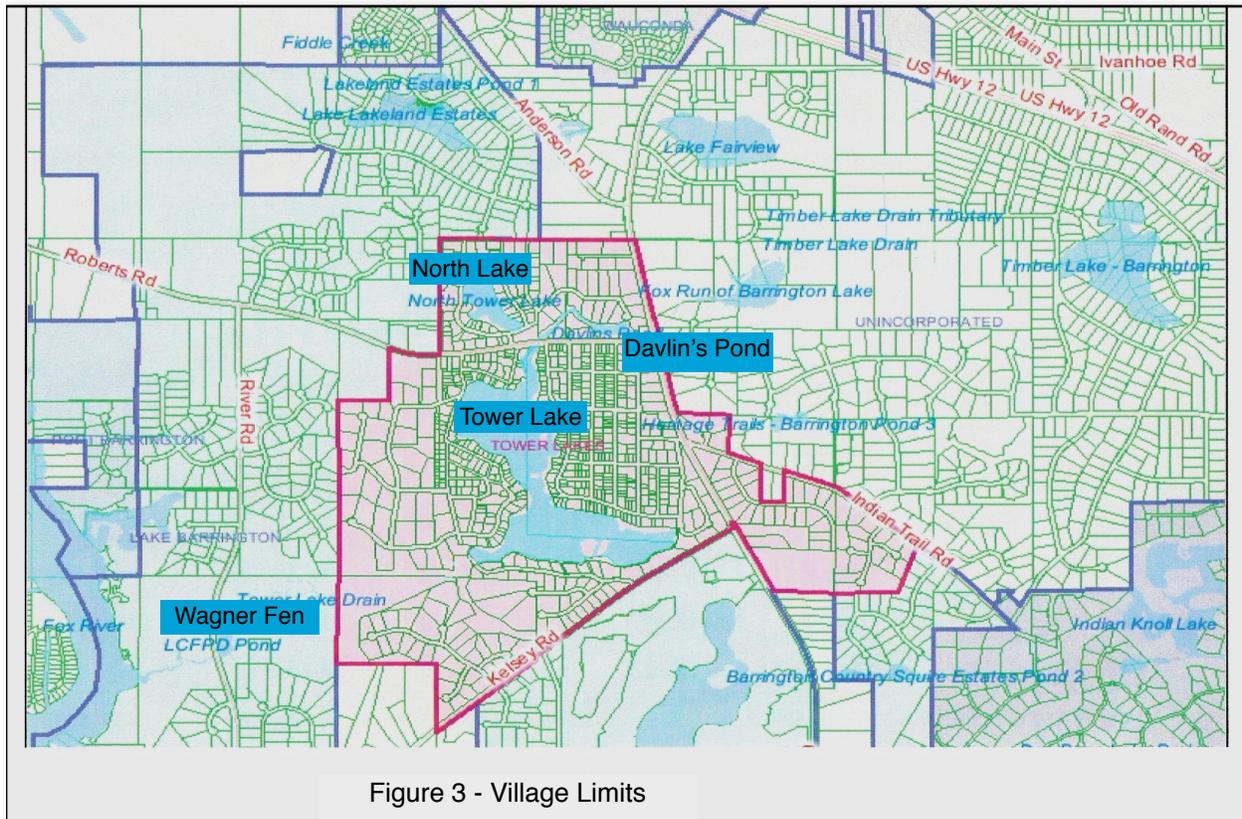


Figure 3 - Village Limits

3.2.2 Limitations on Development

The area known as the Village of Tower Lakes has evolved from a mixture of farmland, woodland and wetlands. The original development sought to convert a portion of the wetlands into a usable system of lakes and home sites. Special emphasis is to be placed on retaining Tower Lake and North Lake as the unifying focal points of the village and its community life, and on preserving the lakes and nearby marshes and floodplains as open-spaces enhancing the countryside character of the surrounding environment.

An environmental corridor is an interconnected geographic area of interdependent natural features. These features include waterways, soils, geology, topography, hydrology, vegetation and wildlife. Environmental corridors are located in the northeast section of Tower Lakes by Davlin's pond, North Lake, in the center by Tower Lake, and in the southwest by Wagner Fen which is designated an Illinois Nature Preserve. (see Fig.3) These environmental corridors extend into the planning jurisdiction surrounding the village.

3.3 Existing Conditions: Land-Use Categories and Percentages

3.3.1 Tower Lakes Area

This area encompasses all land within the existing boundaries of the village. It includes the subdivisions surrounding Tower Lake: Tower Lakes Estates, Tower Lake Park, North Lake, South Hills and West Hills as well as Marian Hills, Country Club Estates, Tower Trails, Fenview Estates, Barclay’s Woods, and Glen Geary Brae, Barrington Oaks I, and other parcels.

3.3.2 Tower Lake Drain Watershed

The Tower Lake Drain is a sub-watershed of the Lower Fox River Watershed. The Watershed includes almost all of the Village of Tower Lakes. It also includes the land which drains into Timber Lake, Lake Fairview, the wetlands and the creek West of Timber Lake called “Timber Lake Drain”, also known as Mud Creek, which flows into Tower Lake. Additionally, the watershed includes the

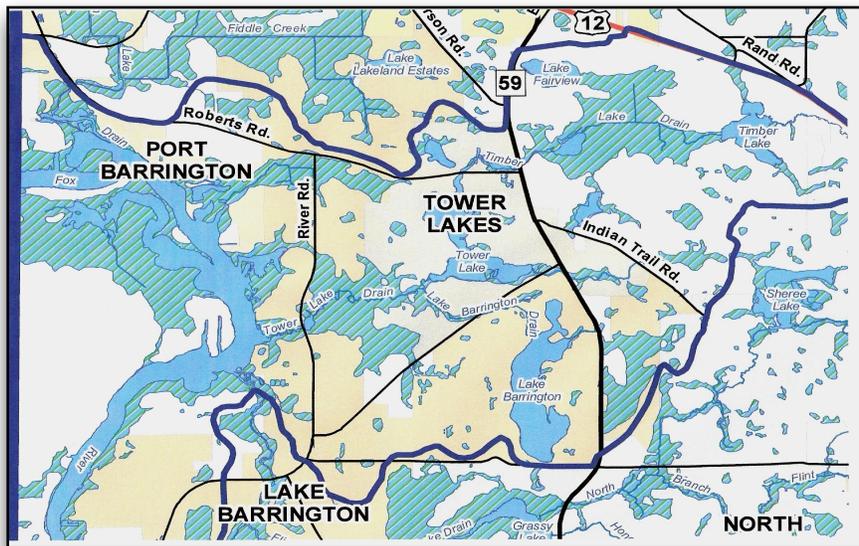


Fig. 4 Tower Lakes Drain Watershed

land draining into the lake known as Lake Barrington, the Wagner Fen, and the creek below the Tower Lake dam called “Tower Lake Drain”, which is also part of Mud Creek. Tower Lakes water quality is affected by watershed quality to the East and Northeast and the Tower Lakes community affects water quality downstream. Figure 4 shows a thick curving blue line that represents the edge of the Tower Lake Drain, or minor watershed.

3.3.3 Wagner Fen Area

The area west of Tower Lakes extends to the Fox River and is bounded to the north by Roberts Rd. and in the south by Kelsey Rd. Tower Lakes’ drainage passes through this area via the Wagner Fen, which is a state protected area managed by the Lake County Forest Preserve District and the Citizens for Conservation. Scenic topography, a path, and extensive wetlands, wooded areas and farms characterize the area. Adjacent to the river, and both sides of Roberts Road, is the Lake County Fox River Forest Preserve. Further south, on both sides of River Road is the Lake County Grassy Lake Forest Preserve, which includes part of Wagner Fen.

3.3.4 Slocum Lake Area

The area north of Tower Lakes, west of IL Route 59, and north to IL Route 176 has a mixed variety of land-use mostly consisting of residential. Included in this area are Lakeland Estates of Lake Barrington, with homes on up to two acres, and the Oak Grove subdivision in Wauconda, with homes on less than one-half acre. An auto service station exists on IL Route 59 in the vicinity of US Route 12.

3.3.5 Timber Lake Area

The area east of IL Route 59 and north of Indian Trail Road extending to US Route 12 includes unincorporated Heritage Trails, Fairview Acres, and Timberlake subdivisions, and part of Wynstone in North Barrington. Much of the area north of Indian Trail Road is developed or is being developed for residences on lots averaging 1-2 acres. In that area there are substantial floodplains and wetlands that are generally unsuitable for development. Commercial enterprises exist on Ivanhoe Road. Drainage from these areas flows into Tower Lakes via Davlin's Pond. Some also flows from North of Indian Trail Road through Country Club Estates and Barclay's Woods to the retention pond on the southwest corner of IL Route 59 and Kelsey Road and then into Tower Lake.



Fig. 5 Timber Lake Drain East

3.3.6 Lake Barrington Area

The area east of IL Route 59, south of Indian Trail Road extending to Grandview Drive and south and west of Kelsey Road extending to Miller Road. Included in this area are Barclay's Woods and Lake Barrington Shores. Drainage from east of IL Route 59 flows into Tower Lake via the detention pond on the southwest corner of IL Route 59 and Kelsey Road. Drainage from Lake Barrington flows through Fenview Estates and Wagner Fen below the Tower Lake Dam.

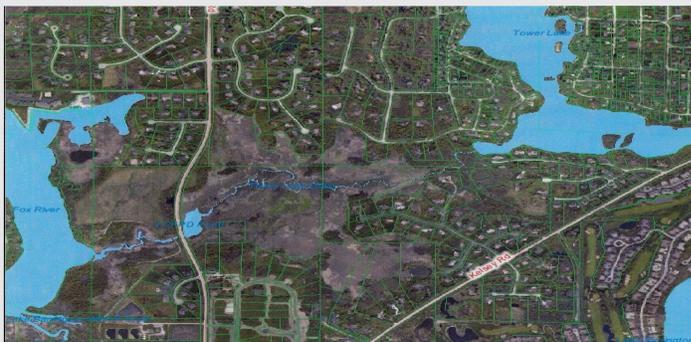


Fig. 6 Tower Lake Drain West

3.4 Zoning Requirements: Emphasis on Design Criteria; Ecological effects

3.4.1 Conservation Zoning Design

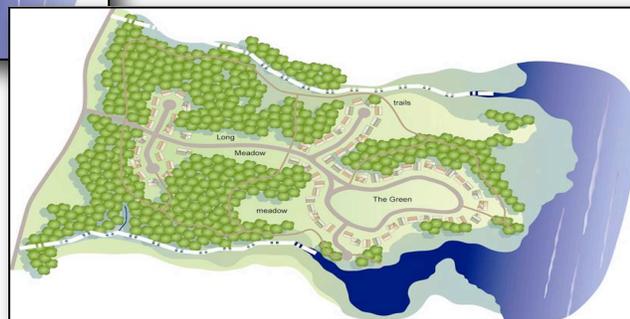
Tower Lakes strives to maintain its current zoning standards, including lot coverage, impervious surface requirements, and set backs. The Village will consider conservation design on a case by case basis.

Conservation design includes site planning and design approaches that cluster buildings and infrastructure to preserve existing natural areas and uses Best Management Practices (BMPs) as a means of utilizing the natural drainage system, reducing the volume of storm water runoff, and conserving as well as preserving water resources. The design may also include reduced energy consumption, transportation efficiency, and naturalized detention for storm water management. In 2007 the Village approved one such development (although not within village limits, it is within the intergovernmental boundary agreement jurisdiction) called Legacy Subdivision off of Indian Trail Road.



Fig. 7 Traditional Subdivision Design

Fig. 8 Conservation Zoning Design



Essentially, conservation design preserves some natural areas by developing in a particular pattern that conserves ecologically significant land. Proper design typically results in reducing impervious surface area by clustering the buildings. One of the primary goals of conservation design is to create an interconnected network of permanent open space that will be kept in its natural state, thereby affording the local community a multitude of ecological and recreational benefits. Typically, around 50% of the development area in a proposed subdivision is preserved in conservation design methodology. These design features would assist in preserving the watershed quality that in turn affects Tower Lake water quality.



3.5 Impervious Design Reduction

Impervious surfaces are mainly constructed surfaces - rooftops, sidewalks, roads, and parking lots - covered by impenetrable materials such as asphalt, concrete, brick, and stone. These materials seal surfaces, repel water and prevent precipitation and meltwater from infiltrating soils. For a lake community such as Tower Lakes, the concerns also include polluted storm water runoff reaching and degrading the lake water quality.

Impervious area reduction is a set of techniques employed during site planning and development stages that minimize the amount of impervious surfaces from buildings, roadways, driveways, parking areas and sidewalks. Examples may include building a residential addition up instead of out, using permeable paving materials, reducing building setbacks and clustering buildings to reduce roadway, driveway and sidewalk area. These techniques may also be used to retrofit redevelopment sites.

A few simple ways to do this include:

- Directing downspouts to vegetated, bio-retention, or infiltration areas
- Directing flows from driveways to vegetated areas
- Directing flows into drain tiles
- Breaking up flow directions from expansive paved areas
- Encouraging sheet flow through vegetated areas
- Carefully locating impervious areas so that it drains as naturally as possible and runoff is minimized

Benefits

- Reduces the amount of runoff from developed and re-developed areas.
- Reduces pollutants and sediment in nearby waterways.
- Benefits are enhanced when combined with methods to “disconnect” impervious surfaces through the use of bio-swales, filter strips, vegetated swales, etc.

(For more detailed information on impervious surfaces, see Natural Resources Sec. 7.0)

3.6 Conservation Easement

A conservation easement is a legal mechanism where landowners can place voluntary restrictions on the future use of their land. It generally requires that a landowner sell, permanently relinquish, or donate the rights of development reserved and granted to an organization or public agency dedicated to land protection. Most conservation easements are donations from someone who wants to protect a beloved place such as a nature area or family farm. In areas around Tower Lakes’ water source to the East of Rt. 59 and also bordering wetlands, these easements can limit development (even some forms of destructive landscaping) in order to protect the watershed.

Benefits

- Preserves significant natural features from development and other disturbances
- Particularly advantageous in floodplains due to prevention of future flooding damage
- Maintains an area in natural vegetation reducing the use of fossil fuels and air pollution relative to turf landscapes



- Provides wildlife habitat
-

3.7 Low Impact Development

Low impact development, also referred to as “Better Site Design” is a decentralized approach to storm water management that uses various site design practices and pollution prevention measures to reduce the amount of storm water leaving each lot. Low impact development practices manage storm water in small, cost-effective landscape features located on-site rather than being conveyed and managed in large, costly pond facilities located at the bottom of drainage areas. The primary goal of low impact development methods is to control the quality and quantity of surface water runoff at the source using site design techniques that store, infiltrate, evaporate, and detain runoff in a manner similar to predevelopment site conditions. Simply put, low impact development is a comprehensive set of best practices aimed at managing storm water at the site level to prevent problems associate with uncontrolled drainage.

Current “end-of-pipe” storm water management practices in Tower Lakes, which focus mainly on collecting and quickly conveying storm water away from the site directly into the lake or wetland, reflect outmoded (though common) practices (see Natural Resources Sec. 7).

3.8 Evaluation of Existing Zoning and other Land-Use Policies

3.8.1 Current Land-Use

<i>Use of Land</i>	<i>Acres Used</i>	<i>% of Total Land</i>
Residential (Estate Zoning)	325	48.35%
Commercial	0	0%
Open Space	347.54	51.65%
Agricultural	0	0%
Conservation Zoning	0	0%
Affordable Housing	0	0%

Table 5 Current Land Use

3.8.2 General Land-Use Goals

The general concept is to retain, essentially unchanged, the developed portions of the community and to extend the environmental corridors into undeveloped areas, while keeping surrounding new development in conservation zoning (residential) and open space (recreational). Additional Policy Objectives include high-end commercial (professional) and Leadership in Energy and Environmental Design (LEED) certified municipal structures (see Sec. 4.1.2 for additional information on LEED).



3.8.3 Land-Use Goals

- Protect critical environmental resources, such as lakes, marshes, and vegetation, located within the community and the surrounding area
- Retain the unique semi-rural atmosphere
- Promote the preservation of open-space
- Maintain existing municipal services supported and supplemented by individual residents responsibility
- Promote the value of home properties
- Promote environment-friendly storm-water management practices
- Plant trees and maintain and enhance the urban forest

3.8.4 Annexation

Annexation is the process used by villages to increase their size through the acquisition of additional land. In most cases, the land which the village seeks to acquire is contiguous to the village's existing boundaries, but currently within a neighboring jurisdiction. Once a village annexes land, the village is required to extend public services to the citizens of an annexed area, such as providing police and fire protection and issuing appropriate licenses and permits to qualified residents.

Annexing land is one important tool for managing growth contiguous to Tower Lakes. It is important to provide for a variety of lot sizes and land uses in the Village. Annexation is a guide for efficient land-use and extending Village services in the most cost efficient manner.

Illinois state law [65 ILCS 5/11-15.1-1, et seq.] allows the corporate authorities of any municipality to enter into an annexation agreement which shall be valid and binding for a period not to exceed 20 years from the date of its execution with one or more of the owners of record of land in unincorporated territory. This land may be annexed to the municipality at the time the land is or becomes contiguous to the municipality.

This process allows both the Village and the owner of the land desiring to be annexed to determine the relationship between them and provides for the future development of the land before it is annexed. The annexation agreement provides a means for the advanced planning and negotiation that is intended to result in a more logical development of the property without burdening existing citizens with undue costs.

Property that is covered under an annexation agreement is not subject to the ordinances, control and jurisdiction of the annexing municipality until it is finally annexed. There are two common situations in which the Village will enter into an annexation agreement:



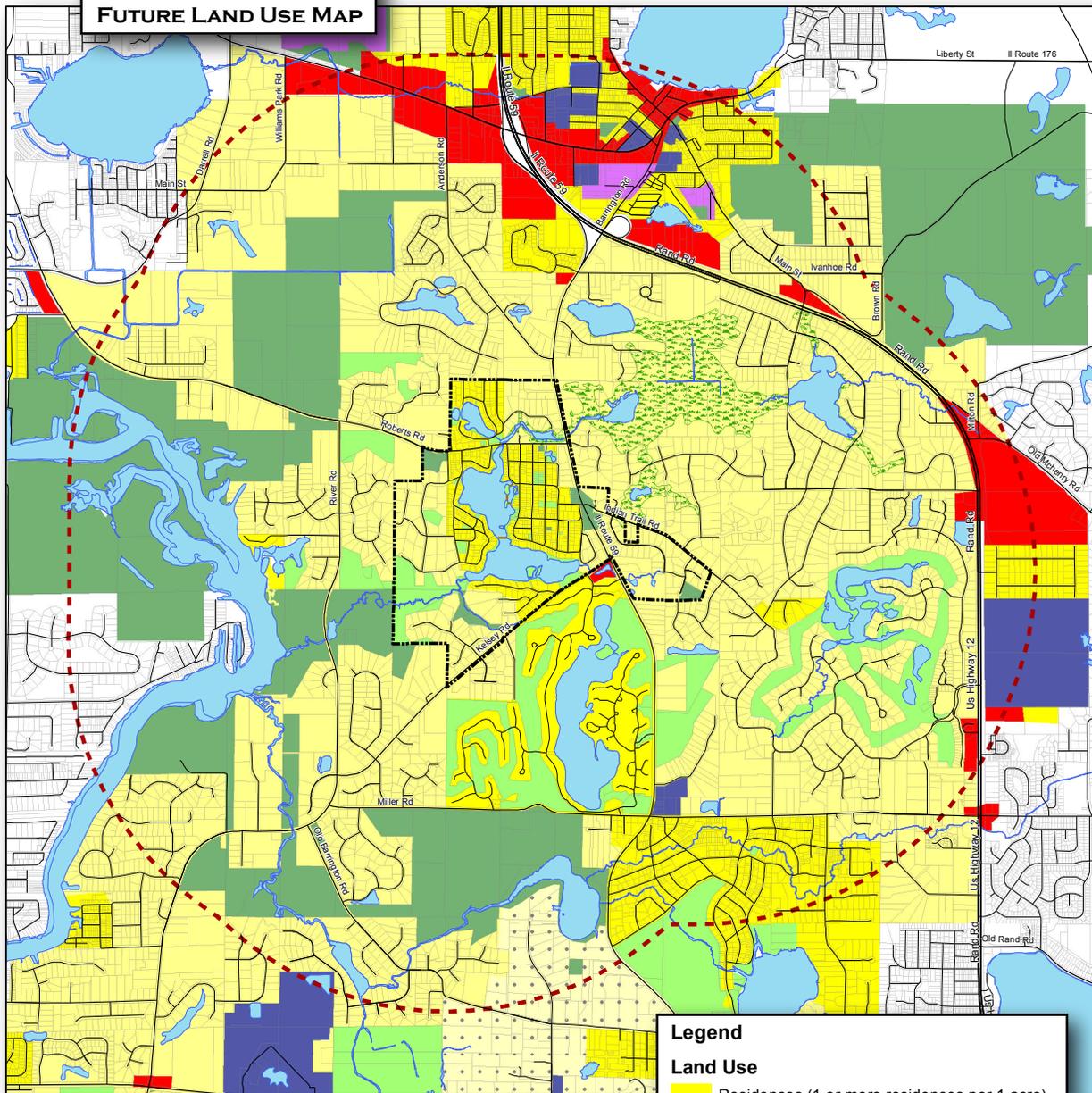
3.9 Future Land-Use

There is an estimated 51 acres of land along the Rt. 59 corridor that could potentially be annexed into the Village. In Figure 9 above, the shaded parcels are currently within the Village of Tower Lakes. Non-shaded and unincorporated parcels displaying the acreages of 11.72, 6.14, 12.5, 6.33, 9.27 and 5.1, comprise a total of 51 undeveloped acres available for annexation. In addition, there are approximately 8 acres of undeveloped parcels that are currently within the Village. The recommendation of this Comprehensive Plan for future land uses is shown on the Future Land Use Map (Figure #10) attached hereto and thereby made a part hereof.

Recommendations for future land uses are based upon two principles, that existing land uses should serve, at least in part, as a basis for future land recommendations and that guidance for specific land use decisions should also be taken from this Comprehensive Plan in general, and, in particular, from the Village's Land Use Goals (See Section 3.8.3) and from the Village's LAND USE Policy Objectives (See Section 3.14) (See also Economic Development Sec. 5.3 for further discussion on these parcels.)



FUTURE LAND USE MAP






Publish Date: October 2010
 Sources: Village of Tower Lakes, Barrington Area Geographic Information System (BAGIS), Lake County GIS, Teska & Associates
 Projection: State Plane Illinois East

Legend

Land Use

-  Residences (1 or more residences per 1 acre)
-  Estates Residences (1 residence per 1-5 acres)
-  Agricultural and Rural Estates
-  Institutional
-  Public Open Space
-  Private Open Space
-  Industrial
-  Commercial
-  Other Wetlands
-  1.5 Mile Limit from Existing Boundary
-  Tower Lakes Boundary
-  Water Features
-  Parcels

Fig. 10 Future Land Use Map



3.10 Resolving Conflicting Viewpoints

It is important that the Village Board address new development issues by first considering the recommendations and Policy Objectives (see below) of this document. However, over time conditions will change and circumstances will require additional input from the residents at large. It is recommended that the following forums be utilized.

3.11 Town Meeting

A town meeting is a meeting where the population of an entire geographic area is invited to participate in a gathering, often for a political, administrative, or legislative purpose. Traditionally, a town meeting is a time when community members come together to legislate policy and budgets for their town.

3.12 Conflict Resolution through Consensus Building

Like a town meeting, consensus building is based on the principles of local participation and ownership of decisions. The process allows various stakeholders (parties with an interest in the problem or issue) to work together to develop a mutually acceptable solution.

Ideally, the consensus reached will meet all of the relevant interests of stakeholders, who thereby come to a unanimous agreement. While everyone may not get everything they initially wanted, "consensus has been reached when everyone agrees they can live with whatever is proposed after every effort has been made to meet the interests of all stake holding parties.

3.13 Background Information Affecting Policy Objectives

For the purposes of this Comprehensive Plan, a “planning recommendation” is intended as general guidance to the governing bodies and ultimately the Village Board, to assist in the future planning and decision making. (For specific policy see Policy Objectives Sec 3.14)

3.13.1 Annexation

It is in the interest of the Village of Tower Lakes to maintain an influence within the properties defined by the Village of Tower Lakes Jurisdictional Area of the Intergovernmental Boundary Agreement. For the most part, the land surrounding the Village is not available for annexation. However, an estimated 50 acres of unincorporated lands along and East of Rt. 59 does exist. Annexations may be considered where essential to achieving Village goals and policies. Continued membership in BACOG, involvement in regional planning efforts, and enhanced intergovernmental relationships (see Policy Objectives) with appropriate entities are essential for the Village’s future.

3.13.2 Sensitive Areas Preservation

All flood plains and wetlands should be withheld from development and maintained in a natural condition (see Policy Objectives). Designating them as conservation areas or easements should protect wetland areas. This priority should include all lands outside the Village but still within its jurisdiction. Particular attention should be given to the lands bordering the water source for both Lakes. Restoration of native species to wetlands and conservancy areas and a path through them should be studied.



3.13.3 Bordering Lands-General

It is recommended that all future development within the Tower Lakes area of the Intergovernmental Boundary Agreement be zoned residential. Development of flood plains and wetlands should be prohibited and remain as private or public conservation areas. This is consistent with Lake County Zoning of un-subdivided land and BACOG land-use planning.

3.13.4 Storm Water Runoff Reduction

The Village should continue discussions with the homeowner associations regarding the joint effort to protect the water quality of the lakes, wetlands, groundwater, as well as the overall watershed. The promotion and enforcement of ordinances such as lot coverage/impervious area maximums (see Sec. 7.5.5), fertilizer ban to reduce phosphorus in the lakes (acceptable to a majority of residents), and low impact development (see Sec. 7.5.7) to this end is strongly recommended. The Village and the homeowner associations should work together to educate residents and encourage the use of rain barrels and rain gardens to reduce the amount of polluted storm water runoff into the lakes. There is the potential to acquire rain barrels in bulk from the Lake County Forest Preserve and resale to the community residents (See Sec. 7 Natural Resources).

3.13.5 Agriculture/Community Garden

The Village, in cooperation with home owners associations within the Village, should continue to encourage a community vegetable and flower gardens. These gardens would develop community pride, social interaction, locally grown produce, projects for school children, revenue producing market, as well as good exercise for the community's senior citizens (See Sec. 7 Natural Resources).



3.14 Policy Objectives

For the purposes of this Comprehensive Plan “Policy Objectives” are based on careful study, and collaboration with all stakeholders has been established to determine future village policy direction. When exploring or implementing the following objectives, the Village should utilize and promote the use of sustainable practices and planning (see Sec 1.3 for a definition of sustainable practices).

- I. The Village should take active steps, if it’s a benefit to the Village, to acquire through direct purchase or annexation, any lands available that are contiguous to Tower Lakes borders.
- II. Any proposed development of lands that cannot be made contiguous by such means, and fall within the 1.5 mile buffer jurisdiction as outlined in the Intergovernmental Boundary Agreement (See Sec. 3.2.1), should receive a full and complete inquiry by the Plan Commission, a public hearing, and be accountable to any requirements dictated by the Village Board. This process needs to be a thorough investigation and be based on the environmental, economic and social concerns outlined in this Comprehensive Plan.
- III. Any additional lands annexed by the Village should be zoned for residential use. Consideration will be made for open space, new municipal/public space, or special use for high end professional commercial development or conservation design on a case by case basis.
- IV. Any future zoning decisions must consider the financial condition of the Village, and in doing so should consider alternative zoning that encourages proven revenue generating potential.
- V. Any land-use decisions regarding purchase or annexation and a subsequent zoning declaration must be accompanied by a professional analysis detailing the benefits to the Village. A public hearing with legitimate public participation and input through consensus building is required.



- VI. The Intergovernmental Boundary Agreement should be extended beyond the current expiration date in 2013. Negotiations should continue with all communities involved. Regular meetings should be encouraged to discuss among IBA communities regarding any new developments in planning. The Tower Lakes governmental bodies should understand, well ahead of any developer's inquiry, the goals and objectives of the neighboring community.
- VII. The Village should pursue the redevelopment of the current Village Hall. The Village buildings should include space for daily governmental duties, board and committee meetings, police department facilities, and a community hall for varied uses. The Village Hall should be rebuilt as an energy efficient model for environmentally sensitive governmental buildings.
- VIII. The Village should address the protection of the "Timber Lake Drain" (see Fig. 4 & 5) within the controls allocated by the Intergovernmental boundary agreement. These protections should include as a minimum: strict zoning with conservation easements, 100 foot natural area setbacks, strict septic guidelines, and erosion control guidelines.
- IX. In addition, all future development in these sensitive areas should have an impact study completed and approved by the Lake County Storm Water Management Commission.

4. FACILITIES, UTILITIES AND COMMUNITY SERVICES

This section attempts to identify existing community assets quantitatively, their condition and maintenance schedules currently, and provides a general assessment of community services. The future needs as articulated by trustees, and researched by the Plan Commission are also identified.

In addition, each service and related issues in this section contain *Alternatives* to the current procedure or process. These alternatives are intended to start conversations and possible implementation of these ideas to improve the processes and make them more sustainable in the future.

A community needs a wide variety of utilities, facilities, and community services to ensure that health and safety needs are met, and to maintain a high quality of life. The intent of this plan element is to provide an inventory of community facilities and services currently offered in the Village of Tower Lakes, and to identify utilities and facilities needed to accommodate the Village's future population and needs. The Utility and Facilities Plan is intended to identify the public services that should be expanded or rehabilitated and to identify new services that should be provided to meet the community's needs.

- **Community Facilities** – public buildings and grounds that provide space, services or programs that are intended to improve the quality of life, safety, or general welfare of community residents.
- **Utilities/Infrastructure** – the physical systems, networks and/or equipment necessary to provide for and support basic human needs, including systems, networks and equipment.
- **Community Services** – the basic and extended services the Village provides to residents beyond the basic governmental structure which includes the Village Board, Planning Commission, Zoning Board and Building Inspector.

4.1 Village Hall

The Village of Tower Lakes had operated from a number of different locations until 1995 when it purchased the current location in what was once a realtor's office adjacent to the east entrance. Here, most all government work is completed, including but not limited to the daily work of the President, Village Clerk, Village Board, Plan Commission and Zoning Board of Appeals. In addition, the Village Hall is occupied by the Tower Lakes Police Department.



Fig. 11 Tower Lakes Village Hall



There is a fair amount of concern with the structure's shortcomings, including:

- Its overall condition and costs of repair
The building needs structural repairs beyond economical sensibility. The shortcomings include HVAC, leaking roof, electrical upgrades, poor plumbing, siding, structural support for second floor, doors, windows.
- Storage Space
Currently, because of lack of space, the Village rents off site commercial storage.
- Limited space for public meetings & village offices
Any public meetings for more than forty-nine people are held at facilities outside the Village. The building layout is not conducive to village functions or the effective operation of Village business.
- ADA compliance
Only the first floor of the building is ADA compliant. It is cost prohibitive to make the second floor compliant.
- Parking
Parking space is insufficient for any medium scale public meeting or community event.
- Inadequate police department space and facilities
The police department does not have a reception space, holding facility, inadequate garage space for vehicles and equipment, lack of record storage and office space.

4.1.1 Village Hall Future Needs

In addition to solving the current issues, a new multi-use building in the Village could include several other potential opportunities such as a Public Library Branch, post office, a technology center and recreation facilities.

In addition, any modifications, changes or re-building should be done in an environmentally sensitive and responsible fashion (See LEED certification benefits Sec. 4.1.2) provided that it is economically feasible.

All current building methods and technologies should be investigated to ensure a cost effective and energy efficient facility and reflect the community's commitment to promote sustainability and reduce the environmental foot print.

Architecture must be aesthetically in line with community character, so as to contribute positive property values, community identity, and pride

In addition, the inclusion of revenue generating space should be considered, if cost effective, to the Village.



4.1.2 Sustainable Development

Currently, there are ample incentives through both state and federal programs encouraging the construction of environmentally sensitive municipal public buildings. These incentives, including matching funds, grants, tax breaks, tax credits, and low interest loans, are based upon attaining LEED certification.

In the United States and in a number of other countries around the world, LEED certification is the recognized standard for measuring building sustainability. Achieving LEED certification is one way to demonstrate that the building project is truly "green."

The LEED green building rating system -- developed and administered by the U.S. Green Building Council, a Washington D.C.-based, nonprofit coalition of building industry leaders -- is designed to promote design and construction practices that increase profitability while reducing the negative environmental impacts of buildings and improving occupant health and well-being.

The upfront costs of a green building are marginally higher than conventional building. However, the reduced operating costs associated with high efficiency mechanicals, site development conditions conducive to passive design savings, and long life materials, add a life cycle "value" over time. In addition, many residents see the intrinsic value in creating a model municipal building, and are able to visualize the community value in a facility that can offer multiple uses to the residents.

4.2 Roads and Right of Way

4.2.1 Utilities/Infrastructure: Replacement of Roads

The Village owns and maintains approximately 11.6 miles of paved roads. The age of the pavement on the various streets is shown in the pavement age map (see Fig. 12). The current repavement plan is to repave streets once they get to a state of "poor" condition by engineer's rating. Ideally, from a best cost effectiveness view, this would be before they are visibly crumbling across the entire surface. The average surface life used to set the savings rate is 10-15 years, but in reality there are many variables that affect the surface life so there are wide differences in actual results. Those variables include quality of base, softness/ stability of subsurface, freeze-thaw frequency, traffic weight, quality of material used for surfacing, and others. Therefore, the Village will not expect to resurface roads in order of pavement age.

Wherever applicable, the Village is currently using a new "greener" hot-patch methodology on the village roadways. This method, piloted in 2008, partially melts the pavement prior to spraying on the fill material, and then adding stone chips which are lightly rolled into the composite. The excess chips will wash away, providing a durable pavement patch costing half of traditional asphalt patching in both man hours and overall cost. The method is considered environmentally sensitive because the amount of petroleum product and the amount of energy used is greatly reduced, and the hazardous waste generated is nearly eliminated by not removing most of the old broken asphalt. The life of these patches has proven to meet or exceed the old method.



4.2.2 Cost Efficiency

Tower Lakes generally receives lower bids for larger jobs, so the cost-efficient strategy in the last decade or two has been to accumulate resurfacing projects into batches of several miles and do one project every few years rather than small annual projects. In the last 2-3 years, Cuba Township Road District has offered to organize larger batches of pavement projects in alliances between Tower Lakes, Lake Barrington, North Barrington, Barrington Hills, and unincorporated Cuba Township. This allows the Village to plan for more frequent smaller resurfacing projects, while maintaining the cost effectiveness of larger projects. Another variable that has affected the timing of resurfacing plans in recent years has been the spike in labor costs (driven by state legislation) combined with the wild fluctuations in asphalt prices (i.e. oil).

4.2.3 Village Road Maintenance Service Providers

For routine annual maintenance of the roads, The Village entered a long term intergovernmental agreement with Cuba Township Road District (CTRD) to do most of the work. The village pays a flat monthly fee, which escalates per inflation yearly. There are huge efficiencies with this method over a private contractor; as they

- Do not operate for profit
- Have all the necessary equipment, infrastructure, maintenance barns, and training, needed for the unincorporated areas and can expand to cover us at low incremental cost,
- Are conversant with State regulations, which is increasingly important and are managed by an elected official who thus needs to be responsive to the citizens.

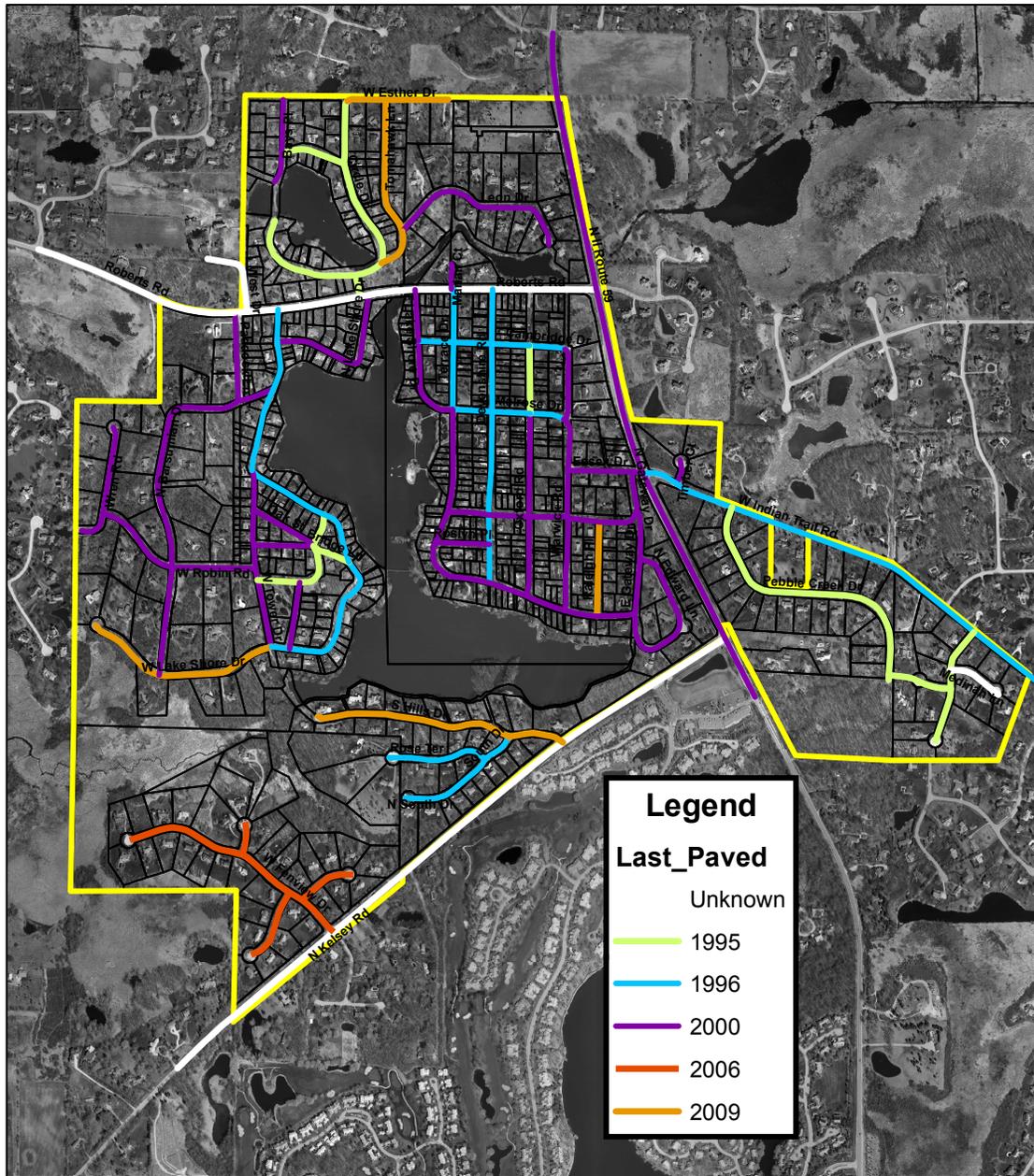
Other maintenance by CTRD involves patching of cracks and potholes (usually done in batches to control cost), shoulder re-graveling, sign upkeep, annual street sweeping, storm debris removal, brush trimming, and other miscellaneous work. Tower Lakes pays only for materials (salt, gravel, blacktop, signs), not labor, which is covered by governmental agreement. The patching is intended to extend the life of the pavement surface. Sometimes it is saw-cut and rebuilt.

4.2.4 Roads Maintained by Others

Three roads inside the Village of Tower Lakes boundaries are maintained by governments other than the Village and are not included in the above total mileage. These are IL Rte 59, owned by the State and maintained by IDOT, and Kelsey & Roberts Roads, both owned and maintained by Lake County.



Village of Tower Lakes 2009 Pavement Age Map



Sources of portions of this data are the Barrington Area Geographic Information System (BAGIS), developed through the Barrington Area Council of Governments (BACOG), and Lake, Cook, McHenry and Kane Counties. Other sources of the data are the Village of []. Data published January, 2005.



Map Printed [DATE]

00.03507 0.14 Miles
[Scale bar]

Fig. 12



4.2.5 Snow and Ice Removal

The largest annual road activity is snow and ice control. CTRD employees go to annual training and compare notes on strategies with neighboring states. Tactics and equipment are upgraded annually and we now have computer control of routes, salt and brine dumps and a wide arsenal of materials all aimed at minimizing cost and environment impact while balancing that with keeping roads as safe as possible. In 2008 Tower Lakes went to two private weather services that provide mile by mile info and we started an e-mail alert network to keep local officials in the loop with plans 24-7. Cuba Township also started a web-based system where citizens can self-enter messages which can be sent directly to Cuba Township dispatch.

4.2.6 Road Salt Reduction

The effective use of salt on roads to assist in ice and snow removal has been a practice in Illinois for decades. Originally, residents saw the negative effect that salt had on their automobiles, but recently, effects of salt on the natural resources and infrastructure have also become a concern to residents. Residents in Tower Lakes are curious if there are alternatives that might reduce or eliminate this use of salt, without adding risk to travel on the roadways.

One way to address the issue of destruction of infrastructure and wetlands due to salt use is to adopt practices that reduce or eliminate altogether the use of those deicing materials (i.e. road salt) that cause corrosion. This is the most comprehensive and environmentally sound solution and can be accomplished by adopting advanced winter maintenance strategies that make more efficient use of deicing materials and by using alternative deicing compounds such as Calcium Magnesium Acetate which are harmless to the environment and do not corrode vehicles.

Municipalities all over the country are adopting new winter maintenance techniques, such as salt pre-wetting and road weather monitoring devices, such as CTRD is now utilizing. As the temperature of pavement decreases, it takes more salt to melt the ice; likewise as the temperature rises, less salt should be used. Mobile sensing devices can be mounted on the salt truck to alert the driver when road temperatures are optimal for salt use. This technology, used in combination with properly calibrated spreaders, allows operators to distribute salt more efficiently, which can lead to substantial reductions in material cost and water quality impact. Special consideration should be given when applying salt to roadways adjacent to the lake.

4.2.7 Overweight Trucks on Village Roads

The Village Board is currently exploring a streamlined and stronger truck overweight ordinance that would be part of the building permit process, to better address wear and tear from construction as well as address enforcement issues and simplify the way residents/ contractors deal with the process.



4.2.8 Roads and ROW Future Needs

Future intergovernmental agreements should be continued to provide the Village cost effective service, the latest technology and modernized material and construction methods. All current services should be maintained.

Future attention should be paid to the effects of over-weight vehicles on the roads and infrastructure, with permit fee increases a strong possibility.

Residents would like to see improved response times for snow removal and icy road treatments.

4.3 Storm Water Management (SWM)

4.3.1 Oversight and Professional Review

The Village works closely with the Lake County Storm Water Management Commission (LCSMC) and consults with Cuba Township. A consulting engineering firm is retained as necessary to serve as Watershed Development Enforcement Officer for the Village.

4.3.2 Storm Water Management Assets

The storm water management system in Tower Lakes utilizes 109 catch basins, 58 culverts running under roads, 25,760 Feet (ft) of buried culvert, 24 egress points where the water meets one of the lakes, and several miles of grassy swales.

4.3.3 Asset Lifespan and Materials

All of these assets are between 1 and 80 years old. Tower Lakes is systematically repairing/replacing failing equipment with higher grade and longer lasting materials. For example, a steel culvert pipe has a useful life expectancy of 20 years while the same size PVC pipe will last at least twice as long.

The materials the culverts are made from include: approximately 7,300 ft. of plastic (not PVC), 11,400 ft. of steel pipe, approximately 1,200 ft. of clay pipe, approximately 1,800 ft. of cement pipe, and 4,100 ft. of PVC. Approximately 2,000 ft. of culverts are inoperable or abandoned. They range in size from 5 inches to 36 inches in diameter.

The catch basins are either stacked brick or pre-cast concrete. The 11 stacked brick constructed catch basins we have are at least 50 years old and pre-date the incorporation of Tower lakes in 1966. The 98 concrete catch basins have been installed more recently.

4.3.4 Asset Improvement and Repair

Tower Lakes has traditionally had SWM budgets that are stretched thin to service the maintenance of the system. In 2007 to 2009 Tower Lakes has increased the budget amount to handle the service and take on one or two larger, preventive projects geared to improve and update the system. The age of the system is causing the Village to spend most of the budget on



fixing failing elements of the SWM system, however, when they are improved; the useful life is 40+ years.

4.4 Alternative: Low Impact Development (LID)

Low impact development, also referred to as “Better Site Design” is a decentralized approach to storm water management that uses various site design practices and pollution prevention measures to reduce the amount of storm water leaving each lot. Low impact development practices manage storm water in small, cost-effective landscape features located on-site rather than being conveyed and managed in large, costly pond facilities located at the bottom of drainage areas. The primary goal of low impact development methods is to control the quality and quantity of surface water runoff at the source using site design techniques that store, infiltrate, evaporate, and detain runoff in a manner similar to predevelopment site conditions. Simply put, low impact development is a comprehensive set of best practices aimed at managing storm water at the site level to prevent problems associate with uncontrolled drainage.

Current “end-of-pipe” storm water management practices in the Village of Tower Lakes, which focus mainly on collecting and quickly conveying storm water away from the site directly into the lake, reflect outmoded (though common) practices. Low impact development practices reflect the latest thinking in storm water management, using various small-scale controls distributed throughout the site to discharge storm water at volume and flow rates that approximate the receiving waterway’s predevelopment base flows, resulting in fewer negative impacts on property.

The use of low impact development practices offers both economical and environmental benefits. Low impact development measures result in less disturbance of the development area, conservation of natural features and can be less cost intensive than traditional storm water control mechanisms. Cost savings for control mechanisms are not only in up front construction costs, but also for long-term maintenance and life cycle cost considerations as well. (See also Natural Resources, Sec 7).

4.4.1 Alternative: Grassy Swales

An alternative to the cost of replacing existing sewer pipe, while reducing the amount of storm water flow that actually reaches the shoreline of the lake is the construction of grassy swales. Grassy swales (minor channels that are lined with grass) are used as a method of transporting water from a developed area across undeveloped areas when minimizing the effects of runoff. Their ability to remove pollutants can be increased with modifications such as turf reinforcement matting, small check dams, and a shallow underground treatment layer of soil beneath the base of the swale. Turf reinforcements allow the ditches to carry higher flows without eroding as compared to traditional grassy swales. They also are a more aesthetically pleasing and a less expensive alternative to stabilizing the slopes than using rip-rap or concrete. The mat gives the grass additional support, holding it in place during heavy storms. The use of mats now allow for grass swales in some steeply sloped or high flow areas that once were unable to support the growth of grass.

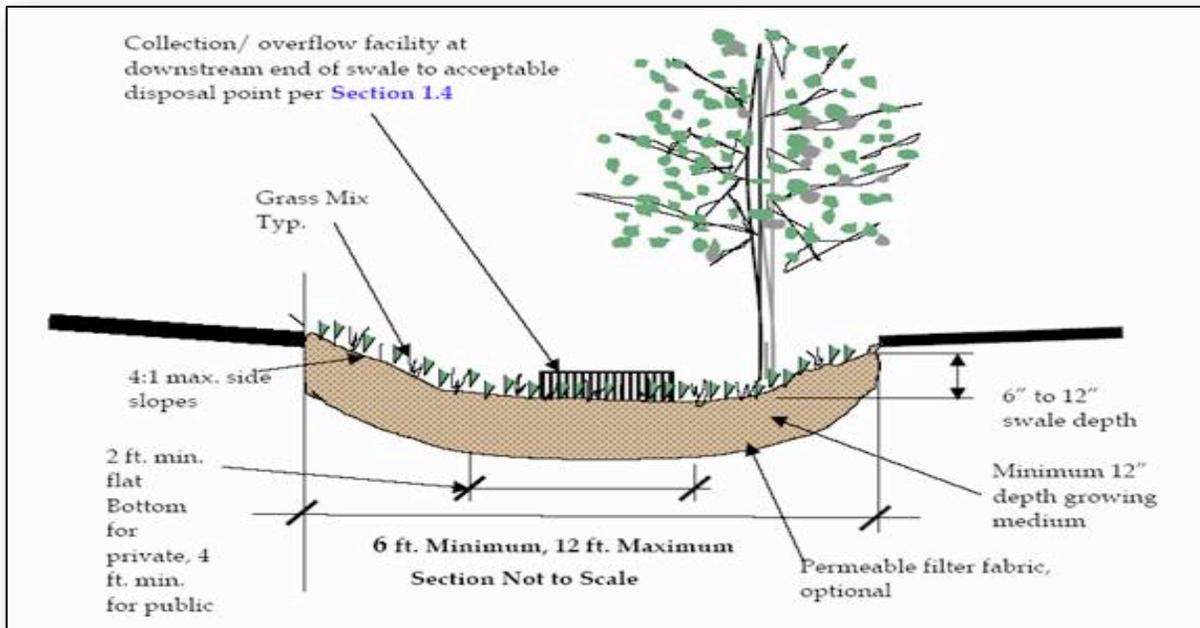


Fig. 13 Grassy Swale Detail

4.4.2 Storm Water Management Future Needs

Continued use of higher grade longer lasting materials, such as PVC pipe, should be the standard for all replaced and repaired storm water structures. The standard should be to repair for a 40-year plus life span for the structures.

Residents feel that storm water drainage issues need to be a top priority for the Village budget and monies should be allocated accordingly.

A review of the current ordinances that effect storm water runoff should be conducted with review every 5 years to assess if current construction codes, standards and current building activity is negatively impacting infrastructure, property or harming the lake.

Storm water trustees and committee members must remain knowledgeable with the current issues facing the Village and obtain continuing education regarding current Storm Water practices and Federal EPA regulations (National Pollutant Discharge Elimination Systems, Phase II). Educated interaction with the county agency, as well as the contracted consultant assisting the village is essential.



4.5 Village Property Monument/Gates, Lighting Systems, Gardens and Green Space

4.5.1 Village Property Maintenance

Generally speaking, all the paved roads in the Village of Tower Lakes are within the public right-of-way (ROW) corridors, which vary from 60-80 ft wide. There are areas within the Village that the roads are not centered and may be located outside of the ROW, due to the original roadways being paved around various trees, in order to preserve them. On average the paved surfaces make up only one third of the road real estate. This means the Village also owns hundreds of trees and many miles of lawns. The public parts of lawns are mostly maintained by adjacent property owners. For the rest, the Village contracts with a private landscaping company for mowing and weeding.

4.5.2 Other Village Assets

Assets in the road right of way other than pavement includes signs and poles, various retaining walls, a few curbs, 8 stone entry monuments with associated light systems, a few electric overhead lights, and several gas lights. All the gas lights, with the exception of those in Fenview Estates, which pays for their own lighting and a handful of others have been decommissioned to save costs, which had become very high.

4.5.3 Tree Trimming and Removal

The Village uses various contractors for removal of Village owned dead or diseased trees and broken branches. This has become a considerable expense as result of the Dutch elm disease recently. The Village is planning to establish a GIS-based database to track tree work done and planned, and have begun diverting more of the budget to safety pruning. Under a State grant, the Village recently had a complete survey done of all public trees and their conditions and obtained recommendations.

The Village also has a reforestation program, both for public trees in the ROW and a cost-sharing program to encourage tree planting on private property. An appointed commission oversees the reforestation program.

4.5.4 Green Space Alternative: Community Garden

Like traditional public parks, most community gardens are open to the public, and provide green space in common areas, along with opportunities for social gatherings, beautification, education and recreation. However, in a key difference, community gardens are managed and maintained with the active participation of the gardeners themselves, rather than tended by the Village contracted landscaper.

A second difference is food production: Unlike parks, where plantings are ornamental (or more recently ecological), community gardens often encourage food production by providing gardeners a place to grow fruits and vegetables. To facilitate this, a community garden may be



divided into individual plots or tended in a communal fashion, depending on the size and quality of a garden and the members involved.

Lake Barrington Shores currently leases some farm land off River Road and has constructed a community garden. Individual plots are rented by the residents and the association covers the expense for an early season tilling and the water.

4.5.5 Monuments/Gates, Lighting Systems, and Landscaping

The Village should continue to encourage property owners adjacent to the ROW to maintain these areas as it contributes to the overall look and feel of the community. For areas currently maintained by professional services, a continued shared vendor relationship with TLIA is advisable.

Yearly attempts for Federal and State grants should be pursued to assist in the increasing cost of replacement and repair of the roads. In addition, grants should also be pursued for the Village reforestation program to assist in fighting tree disease, such as Dutch elm, and for the purpose of offsetting the cost of emergency tree removal due to disease and weather.

4.6 The Tower Lakes Water Company

4.6.1 Existing System

The Village owns its water supply, treatment and storage. Since the purchase in 1995, the Village completed a large upgrade which included a 550 gpm (gallon per minute) deep well, a 250,000 gallon in ground storage tank, 8500 feet of water main, and provisions for an electrical backup system so pressure will not be threatened during a power outage.

The system is operated and maintained under contract with a licensed operator. There are two interconnected wells, storage, treatment and testing facilities, and a distribution system. Properties within newly annexed areas are encouraged to connect with the water system if feasible. A few Village homes, as well as most properties in contiguous unincorporated areas, are served by individual on-site wells.

4.6.2 Recent Upgrades Completed

During the summer of 2008, the Village completed a new water main system map, identifying all water mains, valves and hydrants. The new map will help with the location of valves for isolating water main breaks. This will be of assistance for a timely conduct of repairs.

In the fall of 2008, the Village rehabilitated Well 1 with a new upgraded 200 gpm well pump. This new backup pump will maintain water pressure, for a very limited period, at a limited daily rate of usage, in the event that the Well 5 facility requires maintenance or repairs.

The Village is exploring the use of new upgraded touchpad meters.

The generator at Well 5 Pump House is now programmed to exercise weekly and tied into the phone alarm system. Well 1 has been repaired to exercise weekly and automatically operate should the deep well sited at Well 5 Pump House fail to function.

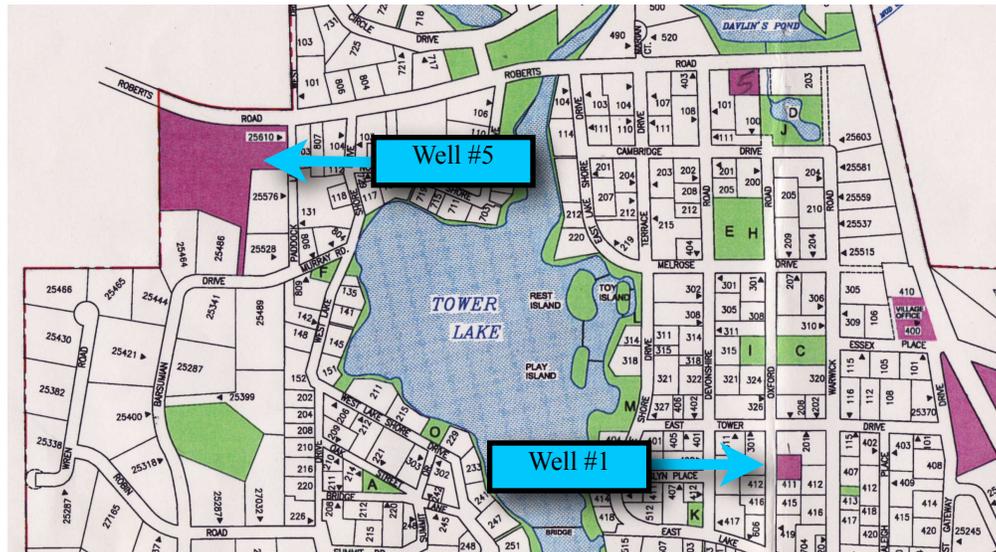


Figure 14 Pump/Well Locations

4.6.3 Future Planning and Improvements

In January 2009, Manhard Engineering completed a study of water mains, valves, and hydrants that needed to be repaired and/or replaced. It was this study, along with a previous analysis done by Devery Engineering in 2007 that has provided the Village Board with a complete evaluation of the water system. This evaluation will be the basis for the Plan Commission to formulate Policy Objectives for the Comprehensive Plan, and the water system infrastructure plans in the future.

4.6.4 Future Costs

A 2007 report by Devery Engineering recommends spending \$2.3 million dollars to update the system over the next three years. (see Table 6)³

³ example from Devery Engineering Study, 2007



A. Water Distribution	Cost
1. Installation of flushing hydrants	\$20,000.00
2. Installation of Pebble Creek/Stonehenge loop to Kelsey Rd.	\$683,200.00
3. Water main replacement of all pipes less than 3 inches	\$1,120,875.00
B. Water Supply Improvements	
1. Remove/replace pumps and develop Wells #1 and #4 to determine useful life of each well	\$20,000.00
2. Construct new well if rehabilitation of well #1 and #4 is not feasible	325,000.00
C. Water Storage Improvements	
1. Rehabilitate/restore existing hydropneumatic tank at Well #4	\$66,650.00
D. Miscellaneous System	
1. Install SCADA system for operation and control of system	\$75,000.00
2. Contact Lake Barrington Shores and/or Village of Wauconda to discuss the feasibility of constructing an emergency water main interconnection	
TOTAL COST OF WATER SUPPLY IMPROVEMENTS	\$2,310,725.00

Table 6 Water System Improvement Cost



The plan above, (Fig 15) although only an example, outlines the highest priority water system improvements as referenced above, identifying the areas where existing 2 ½” mains will need to be upgraded to 8”, according to the 2007 Devery Water System Report.⁴

4.6.5 Future Needs and Federal Funding

Current and future projects include the replacement of all undersized 2” and 2 ½” pipes in the system and upgrading them to 8” pipes. This is first on the list due to the age of these pipes and concern with repeated breaks in the pipes. The Village also will need to fix existing hydrants and valves, upgrade main diameters from Well 1, and rehabilitate the storage tank at Well House 3. These projects were determined by an engineering consultant to be most critical to the system at this time.

Should Tower Lakes receive grant/loan money, the Village will begin and complete these projects. In the event that the Village does not receive grant/loan money, the Village has the engineering and survey plans to slowly pursue these projects as capital improvements in the next five years.

Any infrastructure asset depreciates over time and requires ongoing investments in maintenance and periodic replacement/renovation. Failure to set aside dollars for replacement/renovation during the operating life of a system results in the need to borrow large sums of money which will be repaid by the next generation of users. Prudent municipalities establish rate structures that provide sufficient revenue to cover not only current operations and maintenance, but at least a portion of future replacement costs as well. At least 15-20% of future replacement costs should continue to be set aside to cushion future fiscal impacts and to provide a contingency fund for unplanned repairs and replacements. Revenue set aside to cover future replacement costs should be placed in interest bearing instruments or accounts with the interest reinvested or available for use as needed in the short term at the discretion of the community.

Capital improvement budgeting starts with identifying the components of the system that will require renewal or replacement (see above), the number of useful years of service remaining, and an estimate of the cost to renew or replace. Divide the estimated replacement cost by the number of years of remaining life to determine the amount that should be set aside each year. Add these amounts together to determine the annual capital reserve. An annual inflation factor should be incorporated into the estimated replacement cost. If the budget will not support capital reserve requirements, determine the gap and plan for rate increases and/or increasing debt over time. Debt payments should be factored into capital reserves.

⁴ Devery Engineering Study, 2007



4.7 Other Public Utilities

Current services are provided by:

Electric : ComEd

Gas : Nicor

Phone : Comcast and AT&T

Cable/Technology : Comcast and AT&T

4.7.1 Telecommunications

The internet is an ever increasing factor in the personal and business lives of Americans. Modern communication requires that people are connected. The internet is increasingly used for personal communications, business interactions, financial transactions, as an entertainment resource and a provider of on-line shopping opportunities. All aspects of the internet have grown exponentially with no end in sight for the economic potential and growth opportunities for communities. Realizing that state-of-the-art telecommunications is to this century what electricity and phones were to the last, it becomes ever more vital for the Village to be connected and at the forefront of available technology.

To better meet the growing demand for reliable, high speed connection for telecommunications, data and entertainment the Village must become and remain up to date with telecommunications technology and its ever increasing influence on people as they consider Tower Lakes for their home.

4.8 Community Services

4.8.1 Garbage/Recycling

Recycling is the term used to describe an alternative form of getting rid of used materials. Instead of putting used materials in a landfill, it is processed and made into new items. Through recycling it is possible to reduce the amount of waste going into landfills and it also helps to bring prices down on items that are made from using recycled waste. Recycling has expanded and grown to allow for everything from paper to plastic to batteries to be recycled and made into something useful again. Reduce, Recycle, and Reuse should be a strong focus in Tower Lakes.

The Village provides weekly garbage collection and waste recycling via a contract provider. Yard waste pick-up is available for an extra fee. Tower Lakes is a member of SWALCO (Solid Waste Agency of Lake County). SWALCO negotiates rates for community members, provides public information and education on waste disposal and recycling issues, develops plans for landfill management, and conducts several household hazardous waste collection events throughout the year. All residents are encouraged to participate in the recycling program. The Village has in the past and remains eligible to receive a rebate based on the amount collected.



4.8.2 Alternatives: Community and/or Individual Composting

Municipal composting programs are sprouting up everywhere, and for good reason: the U.S. Environmental Protection Agency estimates that nearly 25 percent of solid waste in America comes from yard trimmings and food scraps (USEPA).

The Village should encourage residents to establish a personal composting facility in which yard and food waste is collected, processed and then used by individual residents. This program would be a benefit to home gardeners by providing a high-quality soil-enhancer to make their trees, flowers, vegetable gardens, and shrubbery flourish.

The Village can educate residents on the need and benefits of composting. This potential program, like many others considered, need to be coordinated with the homeowners associations within the Village. (Also see Leaf Burning in the Natural Resources Sec. 7)

4.8.3 Garbage/Recycling Future Needs

- Village should maintain cost effective service of weekly garbage collection
- Attempts to encourage and increase recycling should be made via communication with residents about what to recycle, how to recycle and the benefits to the community and the environment
- A composting program should be encouraged in the village to reduce waste, provide residents with useful gardening compost, and provide a financial benefit to the Village

4.8.4 Schools and Library District

The entire Village of Tower Lakes is included in Barrington Unit School District 220 and the Barrington Library District. Children in Tower Lakes attend North Barrington grade school, Station and Prairie Middle Schools, and Barrington High School. There are also nearby parochial schools. The Village is within the boundaries of Harper College.

4.8.5 Mosquito Abatement

Mosquito Abatement spraying occurs in the Village on an “as-needed” basis by a licensed private vendor. The residents have displayed much interest in this service, primarily concerned with application timing, chemicals used, methods of determining area priority, public notification of spraying, and possible organic alternatives.

The Village, at the time of this writing, is providing answers to some of these concerns in the monthly newsletter.



4.8.6 Non-chemical Mosquito Control

Mosquito larvae or "wigglers" must live in still water for five or more days to complete their growth before changing into adult biting mosquitoes capable of transmitting disease. Often, the number of mosquitoes in an area can be reduced by removing sources of standing water around residences. For example, hundreds of mosquitoes can come from a single discarded tire. The Village, along with the HOA's, should inform the public how to prevent mosquito production around residences and how to prevent mosquito bites. Individuals can reduce their risk by taking these precautions:

- Get rid of old tires, tin cans, buckets, drums, bottles or any water-holding containers
- Fill in or drain low places (puddles, ruts, etc.) in the yard
- Keep drains, ditches and culverts free of weeds and trash so water will drain properly
- Keep roof gutters free of leaves and other debris
- Cover trash containers to keep out rainwater
- Repair leaky pipes and outside faucets
- Empty plastic wading pools at least once a week and store indoors when not in use
- Unused swimming pools should be drained and kept dry during the mosquito season
- Fill in tree rot holes and hollow stumps that hold water
- Change the water in birdbaths and plant pots or drip trays at least once each week
- Store boats covered or upside down, or remove rainwater weekly
- Keep grass cut short and shrubbery well trimmed around the house so adult mosquitoes will not hide there
- Make sure ornamental ponds have fish that eat mosquito larvae⁵

4.8.7 Alternative: Organic Insecticides

Pyrethrins, extracted from chrysanthemum flowers, are a group of naturally occurring compounds with excellent insecticidal activity. This insecticide was first used as a powder around 1800 and has been used to control mosquitoes since the 1880's. Pyrethrins are currently

⁵ Source: Illinois Department of Health



used in sprays, powders, mosquito coils and in truck-mounted ultra low volume (ULV) applications.

Pyrethrins are disruptive to the nerve function of insects by apparently affecting the nerve cell membrane. The action of pyrethrins can be classified as (1) knockdown, (2) paralysis, and (3) lethality. Pyrethrins act quickly affecting insects within one to a few minutes following exposure.

Natural pyrethrin insecticides are very unstable in the presence of light, moisture and air, breaking down within a few hours into non-detectable residues. No evidence of carcinogenic (cancer causing), teratogenic (birth defect causing), or mutagenic (genetic defect causing) properties have been reported.

It is applied using an ultra low volume (ULV) fogging machine, which uses less than one ounce per acre. At mosquito label rates (dictated by Federal and State law) this insecticide has a minimal affect on non-target organisms and no affect to people, pets, birds and other wildlife.⁶

4.8.8 Brush pickup

The Village provides a brush and branch pickup semi-annually, based on budget availability, to all the residents. Currently there is an agreement with Cuba Township. Brush piles stacked at the road edge are removed and chipped, which reduces costs and the need for burning.

4.9 Wastewater

The Village and contiguous unincorporated areas are serviced entirely by on-site individual septic filter systems. These systems are approved and monitored by the Lake County Health Department. Public sewer service is not likely to be extended to Tower Lakes or contiguous unincorporated areas in the foreseeable future.

4.9.1 Septic Systems

Today, most in the industry consider on-site treatment or Individual Septic Treatment Systems (ISTS) as permanent approaches to treating wastewater for release and reuse in the environment. Even though state and federal water pollution control agencies agree that on-site systems must be managed properly, the regulation of these systems is clearly fragmented among state, county, and local jurisdictions. Tower Lakes does not currently oversee septic system operation and maintenance on the over 400 systems operating within the village limits.

⁶ Source: Napa County California Mosquito Abatement

The Village of Tower Lakes should consider passing an ordinance requiring proof of an approved septic system inspection at regular intervals and at property transfers.

Onsite sewage disposal systems, when properly sited, installed, and maintained, can be a long-term effective means of wastewater treatment and disposal. However, they can negatively impact surface

waters and groundwater when they malfunction

or when they are placed too close to the groundwater table or surface waters (USEPA).

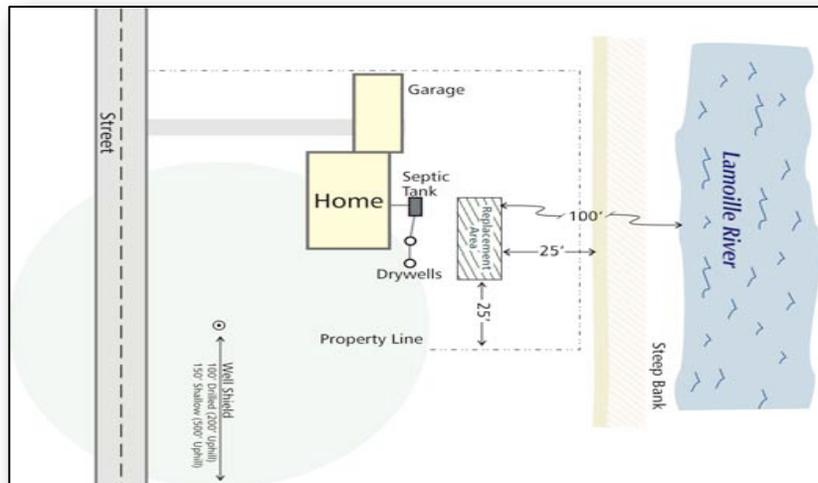


Fig. 16 Typical Septic System Detail

4.10 Police and Emergency Services

4.10.1 Facts about the Tower Lakes Police Department

The Tower Lakes Police Department (TLPD) provides protection and law enforcement services for the Village of Tower Lakes. The Tower Lakes Police Department is governed by the Laws of the State of Illinois and officers are paid by the Village. TLPD consists of part-time employees including a chief, a commander, two sergeants, and multiple part-time patrol officers. The traffic-related jurisdiction for Tower Lakes Police Department covers approximately fourteen miles of Village, State, and County roads.

Using state certified part-time officers to maintain a high level of security for the Village allows the Village to keep the cost per household for protection at one of the lowest rates in the area. The TLPD operations provide revenue to the Village which helps to offset the cost of protection. If outsourced, the alternatives for protection can be as much as three times higher with protracted response time.

The Tower Lakes Police Department is always the first responder in the event of an emergency within the Village. If it becomes necessary, they utilize and have immediate access to additional investigative, forensic, crime lab, and other specialized services through membership with various state and county agencies and associations.

The Tower Lakes Police Department takes advantage of federal and state grants for manpower and equipment. They recently completed the purchase of a tornado siren, utilizing a \$5000 grant.



TLPD officers receive regular training and education on law changes. Emergency Services provides a 24 hour 911 service as well as a reverse 911 system in the event emergency instructions or information needs to be communicated via telephone.

Fire and ambulance protection is provided by Wauconda Fire Department with a consistent response time of 3-5 minutes.

4.10.2 Cost Comparison and Analysis

The Police Department prepared the following breakdown in 2007:

<p>Cost of Tower Lakes Police</p> <p>The cost of maintaining a police force in Tower Lakes is less than the cost of police protection in many neighboring communities throughout Lake County. Currently the annual police budget in Tower Lakes is approximately \$215,000. Given a population of approximately 1,300 citizens, the annual cost of maintaining the Tower Lakes police department is roughly \$165.00 per citizen. Compare this with a village of comparable size such as Bannockburn which has a population of 1,500 and an annual police budget of \$975,000 for an annual cost of \$650 per citizen and one can see that we have a very cost effective police department here in Tower Lakes.</p> <p>Nearby communities such as Wauconda (\$247.00 per citizen), Barrington (\$280), Barrington Hills (\$563) and Lake Zurich (\$330) all pay more per citizen for police protection than we do in Tower Lakes. To be fair, other communities pay less (i.e., Hawthorn Woods, \$173; Fox River Grove, \$162; Cary, \$150; and Island Lake, \$153). However, the costs associated with the Tower Lakes police are not out of line with these neighboring communities.</p> <p>By maintaining our own police department, we are provided with greater patrol presence, quicker response time and department personnel that continually work in the same area and develop an affinity for the community. When you compare this with the spotty police coverage and slower response time we would get from the sheriff's office you can see that the police department is a prudent investment for our community.</p> <p>Cost of Lake County Sheriff's Police</p> <p>If we were to contract with Lake County to provide police protection, the town's costs for police service would rise from approximately \$14.00 per hour to almost \$65.00 per hour. Part of this increase in cost is due to the fact that because Tower Lakes' police are part-time employees, we do not incur any retirement fund expenses.</p> <p>In addition to increased costs, the Lake County Sheriff's office would provide less police coverage and a greater response time. A review of the recent contract signed between Lake Barrington, North Barrington and the county shows that for over \$500,000 per year, the two communities will receive one deputy and squad car that will have to patrol both villages 24 hours a day. Those communities hope that this will result in the communication of police activity to their village hall within hours. Currently, we have overlapping shifts which allows for at least two cars on duty in Tower Lakes at certain times. Furthermore, police activity is immediately reported to our village hall. By contracting with the county, we would incur greater costs and less protection than we currently have.</p>
--

Fig. 17 TLPD. Cost Analysis Example, TLPD 2007



4.10.3 Police and Emergency Services Future Needs

Sustainability of Tower Lakes Police Dept. is contingent on cost/benefits of service. Audits on service and cost should be conducted every year to confirm continuation.

Village should actively pursue providing police protection for neighboring communities and the financial advantages and disadvantages of such services.

Continued cooperation and partnership for Fire and Emergency services with Wauconda should be maintained.

4.11 Policy Objectives

For the purposes of this Comprehensive Plan “Policy Objectives” are based on careful study and collaboration with all stakeholders have been established to determine future village policy direction. When exploring or implementing the following objectives, the Village should utilize and promote the use of sustainable practices and planning (see Sec 1.3 for a definition of sustainable practices).

- I. Facilitate and encourage the financing and development of the Village Hall and Community Center outlined in this document. (see Sec. 4.1.1)
- II. The Village should continue to use the services of a professional engineer either civil or structural, for consultation and review of Village projects, as needed.
- III. Continue to maintain and update the current storm water management plan, as well as to stay abreast of changing regulations and technologies.
- IV. Encourage the use of environmentally sensitive practices and technologies that promote infiltration and protect water quality.
- V. Tower Lakes should begin to improve the Village technology infrastructure and explore all opportunities to create and improve community wide technology services. (see Sec. 4.7.1)
- VI. The Village should encourage the utility companies to relocate existing overhead utility service wires on utility poles to an underground infrastructure.



- VII. Continue to work with private refuse collection and recycling firms to provide efficient and cost-effective service to Village residents. Insist on credible and proven recycling programs.
- VIII. The Village should continue to monitor the water system maintenance and improvement plan as described elsewhere in this document.
- IX. Adopt ordinances as necessary to protect the aquifer that supplies the water. (see Natural Resources Sec. 7)
- X. The Village should continue to actively pursue federal and state funding and available grants for infrastructure improvements.
- XI. Individual homeowner septic systems should be inspected and certified at regular intervals and at property transfers. Residents should be required to provide proof of inspection and cleaning by a licensed septic service.
- XII. The Village should continue funding police protection and when possible explore the expansion of police services to cover surrounding communities, when in the Village's best interest while maintaining the current level of service.



5. ECONOMIC DEVELOPMENT

5.1 Current Thinking on Community Economic Development

In today's economy, the economic health of a community can become unstable if there is an imbalance between the amount of local income, the wealth that leaves a community, and the extent to which new dollars come into the community. Most communities, regardless of size, need to employ a strategy to create a healthy community cash flow. New dollars are generally described as income and wealth generated outside of a community, but invested or spent in the community. Grants and government contracts are another source of new dollars for a community.

Tower Lakes' residents live in the community, but most work elsewhere. They generate income from an outside source and bring that income back to Tower Lakes to pay for goods, services, and certainly taxes. We pay property and other taxes that become part of the stable economic base of the community.

Tower Lakes can better capture the individual discretionary dollars of residents who work outside of the community if it provides a range of convenient and accessible retail and commercial services at times when those residents are home, within the community, e.g. non-commuting hours and weekends. These dollars tend to leak away when local service availability and delivery does not meet the needs of the residents.

Another major source of potential new dollars is tax dollars managed by the state and federal governments that are available through a variety of loan and grant programs for local development projects. Funds are available, for instance, to help Tower Lakes develop and/or extend water service for new business or housing. The village government and public/private partnerships can work to use these programs to build the infrastructure that supports the type of economic activity the residents deem desirable.

5.1.1 Economic Development in Tower Lakes

Tower Lakes is a unique community relative to its surroundings, in that it is an incorporated bedroom community, rich in natural attributes, yet located strategically close to business, transportation, and excellent educational opportunities outside the community.

In recent years, considerable attention has been given to the potential impacts of growth and development on Tower Lakes. In general, growth has been viewed as healthy and desirable for Tower Lakes because it would lead to a broader tax base; and the enhancement of property values. However, residents are aware that growth may also be accompanied by costs such as increased fiscal expenditures for necessary public services and infrastructure, traffic congestion, consumption of local natural resources, loss of open space and unique cultural attributes. In addition, development decisions are too often made without a sufficient understanding of the consequences of those decisions on overall community well-being. Since changes induced by growth in a community are not always positive, carefully planned development is necessary for ensuring that growth is consistent with the long-range goals of Tower Lakes.



Both the recently conducted community survey and resident visioning sessions have established interest in allowing remaining lands, and potential annexed lands to be used for residential, and possibly some carefully developed commercial and or office space. The potentially impacted areas would be along the Rt. 59 corridor (see Land-Use Sec. 3).

This economic development element will attempt to address the following: the type of assessments required when considering new developments, availability of land for economic development, what types of business, if any, should be considered in future discussions, alternative economic revenue generating alternatives, and Policy Objectives for future economic development under consideration.

5.2 Development Impact Assessments

A development impact assessment, typically completed by independent consultant, provides a framework for addressing development decisions. Before any major economic development decision can be made for Tower Lakes, a thorough analysis of the project and its impact on the community must be conducted. This Comprehensive Plan outlines the steps for that analysis, with the caveat stated that each development opportunity is unique, and requires individual assessment.

The analysis should be designed to assist the Plan Commission in making recommendations to the Village Board.

5.2.1 Fiscal Impacts

Fiscal analysis involves assessing the public service costs and revenues associated with the development. Such an analysis projects the net cost of the development on the fiscal balance sheet. Since fiscal feasibility plays an important role in determining whether or not to proceed with a proposed development, fiscal impact analysis is often the most critical component of any assessment.

Any new development results in increased demand for services: New residents, and in the case of commercial development, new workers, demand local services and their expectations may be different from those of the existing population.

Fiscal impacts vary with the type of the development, the location of development, community services, existing service capacity and current village policy. The type of development, commercial or residential, have different implications for a community's fiscal balance sheet. The nature of the development; clustered residential centralizes infrastructure, as opposed to say, traditional 2 acre zoning (See Land-Use Section 3) with decentralized infrastructure matters to the fiscal outcome. If the village must extend public services to new developments, it will incur greater expenditures.

The impact of a single development may be insignificant to a community's fiscal position; however, the impact of multiple developments may be substantial. Over time, even single developments have broad effects on revenues, expenditures and the tax base.



In general, industry studies have suggested that the ratio of the cost of community services for residential and commercial, to revenue generated, are not always beneficial to the Village.

5.2.2 Environmental Impacts

New development often leads to environmental impacts including, but not limited to, loss of open space, impacts on groundwater and surface water quality, increases in impervious cover, and changes in landscape aesthetics (See Natural Resources Sec. 7). If an assessment determines a proposed development will present an adverse impact, the Village Board can work with the developer to mitigate that effect, or offset the effect with impact fees that can be used elsewhere to improve Tower Lakes.

5.2.3 Traffic Impacts

One of the concerns most often associated with any new development is increased traffic. The residents of Tower Lakes have expressed this concern above all, and consider any traffic increases to be contrary to the initial reasons for joining the community. This impact requires careful consideration.

Traffic is a natural result of many development projects. Thus, in considering a development proposal, it is important to evaluate potential transportation-related impacts including additional infrastructure requirements and increased traffic congestion, as well as increased service costs such as fire and police protection.

A traffic impact analysis is a study which assesses the effects that a particular development's traffic will have on the community. These studies vary in their range of detail and complexity depending on the type, size and location of the development. Traffic impact studies help communities to:

- Forecast additional traffic associated with new development, based on accepted practices
- Determine the improvements that are necessary to accommodate the new development
- Assist communities in land-use decision making
- Assist in allocating scarce resources to areas which need improvements
- Identify potential problems with the proposed development which may influence the developer's decision to pursue it
- Allow the community to assess the impacts that a proposed development may have
- Help to ensure safe and reasonable traffic conditions on streets after the development is complete



- Reduce the negative impacts created by developments by helping to ensure that the transportation network can accommodate the development
- Provide direction to community decision makers and developers of expected impacts
- Protect the substantial community investment in the street system

Traffic impact studies should accompany *any* potential development plans along Rt. 59. These studies can be used to help evaluate whether the development is appropriate for a site and what type of transportation improvements may be necessary. The developer or consultant typically is responsible for all costs and coordination with state agencies when a state highway like Rt. 59 is being considered for development (See Transportation Sec. 8).

5.3 Availability of Land for Economic Development

There are only a few parcels available for development within the village, and various parcels along Rt. 59 which would require annexation. This would involve discussions and agreements with the current owners.

There are two aspects of future economic development which require attention. The first involves the currently applicable boundary agreement between surrounding villages and towns. Any new development will require the approval of same. If the most demanding concern from residents is maintaining a pleasant rural landscape, void of anything but residential zoning and preservation of open space (this of course assumes a balanced budget looking out 3-5 years), then conversations should begin promptly with adjoining parties. These discussions would assure that each community has a chance to reveal individual concerns and interests.

Secondly, if the development instead is commercial/light industrial development along the Rt. 59 corridor from Anderson Road up to Rt. 12, any delay in planning and discussions with intergovernmental boundary agreement members, specifically beyond 2013 of the boundary agreement, would leave the Village vulnerable to changes that occur outside its interests.

The map (Fig. 18) depicts the geographic relationship between adjoining communities. Annexation of adjacent properties would provide Tower Lakes the opportunity to have influence over their zoning.

Intergovernmental Boundary Agreement (as of 2007)

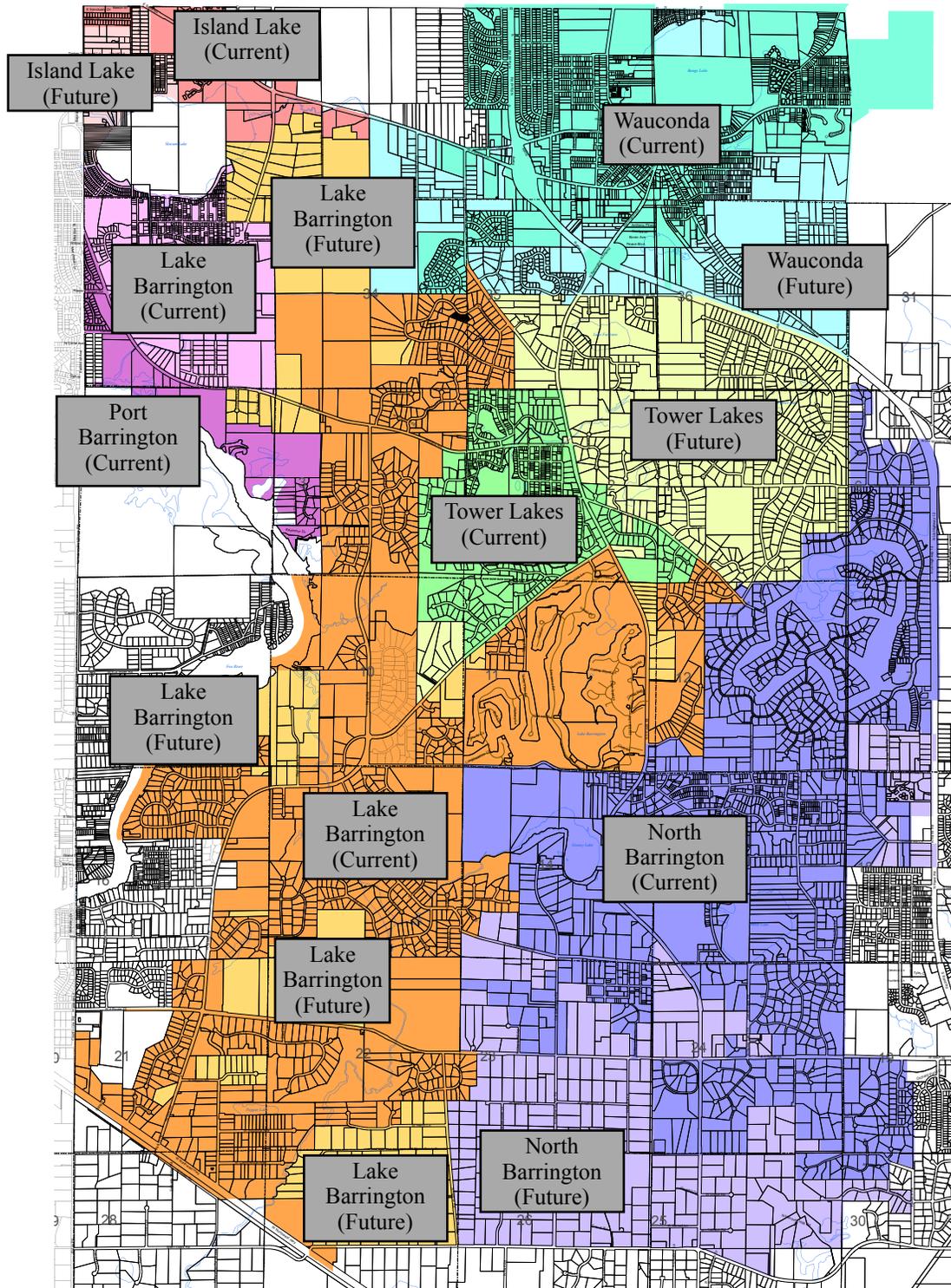


Fig. 18

The following maps (Fig. 19-23) identify larger vacant parcels currently in unincorporated Lake County that potentially could become part of Tower Lakes. Whether these properties are annexed into Tower Lakes they could be zoned residential, commercial, or even agricultural, and each could require an extension of infrastructure, and community services, in return for a potential increase in tax revenues. Therefore, pursuant to the Policy Objectives, it would be in the best interests of the Village to annex these properties.



Fig. 19 12.5 Acre Vacant Parcel



Fig. 20 6.4 Acre



Fig 21 11.72 Acre Parcel



Fig. 22 9.27 Acre Parcel



Fig. 23 6.33 Acre Parcel

The balance of the maps, (Fig. 24 & 25) identify parcels currently within the village limits that are eligible for development. The Village Hall below sits upon 1.01 acres. This property is adequate for current facilities, but is not adequate for the expansion of facilities that might include a new village hall, police station, community center and small retail development.

In addition, there is shown below the vacant 15 acres south of Kelsey Road and east of Rt. 59, currently platted for residential development.

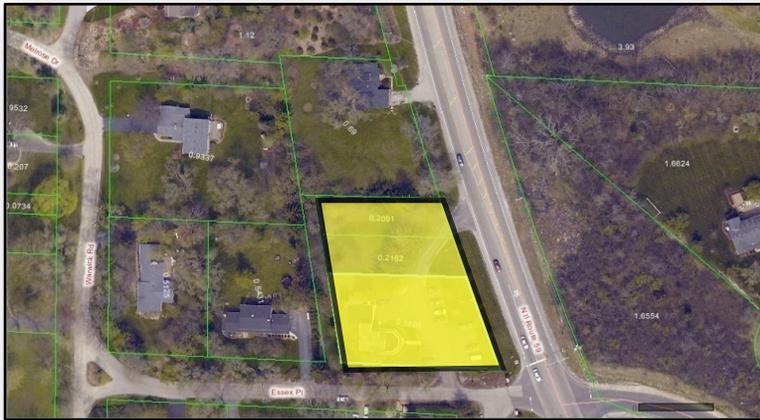


Fig. 24 Current Village Hall (1.01 Ac.)



Fig. 25 15.57 Acres vacant and currently platted residential (within Village)

5.4 Types of Businesses Desired by the Village Residents

Residents have expressed an openness to light retail, professional offices, a local bank, a community center, or perhaps even a privately owned assisted living facility (so seniors can continue to live close to the community).

With all choices, the first or most important emphasis for development was on the quality and aesthetic appeal of the final product.



Second was the understanding that the Village may need to generate additional tax monies to balance future budgets. New commercial development was considered a viable option to attain a means to that end.

Also expressed, was the possible job opportunities for the high school aged youth. These jobs would be close to home and create additional community pride and cohesiveness between residents and the businesses that serve them.

The main reasons why business would be attracted to Tower Lakes include, the small and quiet community atmosphere of friendly residents, a local police force, a diverse and educated work force, an affluent community surrounded by similar demographics, and a state highway with large traffic numbers, providing cross suburb movement.

5.4.1 Home Businesses

The need and desire to create these cottage industries is only increasing, and provides potential economic opportunities for both residents and the community at large.

The Village should encourage the formation of a Tower Lakes Commerce Committee. This organization would work independently to promote community businesses and provide networking opportunities for participants. The committee members should be charged with the responsibility to develop the long term business interests of the owners, while balancing the more significant interests of the overall resident population, by keeping Tower Lakes a quiet, advertisement-free, bedroom community.

5.4.2 Alternative Revenue Choices

It is important to point out that consideration of commercial business in Tower Lakes may come down to a matter of choices or options. For instance, the financial budget, though balanced now, is ever increasing, and the options for revenue generation are limited.

Potential sources for additional revenue, other than sales tax, include a home business tax, the encouragement of the use of Tower Lakes addresses to retain a greater percentage of the telecom tax revenue and utility franchise fees, a tax on natural gas and electric, additional Special Service Areas (SSAs), low interest loans, State and Federal government grants, increased property values, and referendum to exceed the property tax cap.

Cost containment must include continued exploration of merged services, joint operating arrangements, shared purchasing services and lobbying state government to treat non-business Villages differently in terms of tax allocation. Reduction of Village services may need to be considered to maintain current tax rates.

5.5 Quality of Life Considerations

The attitudes community residents have toward development, as well as their perceptions of community and personal well-being are important determinants of the social effects of a proposed action. Such attitudes are a reflection of the quality of life residents seek to enjoy and preserve, whether it is limiting growth in order to maintain the rural image of a small



community; expanding the boundaries of the village; or providing a variety of housing choices to new, diverse residents and businesses.

Changes in a community's social well-being can be determined by asking the individuals and representatives of groups or neighborhoods in the area to make explicit their perceptions and attitudes about the anticipated changes in the social environment. Although this was taken into consideration during the CAC Vision meetings, and the 2008 Residents Survey, additional town hall meetings need to be held in an attempt to determine the best moves going forward.

5.6 Policy Objectives

For the purposes of this Comprehensive Plan "Policy Objectives" are based on careful study and collaboration with all stakeholders have been established to determine future village policy direction. When exploring or implementing the following objectives, the Village should utilize and promote the use of sustainable practices and planning (see Sec 1.3 for a definition of sustainable practices).

- I. The Village should begin a review of the impacts of commercial development on Route 59 as outlined in Section 5.2.1.
- II. The Village should continue its efforts to acquire property necessary to expand the Village Hall into a more active and complete community center.
- III. The Village Board should consider appropriate zoning for the property contiguous to the Village Hall based on the needs of the Village and the recommendations of future impact studies as referenced in Section 5.3.
- IV. The Village should continue its policy of residential zoning and consider special use zoning on a case by case basis consistent with this Comprehensive Plan.
- V. The Village should encourage the formation of an independent Tower Lakes Commerce Committee.
- VI. Tower Lakes should pursue annexing properties adjacent to the Village wherever it promotes the goals of the Village and is consistent with the Comprehensive Plan.
- VII. The Village Board should review and revise as appropriate the current zoning ordinances to be consistent with this Comprehensive Plan.



6. HOUSING

The Village of Tower Lakes is a residential community of 1,350 residents located approximately 39 miles from Chicago's Loop in southwestern Lake County. Tower Lakes has broad diversity in its more than 430 single-family dwellings currently with prices ranging from moderate to expensive. No commercial buildings, schools, churches or post office presently exist within the Village borders. The Tower Lakes Village Office and municipal building is located at 400 N. Route 59.

6.1 Village Homeowner Associations

The Village is served by the following Homeowner Associations, however, not all residents are members of a HOA:

6.1.1 Tower Lakes Improvement Association (TLIA)

TLIA is an active association of more than 350 homes. TLIA and Village government have a shared influence on community life in Tower Lakes. This is so because TLIA holds title to the lakes, ponds, parks, and other recreational facilities, which are private property of the member homeowners.



6.1.2 Fenview Estates Property Owners Association

This association consists of 35 homes. The association maintains entry structures and lighting at Fenview Drive and Kelsey Road.



6.1.3 Country Club Estates Homeowners Association



There are 39 homes within this association. The association maintains entry structures at Indian Trail Road as it intersects at Pebble Creek Drive and at Rolling Green Drive.

6.1.4 Tower Trails Homeowners Association:

This association consisting of three homes is currently inactive.



6.2 Characteristics of Existing Housing Stock in Tower Lakes⁷

Existing Housing Stock Age	# of Houses Built
1999 to 2000	2
1995 to 1998	2
1990 to 1994	11
1980 to 1989	76
1970 to 1979	114
1960 to 1969	96
1950 to 1959	96
1950 to 1959	68
1940 to 1949	38
1939 or earlier	49

Table 8

Estimated Median Home Value	2007	2000
Tower Lakes	\$578,427	\$356,700
Illinois	\$208,800	

Table 7

6.2.1 Building in Tower Lakes

Oversight for the home building process is provided by:

- Village Board
- Plan Commission
- Zoning Board of Appeals
- Village Attorney
- Village Building Inspector

The Village has recently updated the process for applying for permits and continues to work on streamlining the process without losing effective oversight.

⁷ Data based on the 2000 census and compiled by City-Data.com



- The Planning Commission maintains the Village Comprehensive Plan and makes recommendations to the Village Board regarding zoning ordinances and future planning.
- The Zoning Board of Appeals hears all variances to zoning ordinances and makes recommendations to the Village Board, who then makes the final decision.
- The Village works with Lake County, State and Federal guidelines to provide and support up-to-date building standards.
- Changes to the Building Code are made as required, and based on current building trends, and the input of residents during the Comprehensive Plan preparation

6.3 Availability of Affordable Housing

In 2003, the State of Illinois passed legislation requiring municipalities to provide affordable housing in their community. The Village has submitted to the State an affordable housing plan the goals of which are incorporated into the Comprehensive Plan and Village zoning.

6.4 Policy Objectives

For the purposes of this Comprehensive Plan “Policy Objectives” are based on careful study and collaboration with all stakeholders have been established to determine future village policy direction. When exploring or implementing the following objectives, the Village should utilize and promote the use of sustainable practices and planning (see Sec 1.3 for a definition of sustainable practices).

- I. The Village should explore a historical preservation ordinance.
- II. Village ordinances should encourage a mix of housing types and styles consistent with existing homes.



7. NATURAL RESOURCES

The natural resource element inventories the major natural resources within Tower Lakes and looks at how they can be managed in a more sustainable manner. This element not only identifies the natural resources but also identifies those factors that threaten the continued existence of the resource. Things such as water quality, soils, wetlands, and outdoor recreational areas including parks are examples of what are included within this element.

The entity with ownership and control over most of the natural areas in Tower Lakes is TLIA. Their mission to preserve and protect these vital assets is described as follows:

The shoreline property surrounding the lakes and owned by the TLIA shall be maintained in an open park-like environment to assure to all members their maximum use and enjoyment of the property. Access to the shoreline shall be open to all members and their guests for walking around the lakes, bicycle riding, fishing and other uses consistent with this environment. It is the general intent of these rules to preserve and maintain this access and use by all members, regulate the use of all structures, lands and waters within the shoreline area, stabilize and protect the natural beauty of the property, minimize erosion and other adverse affects on the lakes, and to recognize and protect the interests of adjoining private property.

The goal is to preserve and enhance a healthy and mutually beneficial relationship between people and the surrounding natural eco-system. The objectives are:

- Respect the natural topography, soils and geology
- Protect Tower Lake, North Lake, Davlin's Pond, Wagner Fen, Mud Creek, and other ponds, wetlands, streams and creeks from pollution and degradation
- Establish volunteer "stewards" to monitor and protect the Wagner Fen and other wetlands
- Conserve groundwater supplies and protect underground aquifers from contamination, overuse, and misuse
- Maintain adequate storm-water drainage capacities of drainage basins, floodplains, and waterways. Use acceptable practices of storm-water management such as detention, retention, diversion and storage
- Conserve, enhance, and increase the number of native trees and vegetation throughout the Village through a reforestation program and requiring permits to remove healthy desirable trees
- Preserve desirable and endangered wildlife including waterfowl and aquatic habitat

- Maintain a healthy balance of lake habitat for people and aquatic species and plants
- Encourage and foster conservation of energy and water in building design and remodeling
- Monitor and mitigate the objectionable impact of air pollutants, pesticides, fertilizers, road-salt, odors, sounds, sights, and artificial lights
- Respect the natural balance of indigenous wildlife population with appropriate management techniques
- Decrease air pollution by encouraging composting and discouraging leaf burning
- Promote recycling through cooperation with contracted waste services

7.1 Existing Natural Resources

Residents enjoy many natural recreational facilities. The 66-acres of lakes contain many fish species, wild life, natural shoreline, islands, and a community beach. This asset has a significant impact on the character of the community and the value of its properties. Tower Lakes is near many other recreational facilities. Forest preserves: Cuba Marsh, Deer Grove, Fox River, Grassy Lake/Flint Creek, and Lakewood. State Parks: Chain of Lakes and Moraine Hills. Rivers and Lakes: Fox River and Bangs Lake. There are also many public golf courses and private country clubs are in the area.



Fig. 26 Beach and Park Islands



TREE CITY USA.

Tree City USA status should be maintained and the community-wide reforestation program should

be continued and expanded. Village financed tree maintenance and planting of compatible species should focus on public properties and right-of-way. Technical assistance and shared financial participation should be considered for residents. Cooperation with the homeowners associations within the Village should be encouraged in order to encourage common re-forestation goals.

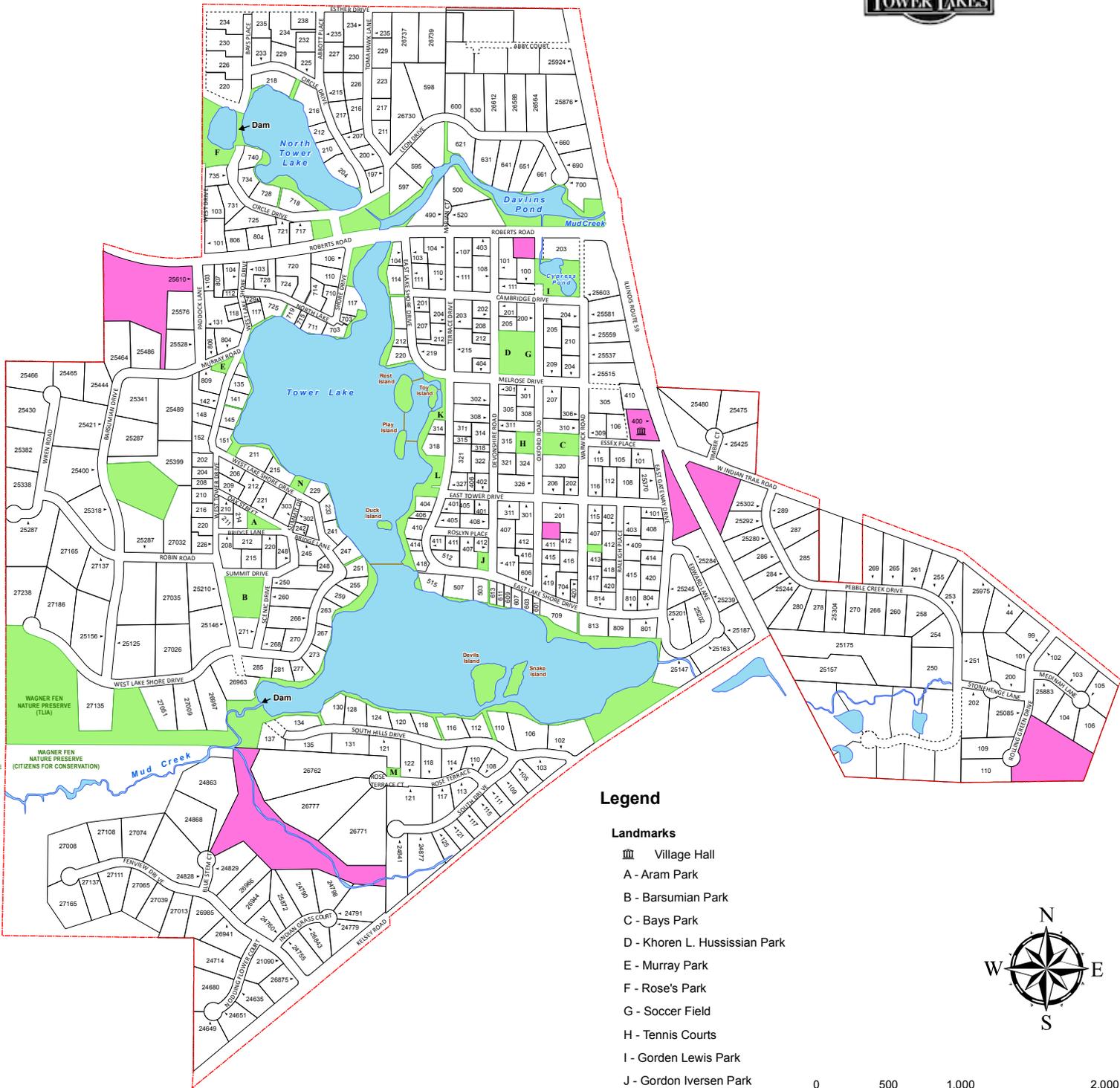


7.2 Parks and Open Spaces

The Village of Tower Lakes does not currently maintain any public parks but it does own eight properties which provide public open space. These are shown in purple in Fig. 27 and include 1 acre adjacent to the Village Hall on Rt. 59, 1/3 acre in the 400 block of Oxford Rd., 5.6 acres at 25610 Paddock Ln., 1/2 acre on Roberts Rd., 1.6 acres between East Gateway Dr. and Rt. 59, 6 acres in two parcels in the Country Club Estates subdivision, and 9.1 acres in the Fenview Estates subdivision. Other public open spaces in the Village are the 1.7 acre lot on the West side of Timber Ct., owned by the Illinois Dept. of Transportation, and a 23 acre portion of Wagner Fen Nature Preserve owned by Citizens for Conservation in the Southwest corner of the Village.

There are several private parks and open spaces owned by the Tower Lakes Improvement Association, shown in green and blue in Fig 25 and these collectively make up a significant percentage of the Village land area. The private open spaces include Tower Lakes, its six islands, shorelines and access points, North Tower Lake and Davlin's Pond and their shorelines, a 13 acre section of Wagner Fen Nature Preserve, natural areas along Kelsey Rd., Warwick Rd., Barsumian Dr., and Roberts Rd., and a series of maintained parks, some of which are developed with active recreational facilities. The private parks include Aram Park with a playground, Barsumian Park, Bays Park with a volleyball court, Hussissian Park with soccer and baseball fields, Murray Park with a basketball court, Rose's Park with a playground and pond, Lewis Park with a pond, Iverson Park with a playground, Graham Park, Wagner Park, Zupancic Park, Lindy Lewis Gazebo and two tennis courts on Oxford Rd.

Preserved open spaces outside the Village limits, but adjacent, include an additional 18 acres of the Wagner Fen Nature Preserve owned by Citizens for Conservation and 62 acres of Wagner Fen which lies within the Lake County Forest Preserve's Grassy Lake Preserve. The extensive Grassy Lake Preserve is connected by trail to the Fox River Preserve, for a combined total of over 1,000 acres of Lake County Forest Preserve land just West of Tower Lakes.



Legend

Landmarks

- Village Hall
- A - Aram Park
- B - Barsumian Park
- C - Bays Park
- D - Khoren L. Hussissian Park
- E - Murray Park
- F - Rose's Park
- G - Soccer Field
- H - Tennis Courts
- I - Gorden Lewis Park
- J - Gordon Iversen Park
- K - Harriet Graham Park
- L - Cyril Wagner Park
- M - Claudia Zupancic Park
- N - Lindy Lewis Gazebo

- Tower Lakes Boundary
- Bridge
- Water Features
- Village Owned Properties
- Tower Lakes Improvement Association Private Recreational Property



Parks & Open Space Map Fig. 27



7.3 Environmentally Sensitive Areas to Protect

The public policy of the State of Illinois, as well as Lake County, is to encourage each citizen to provide and maintain a healthy environment for the benefit of current and future generations. Each person has the right to a healthy environment.

The Illinois Environmental Protection Agency has adopted strict rules and regulations regarding the quality of lakes, rivers and streams and other elements of the natural environment. These actions are indicative of stronger governmental policies, which have emerged for the purpose of conserving and enhancing the environmental resources. In Lake County substantial effort has been devoted to planning with nature and to interpreting the suitability of soils for various types of urban development.

The Village of Tower Lakes is located in the Fox River Watershed in southwestern Lake County, and in the smaller drainage basin including Timber Lake, Tower Lake, Lake Barrington, and connecting streams. Areas adjacent to the Village contain floodplains and marshes of substantial size; their protection is of considerable importance to the countryside ecology and to the control of storm-water runoff, especially as it relates to the level and quality of water in Tower Lake and North Lake. In addition, and of vital importance, is the Timber Lake Drain, which supplies Tower lake with water from outside the Village (see Sec. 3.3.5 & Fig. 5).

Also of importance to the Village is the capacity of soils and geology to receive and purify wastewater from septic filter systems common to the area, without endangering the domestic water supply or the Village's two lakes.

The original subdivision of Tower Lakes was built before adequate soil information was available. Homes were constructed on small lots without adequate area for expansion. Later, subdivisions were developed and zoning amended to allow for larger lots to accommodate proper location and design of septic filter systems, which are consistent with septic requirements of Lake County.

7.4 Wetlands

An environmental corridor is an interconnected geographic area of interdependent natural features. These features include waterways, soils, geology, topography, hydrology, vegetation and wildlife. Environmental corridors are located in the northeast section of Tower Lakes by Davlin's pond, in the center by Tower Lake, and in the southwest by Wagner Fen which is designated an Illinois Nature Preserve. These environmental corridors extend into the planning jurisdiction surrounding the Village.

The area known as the Village of Tower Lakes has evolved from a mixture of farmland, woodland and wetlands. The original development sought to convert a portion of the wetlands into a usable system of lakes and home sites. Special emphasis is to be placed on retaining Tower Lake and North Lake as the unifying focal points of the Village and its community life, and on preserving nearby marshes and floodplains as open-spaces enhancing the countryside character of the surrounding environment.

Tower Lakes borders a rich wetland Fen called Wagner Fen. Wagner Fen is co-owned by the Barrington-based Citizens for Conservation, TLIA, Lake County Forest Preserve District, and several individual landowners. In 2001, the Lake County Forest Preserve’s 55-acre Wagner Fen portion of Grassy Lake Forest Preserve was dedicated as an Illinois Nature Preserve, in conjunction with the 45 acres previously dedicated in 1994 by the Citizens for Conservation. Combined, the Wagner Fen nature preserve complex totals 100 acres.

All flood plains and wetlands should be withheld from development and maintained in as natural a condition as is reasonable. Designating them as conservation areas or easements should protect wetland areas. Restoration of native species to wetlands and conservancy areas and a path through them should be studied.



Fig. 28 Tower Lakes in 1927

Of course, preservation of these waters and soils begins at the source, us. The next section provides a series of methods for reducing the impact on the water quality prior to it reaching the lakes and wetlands.

7.5 Issues Concerning Natural Resource Preservation

Each issue in this section contains *Alternatives* to the current procedure or process. These alternatives are intended to start conversations and possible implementation of these ideas to improve the processes and make them more sustainable in the future. (see Sec. 2.2.2 regarding responsibility and ownership of natural resources)

7.5.1 Shoreline Protections

The choices resident shoreline owners make in managing their lakeshore properties can have a significant impact on the lake’s water quality. Some current practices in lakeshore property management that are known to contribute to water quality deterioration include:

- Eradication of native vegetation at the shoreline and tree clearing upland from the shore
- Green lawn to the water’s edge, especially when fertilizers and/or pesticides or herbicides are used to maintain it
- Poorly planned or installed rip-rap, retaining walls, or other “hard” structures that contribute to runoff and erosion
- Imported sand for beach restoration that eventually migrates into the lake, contributing to the build-up of silt
- Creation of impervious surfaces such as paved driveways, ground level patios, and walkways that compact the soil and/or increase storm water runoff and erosion into the lake

Each of these practices by itself has a negative impact; in combination on a single property or along an entire lakeshore, the impact is magnified and includes declines in water quality and fish populations, accelerated shore land erosion, loss of habitat and increase in invasive plant species.

There are three ways we can reduce pollution and keep the lakes healthy:

- Reduce runoff from roofs and driveways by getting rainwater into the ground near where it falls (this is being addressed in the new Impervious Surface Ordinance described below)
- Create buffer zones along shorelines and remove nutrient building practices (this is addressed in the discussions regarding banning phosphorous fertilizers and creating a shoreline buffer zone)
- Maintain the septic systems.⁸

Rainwater runoff is a major source of water pollution. Rainwater runoff comes from roads, driveways, roofs and lawns. Rainwater that does not infiltrate into the ground or evaporate becomes runoff. Runoff carries pollutants, such as oil, dissolved metals, pesticides, suspended solids, pet waste and nutrients, such as phosphorous, which can lead to algae blooms. The graphic (Fig. 29) shows runoff impacts prior to development.

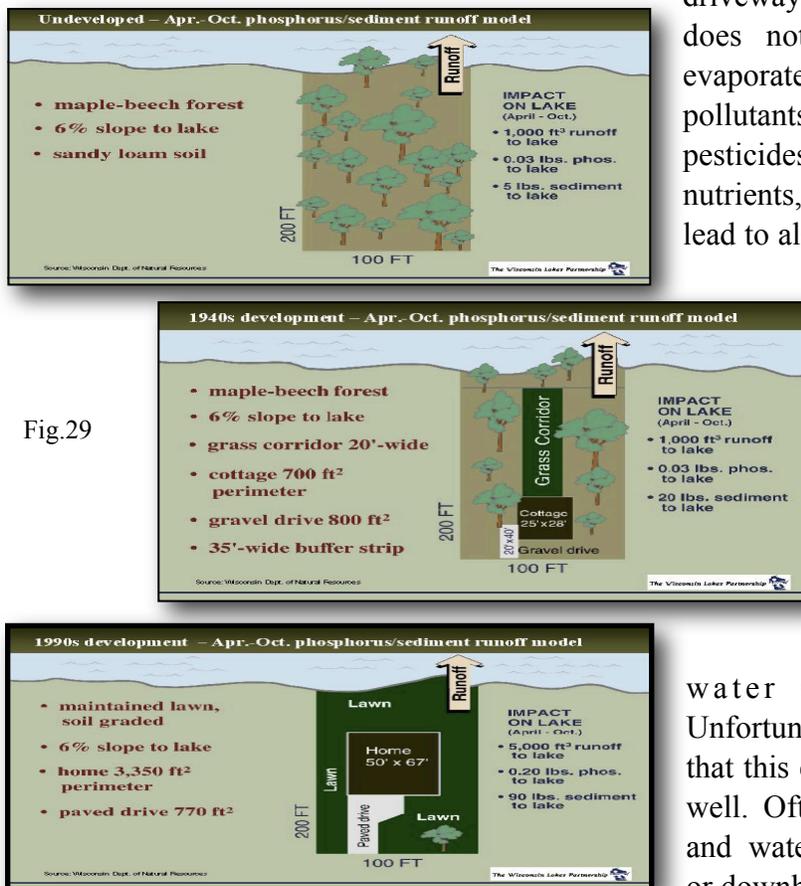


Fig.29

Rainwater that does not infiltrate into the ground or evaporate becomes runoff. Runoff carries pollutants, such as oil, dissolved metals, pesticides, suspended solids, pet waste and nutrients, such as phosphorous, which can lead to algae blooms. The graphic (Fig. 29) shows runoff impacts prior to development.

The two graphics show early development (1940s), and then typical development currently (since 1990s).

There are two ways to manage rainwater. The traditional way has been to move water off fast. This approach uses storm water sewers, pipes and ponds. Unfortunately, civil engineers have found that this expensive approach does not work well. Often, the outcome is water quality and water quantity problems downstream or downhill.

⁸ Source WIDNR

The second way of managing rainwater is to get the water and the pollutants it carries into the ground near where it falls. This can often be a small-scale, decentralized and low-cost option. This approach uses infiltration basins, rain garden, grass swales, porous or pervious paver blocks, and fewer impervious surfaces.

For lakeshore owners, a simple start to managing rainwater is to redirect gutter downspouts that run onto impervious surfaces, such as driveways and sidewalks so they run onto vegetated areas instead. Rain gardens are a good way to capture runoff when greater infiltration is needed.

A shoreline buffer of natural vegetation traps, filters, and impedes runoff. The simplest and sometimes most effective way to recreate this buffer is to stop mowing down to the lake. A smaller lawn with a larger shoreline buffer will help infiltration and reduce runoff. It also helps deter geese.



Shore Line Buffer Example. Fig. 30



7.5.2 Septic Systems

Maintenance is critical to home owners who use septic systems to treat and disperse waste and recycle water. Sludge builds up in the septic tank and should be pumped out every two to three years. If sludge accumulates to the level of the outlet pipe, clogging will occur, which will damage the drain field and reduce the life expectancy of the system. Drain fields can also fail when they are overloaded, either with too much water or too much garbage disposal waste. The average life of a drain field is 10 to 20 years.

Homeowner management of septic systems is sometimes inadequate. Some government organizations and communities have developed septic system management programs that track routine maintenance and compliance with public health standards. These programs can save homeowners money, because regular maintenance and inspection costs are much less than cost to replace failed systems (See Utilities, Facilities, and Services, Sec. 3).

7.5.3 Non-Phosphorous Fertilizers

As the Village of Tower Lakes looks to the future, the impact of lakeshore development on the quality of lakes in the area is a significant concern. One specific concern is the adverse effect of increased phosphorus levels and the algae blooms that result. A review of available literature has identified phosphorus runoff as one of the most significant threats to freshwater lakes nationwide. The following evaluates a major contributor of increased phosphorus – residential yard fertilizers.

Lake water clarity and what’s known as “trophic” status is typically tested with a Secchi Disk. This is a simple test that should be conducted on a regular basis to form a record of lake water clarity. The local boy scouts or high school science class can easily obtain a test kit and retain testing results. The extremes of Trophic status are also represented in the pictures below.⁹



Fig. 31 Secchi Test

Damage to the lake from phosphorus occurs when excess phosphorous on the lawn mixes with water and runs off into the lake. The less water that runs across the lawn into the lake, the less phosphorous will be carried into the lake.

Preventing or minimizing use of phosphorous-heavy lawn fertilizers by homeowners through a combination of public education and/or local ordinance is the most straightforward way to reduce phosphorous runoff into the lakes. There are many alternatives to conventional phosphorous-heavy lawn fertilizers available on the market today.

The Village has conducted town hall meetings, gathered resident input, and has adopted a resolution discouraging phosphorous fertilizer use within village limits.

⁹ Source:MNDEQ



7.5.4 Impervious Surface Ordinance

As described above in the discussion on good rainwater management, reducing impervious surfaces can have a profound effect on the lake water quality. The Plan Commission has completed extensive research of other communities in attempting to shape an ordinance that would be beneficial to Tower Lakes, without applying any unfair restriction upon homeowners.

This strategy relies on several techniques to reduce the total area of rooftops, parking lots, streets, sidewalks and other types of impervious cover created at a development site. The basic approach is to reduce each type of impervious cover by downsizing the required minimum geometry specified in the current local ordinance (see Village Ordinance. 10-1-3 and 10-6-3).

The current ordinance provides for maximum lot coverage of new and existing “structure coverage”. This ordinance concerns itself with the coverage of the dwelling, decks, garages and sheds. Additional developed area that reduces the lot’s ability to absorb rain water (impervious) needs to be addressed prior to granting a building permit.

Existing Lot Coverage Ordinance

ACTUAL AREA OF THE LOT OR PARCEL (In Square Feet)	MAXIMUM LOT COVERAGE AREA
10,000 square feet or less	34% of the area of the lot
15,000 square feet or less, but greater than 10,000 square feet	30% of the area of the lot, up to a maximum of 4,500 square feet
20,000 square feet or less, but greater than 15,000 square feet	25% of the area of the lot, up to a maximum of 5,200 square feet
25,000 square feet or less, but greater than 20,000 square feet	22% of the area of the lot, up to a maximum of 5,500 square feet
30,000 square feet or less, but greater than 25,000 square feet	20% of the area of the lot, up to a maximum of 6,000 square feet
35,000 square feet or less, but greater than 30,000 square feet	18% of the area of the lot, up to a maximum of 6,300 square feet
40,000 square feet or less, but greater than 35,000 square feet	16% of the area of the lot, up to a maximum of 6,400 square feet
Greater than 40,000 square feet	6,400 square feet, plus 5% of the area of the lot in excess of 40,000 square feet

Table 9 Existing Lot Coverage Matrix

7.5.5 New Adopted (Spring 2009) Impervious Surface Area Ordinance

“Impervious surface” means that part of a developed parcel that has been modified to reduce the land’s natural ability to absorb and hold rainfall. It includes hard surfaces which cause water to run off the surface in greater quantities or at an increased rate of flow from the flow that existed under natural conditions prior to development. For example, common impervious surfaces include, but are not limited to, rooftops, walkways, patios, courtyards, driveways, parking lots, storage areas, concrete or asphalt paving, gravel roads, or any cleared, graded, graveled, paved, or compacted surfaces, or other surfaces which similarly impede the natural or man-made infiltration of surface water into the soil.

Calculation of impervious area shall not exceed 40% of total lot area, which shall include the lot coverage area calculation (per ordinance). For example, if a newly developed 15,000 S.F lot has lot coverage calculation of 27% (30% max), this would allow for a total additional surface area for the walkway and driveway to be 13%, (based on 40% max.)

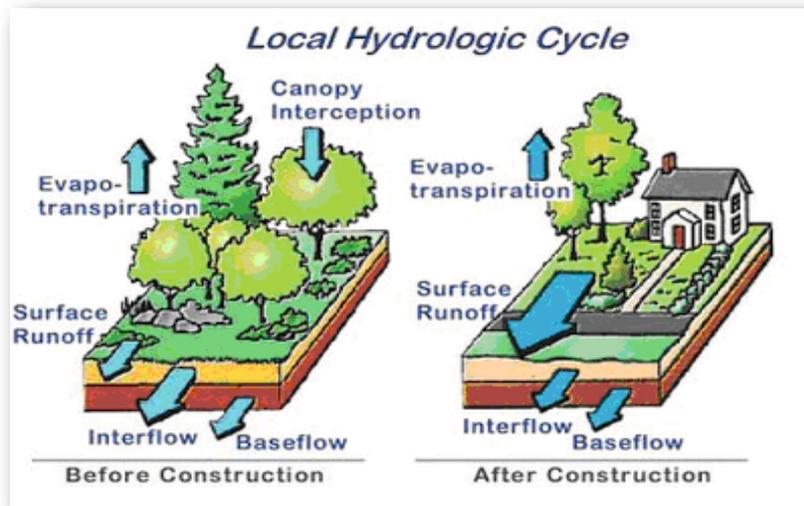


Fig. 32 Local Hydrologic Cycle

A another example would be on a 10,000 S.F. lot which currently is allowed a 34% max for lot coverage, and under this additional impervious ordinance would then be allowed 6% of the lot for walkways and or a driveway. This area could be increased if a driveway or walk was designed and installed with a pervious water absorbing surface.

Actual Lot Area (ft ²)	Max. Lot Coverage Area	Impervious Surface Allowance	Total Lot Coverage Impervious Surface Area
10,000 sq.ft. or less	34% of the area of lot	6%	40%
15,000 sq.ft. or less, but greater than 10,000 sq.ft.	30% of the area of lot, up to ams 4,500 sq.ft.	6%	36%
20,000 sq.ft. or less, but greater than 15,000 sq.ft.	25% of the area of lot, up to ams 5,200 sq.ft.	6%	31%
25,000 sq.ft. or less, but greater than 20,000 sq.ft.	22% of the area of lot, up to ams 5,500 sq.ft.	6%	28%
30,000 sq.ft. or less, but greater than 20,000 sq.ft.	20% of the area of lot, up to ams 6,000 sq.ft.	6%	26%
35,000 sq.ft. or less, but greater than 30,000 sq.ft.	18% of the area of lot, up to ams 6,300 sq.ft.	6%	24%
40,000 sq.ft. or less, but greater than 35,000 sq.ft.	16% of the area of lot, up to ams 6,400 sq.ft.	6%	22%
Greater than 40,000 sq.ft.	6,400 sq.ft., plus 5% of the area in excess of 40,000 sq.ft.	6% plus 1.86% of area of lot in excess of 40,000 sq.ft.	22% plus 1.86% of area of lot in excess of 40,000 sq.ft.

Table 10 Impervious Surface Area Matrix

7.5.6 Low Impact Alternatives

Additionally, there have been discussions to provide for an allowance for those site developments that include rain water retention and reuse such as rain barrels and rain gardens.

7.5.6a Rain Barrels

Rain barrels are low-cost, easily maintainable retention and detention devices that are applicable to residential and commercial sites to manage rooftop runoff. For residential applications a typical rain barrel design will include a hole at the top to allow for flow from a downspout, a sealed lid, an overflow pipe and a spigot at or near the bottom of the barrel. The spigot can be left partially open to detain water or closed to fill the barrel. A screen is often included to control mosquitoes and other insects. The water can then be used for lawn and garden watering or other uses such as supplemental domestic water supply. Rain barrels can be connected to provide larger volumes of storage. Larger systems for commercial use can include pumps and filtration devices.



Fig. 33 Rain Barrel

7.5.6b Rain Gardens

A rain garden is a low impact development practice that uses soil and plant-based filtration devices to remove pollutants through a variety of physical, biological, and chemical treatment processes. Also known as bio-retention, a rain garden consists of porous soil covered with a thin layer of mulch. A stand of various grasses, shrubs, and small trees is established to promote evapotranspiration, maintain soil porosity, encourage biological activity, and promote uptake of some pollutants. Runoff from an impervious area is directed into the rain garden where it is filtered through the plant/mulch/soil.



Fig. 34 Rain Garden

7.5.7 Leaf Burning

Tower Lakes is an arbor community. Trees comprise a large portion of the undeveloped land within the village limits. Over the decades, residents have enjoyed the annual tradition of gathering the fallen flora, and smelling the aroma of burning leaves.

The negative health effects are very well documented and currently are undisputed (IEPA). Even so, many still enjoy the custom and want the freedom to pursue it, yet recognize the need for some regulation to keep air quality within standards. Burning of leaves is currently permitted only from 9 am to 4 pm Oct. 1 through Dec. 15 and April 1 through May 31.

Residents are satisfied with the urban forestry services and feel the services are important. However there are opportunities for awareness and education. Leaf burning is supported by the majority of residents. However, the survey reflects a willingness by residents to consider alternatives to leaf burning.

7.5.7a Alternative to Leaf Burning: Composting

Composting is a safe and environmentally sound method of managing leaves and other yard trimmings. Proper composting does not cause health or fire hazards and, in fact, can be beneficial to gardens and lawns. Composting is a simple process that involves placing yard trimmings and other organic materials in a pile or bin, maintaining adequate moisture, and turning the pile periodically to mix in air. Microorganisms gradually break down the yard trimmings into a humus-like product called compost. Composting can be practical at home or at community operated compost sites. Community-wide programs are already in place in over 2,200 communities in the United States (See Sec.4.8.2 &.3).

7.6 Invasive Species

Invasive alien species are plants, animals, or other organisms that are introduced to a given area outside their original range and cause harm in their new home. Because they have no natural

enemies to limit their reproduction, they usually spread rampantly. Invasive alien species are recognized as one of the leading threats to biodiversity and impose enormous costs to agriculture, forestry, fisheries, and other human enterprises.

7.6.1 Garlic Mustard & Buckthorn

Garlic mustard (Fig.33) produces a characteristic fragrance of garlic from all parts of the plant. Adult plants grow 2-48 inches high. In Illinois, garlic mustard usually blooms in May. Plants usually produce 1 flowering stem, but may have as many as 10 stems from a single root. Each flower composed of 4 white petals that narrow abruptly at the base.



Fig 35

Fall or early spring burning is an effective control treatment in oak woods. Repeated burns over several years may be necessary to achieve adequate control and to eliminate plants produced from the seed bank. Prescribed fires should be of sufficient intensity to burn the affected site thoroughly. Low intensity fires that leave unburned areas will not control garlic mustard effectively. Any isolated plants that are not burned should be removed by hand prior to flower production.¹⁰



Fig 36

The Buckthorn shrub (Fig. 36) or small tree reaches heights of 25 feet; trunk diameter is up to 10 inches; crown is spreading and irregular. Bark is gray to brown, showing a rough texture when mature. Twigs often are tipped with a spine. Small black fruits up to 1/4 inch diameter and containing 3-4 seeds are typical. Leaves are broadly elliptic, rounded to pointed at the tip, and toothed. Both upper and lower leaf surfaces are smooth. Leaves stay green late into fall.

Fire is very effective in controlling buckthorns and is the preferred method whenever feasible. Regular prescribed fire will kill seedlings and shrubs of these species in fire-adapted upland and wetland (e.g. fens, sedge meadows, marshes) sites.

When burning is not feasible, larger trees can be cut or girdled and re-sprouts clipped as they occur. For girdling to be effective, use an ax or saw to make 2 parallel cuts 4-5 inches apart, cutting through the bark slightly deeper than the cambium. The bark is then either knocked off, using a blunt object like an ax head, or peeled away, using a blunt ax blade.¹¹

¹⁰ Source: IEPA

¹¹ Source: IEPA



7.7 Policy Objectives

For the purposes of this Comprehensive Plan “Policy Objectives” are based on careful study and collaboration with all stakeholders have been established to determine future village policy direction. When exploring or implementing the following objectives, the Village should utilize and promote the use of sustainable practices and planning (see Sec 1.3 for a definition of sustainable practices).

- I. The Village should use its best efforts to assist in protecting the quality of the lakes and natural resources through the adoption of zoning, ordinances, and other means within its authority that protect the lakes’ headwater, shorelines, storm water management, and the impact of development around the lakes.
- II. The Village should continue to take actions to protect and enhance the urban forest, such as record keeping, tree planting, species diversification, disease and insect control measures and encouraging privately owned planting and conservation.
- III. The Impervious Surface Area ordinance should be enforced.
- IV. Shoreline buffer zones should be encouraged for lakefront property.
- V. The Village should continue to educate and encourage the use of non-phosphorous fertilizers within the Village.
- VI. Leaf burning is desired by a majority of the residents and the current existing burning schedule should be maintained.
- VII. Efforts and education need to be accelerated regarding the flora destruction due to invasive species including but not limited to Buckthorn and Garlic Mustard. New homeowners and those that construct home additions should be encouraged to remove invasive species prior to receiving final occupancy.



8. TRANSPORTATION

8.1 Smart Growth Planning

Providing people with more choices in housing, shopping, and transportation is a key aim of smart growth. Communities are increasingly seeking these choices -- particularly a wider range of transportation options. There is a growing interest in public transportation, effective bicycle opportunities beyond only recreational uses, and the safety issues involved.

In response, communities are beginning to implement new approaches to transportation planning, such as better coordinating land-use and transportation; increasing the availability of high quality transit service; and ensuring connectivity between pedestrian, bike, transit, and road facilities.

Tower Lakes is bordered by both state and county road jurisdictions, as well as being centrally located between Rt. 12 and access points to the communities developing to the west. This provides a challenge to keep the community safe, quiet, limit congestion and pollution, and yet accessible for the residents to get around by other methods than only the automobile.

Initially, the Village should make sure it preserves the control we currently have:

8.2 Bordering Roadways

The Village should prepare detailed design objectives for all roadway corridors within the community, negotiate agreements with state and county highway departments where necessary, and monitor the desired improvements. Such sustainable improvements should reduce hazards, maintain the countryside character of roadways, and protect residential properties from the impact of light, noise, air pollution, and possible damage generated by increased vehicular traffic.

8.3 Traffic Reduction

Increased traffic intrudes on the countryside character of the community. Where possible, efforts should be made to divert through-traffic to surrounding roadways (most notably US Route 12). The widening of IL Route 59 per the IDOT SRA Plan should be opposed, as it will damage the Village's character by causing safety and pollution issues (See Sec. 5.2.3).

8.4 Noise Reduction, ROW Setbacks, and Foliage Preservation

Special consideration should address the impact of light and noise pollution generated by increasing traffic. IDOT will refine the design of roadway improvements where local municipalities have carried out their responsibility to control land-use in relation to roadways, usually by setback regulations. It is recommended that the Village establish noise-control setback lines in coordination with IDOT noise impact data.

Special consideration should be given to the design and improvement of private properties and public right-of-way along IL Route 59, Kelsey Road, Roberts Road, and Indian Trail. This is particularly true at intersections where safety is a prime factor. Maintain and encourage planted berms (without impacting existing trees) to reduce noise and pollution from major roads and create a buffer behind which native foliage can grow in a more protected environment. This level

of collaboration with state and county agencies is imperative for the Village to maintain a level of control in future design plans.

8.5 Public Transportation

Residents of Tower Lakes who ride the train from Barrington each day would benefit from a Park and Ride location, and Pace bus service. This will require research, inquiry, and persistence to show ample demand and need to have a closer access point.

There are Dial-a-Ride services provided by Pace in Lake Zurich, as well as a ride share program. These could and should be expanded to include, and be more convenient for Tower Lakes residents.

8.6 Bicycle and Pedestrian Transportation

8.6.1 Walking Paths

In the process of evaluating resident's desires as projected in both the community visioning sessions, as well as the resident survey, their interest in walking paths around the lake and wetlands was clear. A walking path along the lake shoreline, possibly created at the same time as the shoreline buffer plantings, (see Natural Resources Sec. 7) would enhance the community assets, and the enjoyment of the natural resources.



Fig 37

There are many good reasons to expand walking paths in Tower Lakes.

Walking paths have been shown to have a positive impact on property sales and to promote physical activity, fitness, and health. However, poorly designed walking paths and paths with impervious surfaces can contribute to deterioration in water quality. The following is a description of environmentally friendly walking paths, with descriptions of different options and maintenance considerations.

Water, poor design, and inadequate maintenance are the three causes of most trail and path problems. Improperly designed and built trails act like channels for water that runs down the trail, carrying debris and causing erosion, until the water hits a depression in which it pools and creates a standing water hazard.

Environmentally friendly walking paths avoid these problems by making sure that paths don't follow the fall line of a slope, are not perfectly flat, and maintain a grade of 10% or less at every point. Paths constructed with permeable surfaces allow rainwater and snowmelt to percolate through the surface and be treated by the underlying aggregate and soil without ponding. All permeable paths are constructed over a bed of aggregate. The depth of the aggregate varies depending on soil characteristics and type of surface. Sometimes, pipes are laid under the aggregate to carry water to rain gardens or other vegetated areas. With a permeable surface on mild slopes, the path can be sloped widthwise to follow the slope of the terrain.



Fig. 38

8.6.2 Bike Paths

The active use of the recently completed bike path along Roberts Road connecting East and West Tower Lakes is an example of creating a large community asset with minimal comparative costs.

Additional areas need to be explored within the community that make bike riding safe, convenient, and available. For instance, the dam crossing might be better served with an appropriate pathway instead of the current grass. And access to the existing shopping at Rt. 59 and Kelsey Road should be better served.

8.7 Types of Path Surfaces

Porous concrete: uses larger pea gravel and a lower water-to-cement ratio to produce a pebbled, open surface that is roller compacted. It uses the same equipment and basic process as regular concrete.

Porous asphalt: An open-graded asphalt concrete surface of course materials approximately 2-4 inches thick. This course consists of porous asphalt concrete containing little sand or dust, with a pore space of approximately 16% (as compared to 2-3% for conventional asphalt concrete). Strength and flow properties of porous asphalt concrete are similar to conventional asphalt concrete.

Plastic grid systems: Made of recycled materials, they are designed to be filled with various materials such as gravel, crushed rock, or a sand/soil mix on top of an engineered aggregate material. The grid system provides support, prevents erosion and holds water in place during heavy rainfalls so it can seep through the aggregate material into the ground without running off.

Crusher fines: These are small particles of crushed rock with a maximum particle size of about 3/8". A crusher fine trail can form a very smooth surface that remains permeable if installed over



an aggregate base. Crusher fine paths are generally less expensive than conventional concrete and are best used when grades are less than 8%.

Wood mulch: Is generally not used as a primary path material, but can be a relatively low cost permeable alternative to vegetated shoulders if laid over a relatively shallow (4") aggregate base.

Gravel paths: These are pervious, as long as they are not built on heavily compacted soil. Different types of gravel produce different types of walking surfaces, some smooth and some rough. Use of non-limestone gravel prevents leaching of alkaline elements into water bodies.

Constructing paths using permeable pavement can be less costly, more costly, or about the same as constructing impermeable paths, however the impact on water quality is not the same.

Also see transportation issues and considerations in the Economic Development section in this document.



8.8 Policy Objectives

For the purposes of this Comprehensive Plan “Policy Objectives” are based on careful study and collaboration with all stakeholders have been established to determine future village policy direction. When exploring or implementing the following objectives, the Village should utilize and promote the use of sustainable practices and planning (see Sec 1.3 for a definition of sustainable practices).

- I. The Village should prepare detailed design objectives for all State and County roadway corridors within the community, negotiate agreements with state and county highway departments where necessary, and monitor the desired improvements. Such sustainable improvements should reduce hazards, maintain the countryside character of roadways, and protect residential properties from the impact of light, noise, air pollution, and possible damage generated by increased vehicular traffic.
- II. The Village should monitor State plans to modify the Rt. 59 corridor layout.
- III. Slower speed limits on Roberts Road, Kelsey Road, and on Route 59 should be explored with the State and County.
- IV. The Village should continue to inquire into the securing of a PACE public bus stop near the Village entrance on Rt. 59.
- V. It is recommended that the Village establish noise-control setback lines in coordination with IDOT noise impact data.
- VI. The Village should begin discussions and coordination regarding the establishment of natural walking trails around the Village.
- VII. Bike paths should be constructed to link all areas of the Village.
- VIII. Cross walks for pedestrians and bicycles need to be negotiated with the State and County, and developed to allow easy access to the commercial area at Rt. 59 and Kelsey Road, as well as to cross the highway to the Tower Lakes area east of Highway 59 and from the south side of Roberts Rd. to the north side, as appropriate.



APPENDIX 1 - POLICY OBJECTIVES RECAP

For the purposes of this Comprehensive Plan “Policy Objectives” are based on careful study, and collaboration with all stakeholders has been established to determine future village policy direction. When exploring or implementing the following objectives, the Village should utilize and promote the use of sustainable practices and planning (see Sec 1.3 for a definition of sustainable practices).

Section 3: LAND-USE

Policy Objectives:

- I. The Village should take active steps, if it’s a benefit to the Village, to acquire through direct purchase or annexation, any lands available that are contiguous to Tower Lakes borders.
- II. Any proposed development of lands that cannot be made contiguous by such means, and fall within the 1.5 mile buffer jurisdiction as outlined in the Intergovernmental Boundary Agreement (See Sec. 3.2.1), should receive a full and complete inquiry by the Plan Commission, a public hearing, and be accountable to any requirements dictated by the Village Board. This process needs to be a thorough investigation and be based on the environmental, economic and social concerns outlined in this Comprehensive Plan.
- III. Any additional lands annexed by the Village should be zoned for residential use. Consideration will be made for open space, new municipal/public space, or special use for high end professional commercial development or conservation design on a case by case basis.
- IV. Any future zoning decisions must consider the financial condition of the Village, and in doing so should consider alternative zoning that encourages proven revenue generating potential.
- V. Any land-use decisions regarding purchase or annexation and a subsequent zoning declaration must be accompanied by a professional analysis detailing the benefits to the Village. A public hearing with legitimate public participation and input through consensus building is required.
- VI. The Intergovernmental Boundary Agreement should be extended beyond the current expiration date in 2013. Negotiations should continue with all communities involved. Regular meetings should be encouraged to discuss among IBA communities regarding any new developments in planning. The Tower Lakes governmental bodies should understand, well ahead of any developer’s inquiry, the goals and objectives of the neighboring community.



- VII. The Village should pursue the redevelopment of the current Village Hall. The Village buildings should include space for daily governmental duties, board and committee meetings, police department facilities, and a community hall for varied uses. The Village Hall should be rebuilt as an energy efficient model for environmentally sensitive governmental buildings.
- VIII. The Village should address the protection of the “Timber Lake Drain” (see Fig. 4&5) within the controls allocated by the Intergovernmental boundary agreement. These protections should include as a minimum: strict zoning with conservation easements, 100 foot natural area setbacks, strict septic guidelines, and erosion control guidelines.
- IX. In addition, all future development in these sensitive areas should have an impact study completed and approved by the Lake County Storm Water Management Commission.

Section 4: FACILITIES, UTILITIES and COMMUNITY SERVICES

Policy Objectives:

- I. Facilitate and encourage the financing and development of the Village Hall and Community Center outlined in this document. (see Sec. 4.1.1)
- II. The Village should continue to use the services of a professional engineer either civil or structural, for consultation and review of Village projects, as needed.
- III. Continue to maintain and update the current storm water management plan, as well as to stay abreast of changing regulations and technologies.
- IV. Encourage the use of environmentally sensitive practices and technologies that promote infiltration and protect water quality.
- V. Tower Lakes should begin to improve the Village technology infrastructure and explore all opportunities to create and improve community wide technology services. (see Sec. 4.6.1)
- VI. The Village should encourage the utility companies to relocate existing overhead utility service wires on utility poles to an underground infrastructure.
- VII. Continue to work with private refuse collection and recycling firms to provide efficient and cost-effective service to Village residents. Insist on credible and proven recycling programs.
- VIII. The Village should continue to monitor the water system maintenance and improvement plan as described elsewhere in this document.



- IX. Adopt ordinances as necessary to protect the aquifer that supplies the water. (see Natural Resources Sec. 7)
- X. The Village should continue to actively pursue federal and state funding and available grants for infrastructure improvements.
- XI. Individual homeowner septic systems should be inspected and certified at regular intervals and at property transfers. Residents should be required to provide proof of inspection and cleaning by a licensed septic service.
- XII. The Village should continue funding police protection and when possible explore the expansion of police services to cover surrounding communities, when in the Village's best interest while maintaining the current level of service.

Section 5: ECONOMIC DEVELOPMENT

Policy Objectives:

- I. The Village should begin a review of the impacts of commercial development on Route 59 as outlined in Section 5.2.1
- II. The Village should continue its efforts to acquire property necessary to expand the Village Hall into a more active and complete community center
- III. The Village Board should consider appropriate zoning for the property contiguous to the Village Hall based on the needs of the Village and the recommendations of future impact studies as referenced in Section 5.3
- IV. The Village should continue its policy of residential zoning and consider special use zoning on a case by case basis consistent with this Comprehensive Plan.
- V. The Village should encourage the formation of an independent Tower Lakes Commerce Committee.
- VI. Tower Lakes should pursue annexing properties adjacent to the Village wherever it promotes the goals of the Village and is consistent with the Comprehensive Plan.
- VII. The Village Board should review and revise as appropriate the current zoning ordinances to be consistent with this Comprehensive Plan.



Section 6: HOUSING

Policy Objectives:

- I. The Village should explore a historical preservation ordinance.
- II. Village ordinances should encourage a mix of housing types and styles consistent with existing homes.

Section 7: NATURAL RESOURCES

Policy Objectives:

- I. The Village should use its best efforts to assist in protecting the quality of the lakes and natural resources through the adoption of zoning, ordinances, and other means within its authority that protect the lakes' headwater, shorelines, storm water management, and the impact of development around the lakes.
- II. The Village should continue to take actions to protect and enhance the urban forest, such as record keeping, tree planting, species diversification, disease and insect control measures and encouraging privately owned planting and conservation.
- III. The Impervious Surface Area ordinance should be enforced.
- IV. Shoreline buffer zones should be encouraged for lakefront property.
- V. The Village should continue to educate and encourage the use of non-phosphorous fertilizers within the Village.
- VI. Leaf burning is desired by a majority of the residents and the current existing burning schedule should be maintained.
- VII. Efforts and education need to be accelerated regarding the flora destruction due to invasive species including but not limited to Buckthorn and Garlic Mustard. New homeowners and those that construct home additions should be encouraged to remove invasive species prior to receiving final occupancy.



Section 8: TRANSPORTATION

Policy Objectives:

- I. The Village should prepare detailed design objectives for all State and County roadway corridors within the community, negotiate agreements with state and county highway departments where necessary, and monitor the desired improvements. Such sustainable improvements should reduce hazards, maintain the countryside character of roadways, and protect residential properties from the impact of light, noise, air pollution, and possible damage generated by increased vehicular traffic.
- II. The Village should monitor State plans to modify the Rt. 59 corridor layout.
- III. Slower speed limits on Roberts Road, Kelsey Road, and on Route 59 should be explored with the State and County.
- IV. The Village should continue to inquire into the securing of a PACE public bus stop near the Village entrance on Rt. 59.
- V. It is recommended that the Village establish noise-control setback lines in coordination with IDOT noise impact data.
- VI. The Village should begin discussions and coordination regarding the establishment of natural walking trails around the Village.
- VII. Bike paths should be constructed to link all areas of the Village.
- VIII. Cross walks for pedestrians and bicycles need to be negotiated with the State and County, and developed to allow easy access to the commercial area at Rt. 59 and Kelsey Road, as well as to cross the highway to the Tower Lakes area east of Highway 59 and from the south side of Roberts Rd. to the north side, as appropriate.



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