

2005 ANNUAL REPORT



CITY OF MUSKEGO PARKS & TRAILS

Recreation trails are facilities located within the existing or planned rights-of-way. These trails serve to link the City of Muskego together with a system of safe and functional off-street recreation trails to facilitate such activities as running, biking, cross-country skiing, in-line skating, hiking, and nature study.

Recreation trails are thought of as extensions of the transportation system for the City and are intended for the exclusive or preferential use of non-motorized transportation modes.



Recreation trails follow utility and principle arterial road corridors to facilitate travel across the City and to connect to other trails in the region. A Citywide system of supplementary local trails is also developed to connect the existing and planned City of Muskego parks and open space sites and Muskego County Parks.



PREPARED BY:
CITY OF MUSKEGO PLANNING DEPARTMENT

2005 Planning Annual Report

This annual report provides an overview of the Planning Department's progress on departmental projects and various community growth issues for the year. The Planning Department promotes both the careful development of land, and the preservation of Muskego's natural resources. To accomplish this, the Department is involved a variety of programs, including current and long range planning, geographic information systems, economic development, zoning administration, lake management, urban forestry, and conservation management. The Department's role also includes the dissemination of this information to the public, and coordination with county, regional, state, and federal officials. The enclosed information provides a detailed look at the recent accomplishments of Planning Department staff while also providing yearly statistical info on how the City is growing on an annual basis. The statistical info helps all of us to better plan our community, while the project information enables the City to see how the Planning Department has functioned as part of the local government in Muskego.

Mission Statement

Muskego is planned each and every day by professional staff whose mission is to:

Promote the orderly development of Muskego in an efficient and aesthetic manner through long-range and current planning, provide public information and data on planning issues, and coordinate related areas of geographic information systems, economic development, zoning administration, urban forestry, and conservation management.

2005 Planning Department Staff

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Planning Activities

Miscellaneous Planning Items

Mayor's Task Force on Janesville Road Reconstruction

In late 2005, the Planning Department aided in leading the Mayor's Task Force (MTF) on Janesville Road Reconstruction. The MTF was created to study and pose recommendations relating to the design concepts that would be a part of the future Janesville Road reconstruction that is slated in the next few years for the portion of Janesville Road between Moorland Road and Pioneer Drive. Planning Department staff is providing recommendations and reasoning as to what design implementations may be best fit along the reconstruction route. The Mayor's Task Force will be working on design implementation relating to: how the street segments will be planned (Boulevards, turning lanes, etc.), if utilities should be buried, where landscaping should go, where recreation trails should be, if street pavement treatments should be included, where street lighting should occur, and if street furniture should be included anywhere along the route. Ultimately, the MTF will hold public informational meetings once their recommendations are set. The recommendations will be sent onto the Public Works Committee and the Common Council before then moving onto Waukesha County for future implementation. The MTF will continue their meetings throughout early 2006.

Comprehensive Plan Updates

The survey that was developed and sent out to 1,500 random residents of the City of Muskego in December 2004 was completed in early 2005. The survey related to many important issues facing the City of Muskego including a variety of questions about economic development, education, park activities, and more.

The survey ended up yielding a response rate of 34% and provided many open comments as to where the people are having issues with how the City is run and as to where they believe the City should be concentrating their time. The results of the project will assist the City in making many important decisions for a future Comprehensive Plan. The City currently has an adopted 2010 Comprehensive Plan that expresses the City's long-term visions, goals, and objectives with respect to the overall quality of life in Muskego. Through resident participation we hope to understand how those visions have changed and we look forward to incorporating any comments and suggestions in updating our current Comprehensive Plan.

Zoning Code Rewrite

The Zoning Code rewrite is now near completion. Due to many alternative projects during 2005 and difficulties in remapping the new zoning districts, the rewrite was put on hold. However, the code is about ready to begin implementation. Staff is near completion of the 300+ page ordinance and

hopes to begin committee meeting adoption and public information meetings in early 2006.

Zoning is the way the governments control the physical development of land and the kinds of uses to which each individual property may be allowed. The City currently has Chapter 17 of their Municipal Code dedicated to Zoning, which has been utilized and amended since 1963. Many aspects of the code have been in dire need of updates as a result of non-conformities and discrepancies. As a result, the Planning Department began the process to rewrite the entire Zoning Code for the City in 2005. New zoning categories were added and some removed. The ultimate goal is to have a code that is easier to understand, eliminates non-conformities, and is adjusted to fit the flavor of the present times.

Plan Commission Items

There were 127 approved resolutions in 2005, along with 5 deferred resolutions (until 2006), 4 resolutions that were approved for denial, 1 removed resolution, and 2 defeated resolutions. There were 7 resolutions that were carried over from 2004 that were approved in 2005. The Plan Commission carried 9 resolutions from 2005 over to the 2006 approval year.

The Plan Commission approved a wide variety of items. Here is a look at some of the numbers of the items that they approved in 2005:

- Sign Applications (requiring Plan Commission approval) – 5 approved
- Annual and Biennial Reviews – 13 approved
- Concept/Sketch CSMs – 2 approved (plus 1 defeated)
- CSMs – 15 approved (plus 1 defeated and 1 deferred until 2006)
- Extraterritorial CSMs – 5 approved
- Concept/Sketch Plats – 2 approved (plus 1 deferred until 2006)
- Preliminary Subdivision Plats – 6 approved (plus 1 defeated and 1 on docket until 2006)
- Final Subdivision Plats – 6 approved
- Extraterritorial Final Subdivision Plats – None approved
- BSOs & BSO Amendments (see below)

Building, Site, and Operation Plans (BSO)

In 2005 the Plan Commission saw 14 new BSO plans come in front of them for approvals, which is an increase from 8 last year. 11 of those were approved, 1 was denied, and 2 were deferred until 2006. Also in 2005, Plan Commission saw 31 BSO Amendments come in front of them for approvals, which is an increase from 16 last year. 30 of the amendments were approved and 1 was deferred until 2006.

Some of the major BSOs and BSO Amendments were for the following companies/organizations:

- Raz Hair Design - Remodel Existing Building
- Inpro Corporation - Building Alterations
- Muskego Animal Hospital - Addition
- Shell Gas Station (f.k.a Marathon Gas Station) - Complete Remodel
- Animal Doctor Inc. - Relocation and Remodel
- Olson Outdoor Power - Relocation and Remodel
- Janesville Retail Center - 16,500 Sq Ft New Building
- Sindic Auto Sales - Addition
- G & G Specialized Carriers - 14,300 Sq Ft New Building
- Release the Hounds Dog Daycare - Remodel Tenant Space
- M & I Bank - 4,640 Sq Ft New Building
- Burbach Builders Mini-Storage - Mini Storage Approval
- Waukesha State Bank - 5,517 Sq Ft New Building
- Preferred Fitness - Remodel Tenant Space
- Muskego Lakes Country Club - New Maintenance Building
- Terra Firma Landscaping - Site Alternations
- Auto Zone & Retail Center -12,921 Sq Ft New Building
- Pioneer Inn - Building & Site Alterations
- Lindale Villas Condos – Site Layout and Building Design Approval
- 4 Two-Family Structures - Northfield Green Subdivision

BSO amendments can consist of a number of different items. Some of the items that BSO amendments have contained are additions, alterations, site work (i.e. parking lot work, lighting, landscaping, fences, etc.), and signage. Some of the BSO items that the Plan Department and Plan Commission have reviewed are for single changes while others have been for numerous changes to entire sites.

Zoning Board of Appeals

The City of Muskego saw an increase in the number of requested variances in 2005. This year there were 9 appeals that came in front of the Board of Appeals, which is up from 7 last year. 5 of which were granted, 3 were denied, and 1 was deferred until 2006. The Board of Appeals had the need to hold 7 meetings in 2005, which is up from 3 last year.

Land Development and Divisions

The Planning Department aided in the platting of many new parcels in the City for residential use (See Map 1). There were no approved final plats containing commercial lots in 2006. There were 2 new commercial lots created through a CSM. Here are some of those statistics relating to land divisions:

Subdivision Plats

During 2005, the City (Common Council) approved 8 final subdivision plats totaling 139 single-family lots and 19 outlots, consisting of 139.49 total acres. There also were 2 re-approved final plats that were originally approved in 2005. The re-approvals were needed due to time concerns and/or slight alterations.

As a comparison, in 2004 the City approved 6 final subdivision plats totaling 132 single-family lots, 19 two-family lots, 1 commercial lot, and 17 outlots; consisting of 156.56 total acres.

Kenwood Place (RS-3/OPD)

- 37 single-family lots and 1 outlot
- 26.40 total acres (19.45 acres of residential lots, 2.16 acres of outlot, and 4.79 acres of right-of-way).
- Majority of the lots range between 15,000 SF and 20,000 SF in size.

This Subdivision is located to the east of Hillendale Drive and to the south of Lembezeder Drive. Access to the majority of the lots is gained from the previously mentioned roads. Access to 2 of the lots is off of Wentland Drive. Lot #1 of this development is a larger parcel and it still contains the original home of the farm of which was divided for this development.

Boxhorn Reserve (RSE/COPD)

- 16 single-family lots and 2 outlots
- 20.54 total acres (10.15 acres of residential lots, 8.67 acres of outlots, and 1.72 acres of right-of-way).
- Majority of the lots range between 17,000 SF and 23,000 SF in size.

This subdivision is a conservation subdivision by design and is located at the northwest corner of North Cape Road and Boxhorn Drive. Access to this development is gained from Boxhorn Drive. Most of the lots get their access through the subdivision street, but 3 of the lots have direct access to Boxhorn Drive. Approximately 52.8% of this development was preserved as open space. The largest of the outlots was dedicated to the City for Conservation Purposes. Also, there are going to be prairie grasses/plants planted to help restore the lands around the stormwater management ponds to a high environmental quality.

Fireside Orchard Addition #1 (RS-1)

- 5 single-family lots
- 4.82 total acres (4.56 acres of residential lots, and 0.26 acres of right-of-way).
- All of the lots are about 30,000 SF in size.

This subdivision is located off of Hillendale Drive just north of Janesville Road. Access to this development is via one point off of Hillendale Drive onto Fireside Drive. The development utilizes the existing zoning creating lots of 30,000 square feet or greater. This is an addition to Fireside Orchard Subdivision approved in 2004.

Forest Glen (RS-2/OPD)

- 27 single-family lots and 5 outlots
- 36.89 total acres (13.22 acres of residential lots, 18.18 acres of outlots, and 5.49 acres of right-of-way).
- Majority of the lots range between 20,000 SF and 22,000 SF in size.

This subdivision is located to the north of Janesville Road across from Bay Lane Drive. Access to this subdivision is gained off of Janesville Road. This subdivision encompasses some wetlands while making sure that all wetlands are protected in outlots. There is a street spurring to the north for any future development that may occur off of Hedgewood Drive. Outlot #5 of this development is currently zoned multi-family and will most likely be developed in the future.

Overlook at Crystal Lake (RS-2 - unsewered)

- 8 single-family lots and 3 outlots
- 15.78 total acres (11.57 acres of residential lots, 2.57 acres of outlots, and 1.64 acres of right-of-way).
- Majority of the lots range between 58,000 SF and 67,000 SF in size.

This Subdivision is located to the east of Lake Denoon. Access is gained off of Muskego Dam Road. The northwestern edge of the subdivision is Crystal Lake. One of the outlots has been dedicated to the City of Muskego for access to Crystal Lake. Most of the wetlands are located on outlots to help ensure their protection. This development is the only subdivision this year that does not have sanitary sewer.

Weatherwood Courts (RS-3)

- 20 single-family lots and 1 outlot
- 11.22 total acres (8.71 acres of residential lots, 0.61 acres of outlot, and 1.9 acres right-of-way).
- Majority of the lots range between 15,000 SF and 20,000 SF in size.

This subdivision is located on the southeastern corner of North Cape Road and Ryan Road. This subdivision gains access from Ryan Road. The eastern edge of this development abuts the Waukesha/Milwaukee County line.

The Nursery (RS-2)

- 6 single-family lots and 1 outlot

- 4.22 total acres (2.89 acres of residential lots, 0.27 acres of outlot, and 1.06 acres of right-of-way).
- Majority of the lots are about 20,000 SF in size.

This subdivision is located off of McShane Drive just east of Tudor Oak Nursing Home. Access to this development is via one point off of McShane Drive. Lot #6 within this development contains wetlands and the City required that a split rail fence be installed along the wetland area to further ensure that the wetland area remains preserved.

Copper Oaks (RS-2/OPD)

(F.k.a. Valley View Estates)

- 20 single-family lots and 6 outlots
- 19.62 total acres (12.35 acres of residential lots, 3.67 acres of outlots, and 3.6 acres of right-of-way).
- Majority of the lots range between 20,000 SF and 29,000 SF in size.

This subdivision is located off of Martin Drive just east of Ranch Drive. Access to this development is via one point off of Martin Drive. 5 of the lots within this development along the southern plat boundary are lots that are split by a creek. Due to this, each of the lots actually is comprised of two parts, a lot and an outlot. The owner of the lots along the southern plat boundary own the adjacent outlot as well as their buildable lots.

Preliminary Plats

During 2005, the City approved 7 preliminary plats, which was down from 8 in 2004.

Extraterritorial Plats

During 2005, the City did not approve any extraterritorial preliminary or final plats. In 2004 two extraterritorial final and two extraterritorial preliminary plats were approved.

Condominium Plats

During 2005, the City approved 1 condo project totaling 48 units and 4.22 acres. In 2004 there were 2 approved condo projects containing 96 units and 18.22 acres.

Lindale Villas (RSM/OPD)

- Developed by Greg Petruski
- 13.47 Acres of Development
- Multi-family development with two 4-unit buildings and five 8-unit buildings.

This development is located on Martine Drive, just to the northwest of Janesville Road. All buildings are 2 stories. Each unit is either a first floor unit or a second floor unit, all with two car-attached garages. The materials of the building include brick, stone, hardi-plank siding, and dimensional shingles. In this development the buildings are situated on a

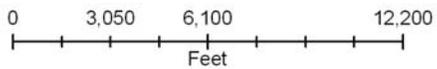
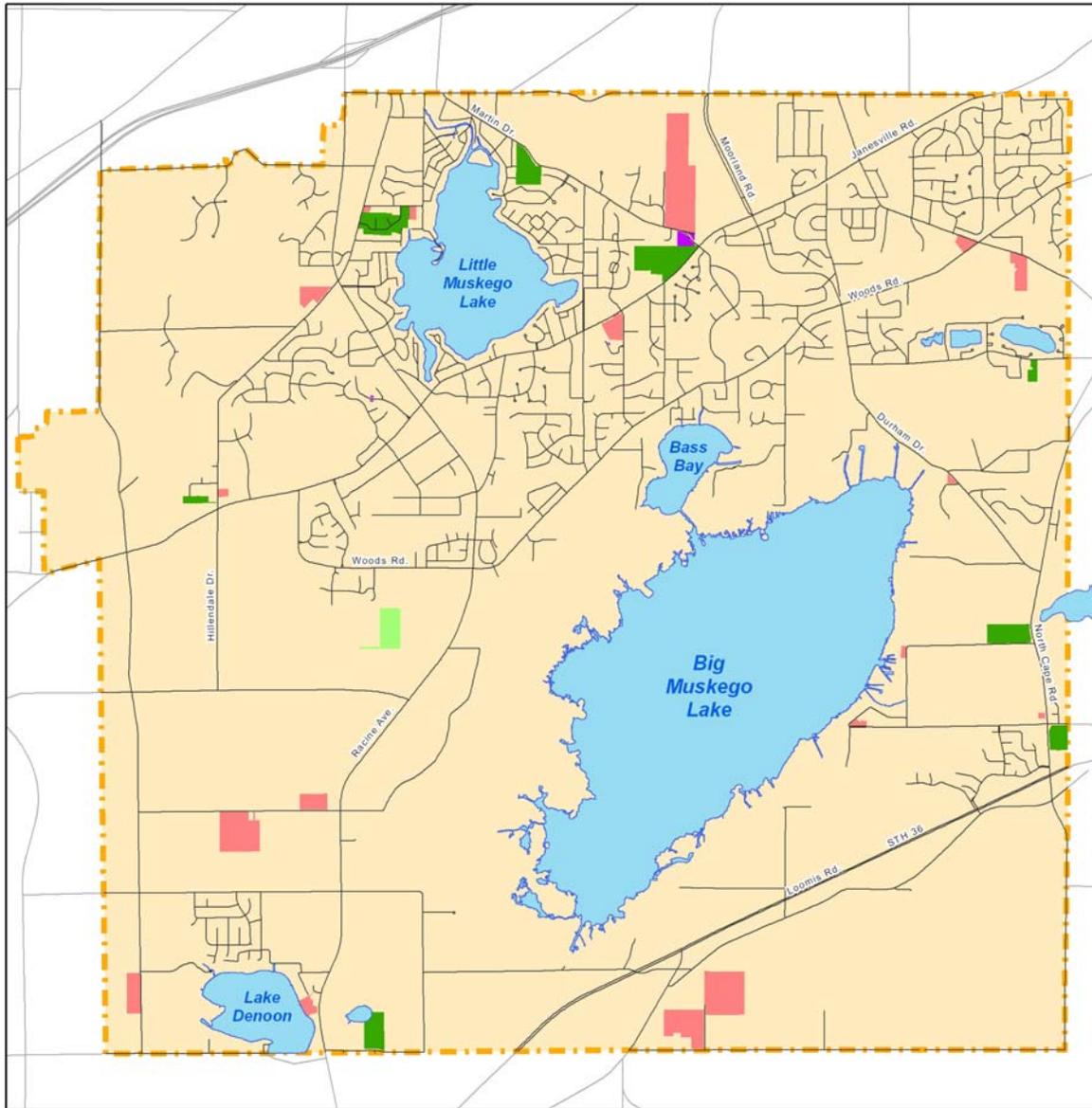
private road. This condo development was approved by the Planning Commission through a Building, Site, and Operation Plan (BSO). The Planning Commission reviewed the BSO for items such as site layout, building design, building materials, landscaping, etc. The site layout and building designs changed during the BSO review process.

Also, in 2005 the City approved 3 apartments buildings to be converted into condos. This created 24 additional new condo units.

Certified Survey Maps (CSM)

- During 2005, the City approved 18 Certified Survey Maps creating 33 new lots (53 total lots including the parent parcels). This is in comparison to 2004 when the City approved 20 Certified Survey Maps creating 27 new lots (48 total lots including the parent parcels)
- During 2005, 5 Extraterritorial CSMs between the Towns of Norway, Vernon, and Waterford containing a total of 13 lots were approved. This is in comparison to 2004 when the City approved 10 Extraterritorial CSMs containing 27 lots.

Map 1 2005 Development and Land Divisions



Legend

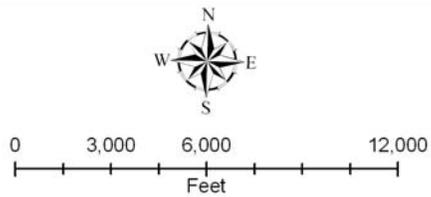
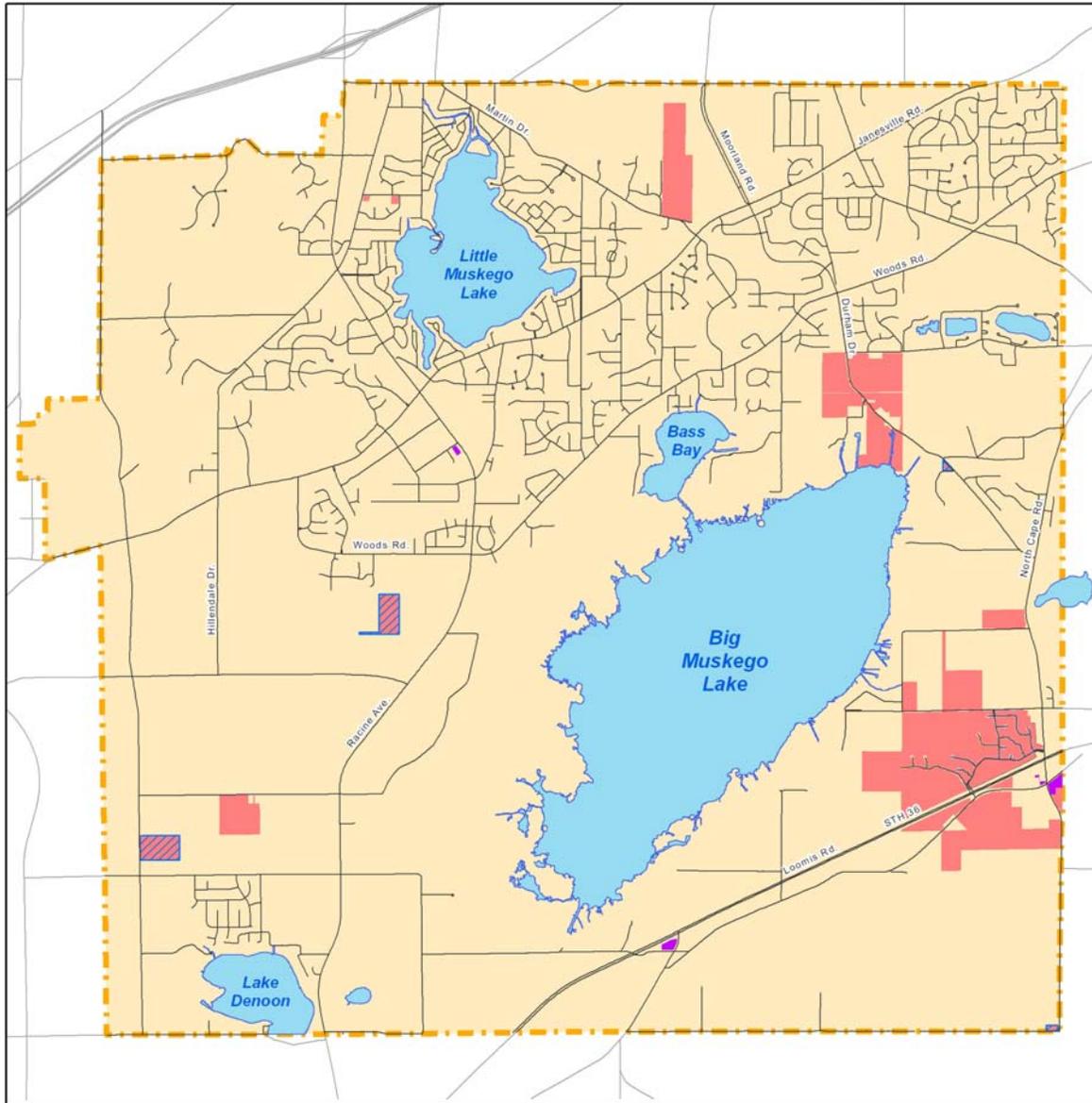
- Roadways
- Municipal Boundary
- Lakes
- CSM
- Condo
- Preliminary Plat
- Final Plat

Rezoning, 2010 Plan Amendments, and Conditional Use Grants

In 2005 the number of approved Rezonings held steady compared to last year while Land Use Amendments dropped (See Map 2). There were two denied rezonings this year. Here is a look at how the land uses changed in Muskego during 2005:

- *13 Approved Rezonings in 2005* - The majority of the rezonings that occurred this year were for the purpose of a land division of some type. Also, 70% of the rezonings granted in 2005 related to residential zonings. In comparison to this year, there were 13 rezonings that occurred in 2004.
- *4 Comprehensive 2010 Plan amendments in 2005* - The City maintains an adopted Comprehensive Plan to guide the use of development in the City of Muskego. At times, this plan needs amending, usually in conjunction with rezonings, in order to allow certain land uses. Amendments are warranted as land use patterns change over time due to roadway or other infrastructure improvements. In comparison to this year, there were 6 Comprehensive 2010 Plan amendments that occurred in 2004.
- *5 approved (new or amended) Conditional Use Grants, 1 denied Conditional Use Grant, and 1 Condition Use Grant Renewal* - Conditional uses are approved by the City's Plan Commission to allow other types of land uses on properties where it is believed the use needs extra requirements (Such as annual reviews) in order to appropriately govern them. Conditional uses were approved or amended this year for a dog day care facility, mini-warehouse facilities, and auto sales/service. The denial was for a tree service/landscape business and the renewal was for an asphalt plant. In comparison to this year, there were 3 approved Conditional Use Grants, 1 denial, and 1 renewal that occurred in 2004.

Map 2 Zoning, 2010 Land Use, & CUG Changes



Legend

- Roadways
- Municipal Boundary
- Lakes
- 2010 Land Use Changes
- Zoning Changes
- CUG Changes

Housing

The Planning Department is highly involved in the building permit process for residential and commercial/industrial projects. Each permit is examined for conformity relating to a variety of aspects including setbacks, open space, height, floor area, and Plan Commission approvals.

In 2005 there were 151 single-family new home permits, which is down from the 182 single-family new home permits in 2004. We saw a rise this year within the commercial/industrial sector. In 2005 we had 29 permits for commercial and industrial alterations/additions and 10 permits for commercial and industrial new construction. In 2004 we only had 10 commercial/industrial permits (alterations, addition, and new construction)(See Map 3 for Building Permit Info).

2005 Housing Statistics

- Average assessment for homes as of January 1, 2005 = \$261,000*
Average assessment for homes as of January 1, 2004 = \$193,400
(*There was a re-evaluation done in 2005)
- Average sale of a single-family residence for 2005 = \$279,300
Average sale of a single-family residence for 2004 = \$278,200
- Reported average valuation for new homes in 2005 = \$233,958 for 151 new homes, in 2004 there were 182 new home permits with an average reported value of \$210,046, and in 2003 there were 178 new home permits with an average reported value of \$201,160
(As determined by the Building Permit reported values)
- Commercial Alterations/Additions average valuations in 2005 = \$71,051 for 29 permits
(As determined by the Building Permit reported values)
- Commercial New Construction average valuations in 2005 = \$516,500 for 10 permits
(As determined by the Building Permit reported values)

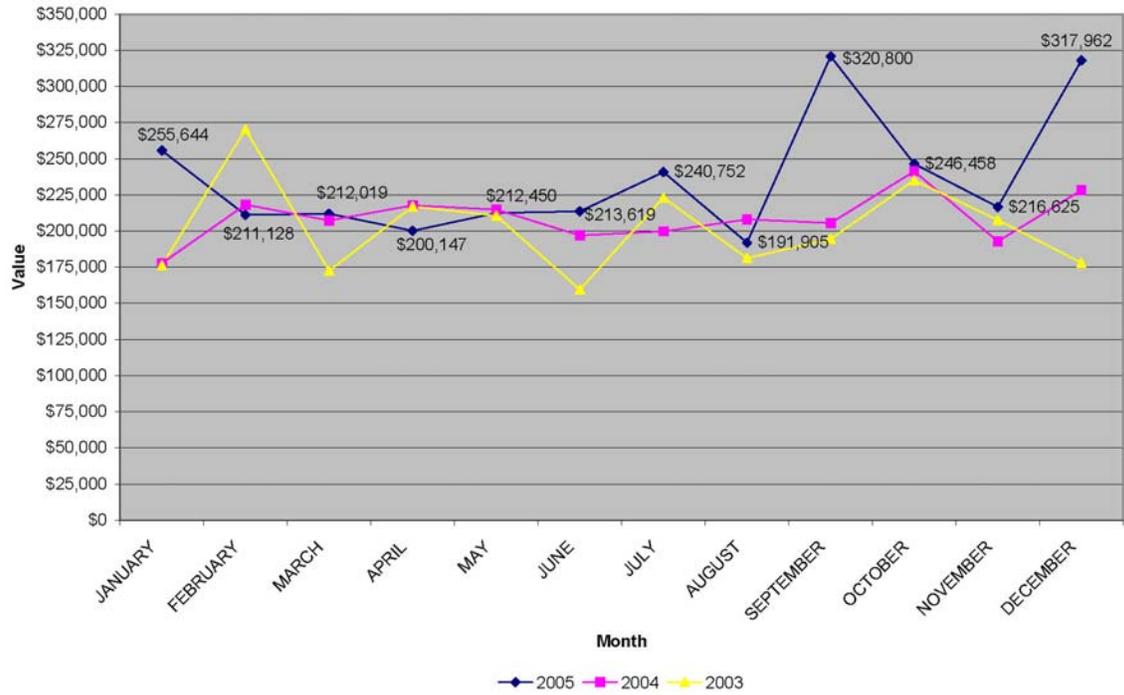
See the following graphs for the following information:

- *Graph 1* - Month-by-month average single family new home values (2003-2005)
- *Graph 2* - Month-by-month total permit numbers (2003-2005)

The following information was taken from the information entered on the building permit applications.

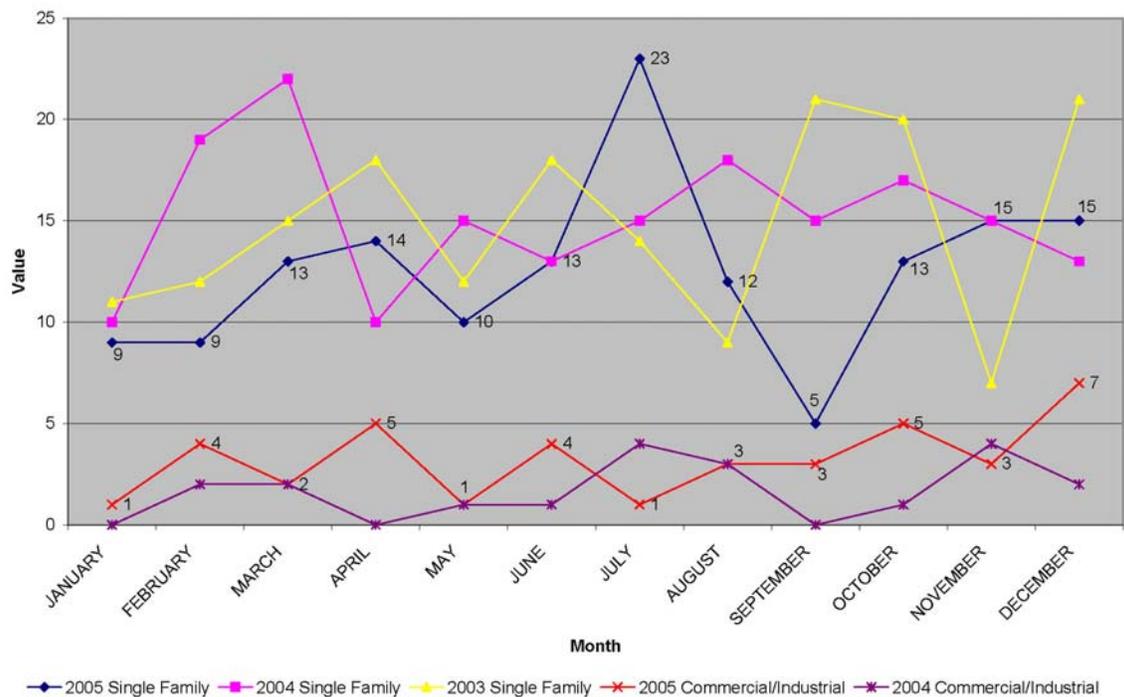
Graph 1

Average Single Family Home Value Per Permit

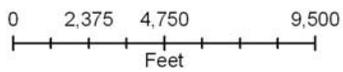
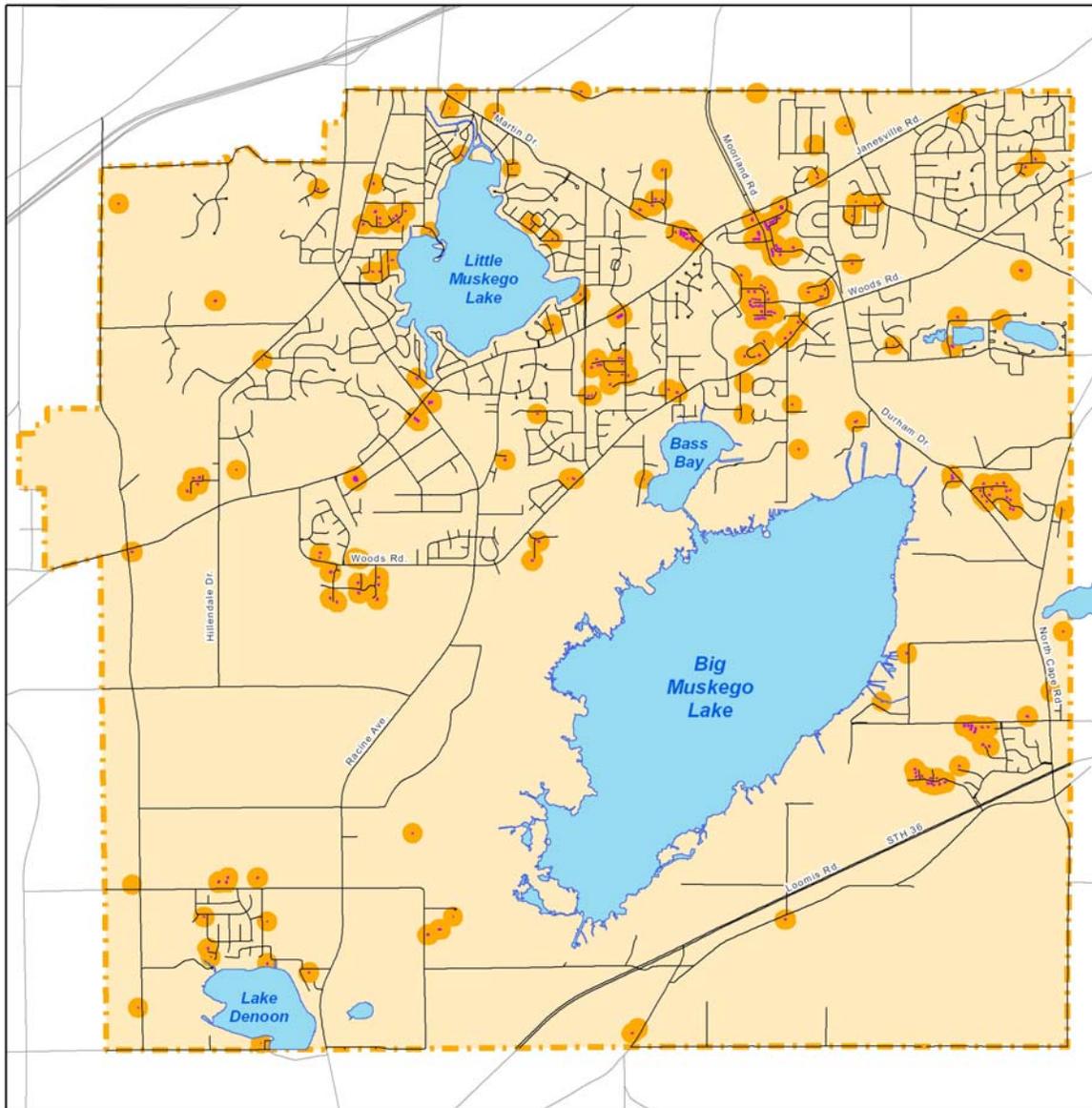


Graph 2

Permits by Month



Map 3 2005 New Construction



Note:
The "Built Areas - 300' Structure Buffer"
is a representation of development nodes.

Also, the structures shown on this map
are an approximation. A few of the
structures may have been built prior to
2005, but not entered into our GIS
system until 2005.

Legend

-  Roadways
-  Municipal Boundary
-  Lakes
-  2005 New Construction
-  Built Areas - 300' Structure Buffer

Geographical Information System Activities

In 2005, the City of Muskego Planning Department made significant improvements to its GIS products and services.

MapMuskego Websites

MapMuskego, the City's interactive mapping website, has been maintained with up-to-date information such as Property boundaries, Zoning, Land Use, Building footprints, Sewer and Water facilities. Based on staff feedback, the websites were modified in 2005 to provide easier access to mapping information.

The Planning staff supports seven different MapMuskego websites. These include:

- Standard Maps (PDF Map Library - public)
- General Information (Interactive website - public)
- Aerial Photos (Interactive historic photographs website - public)
- Zoning (Interactive Planning Dept. website - internal)
- Utilities (Interactive Public Works Dept. website - internal)
- Voting (Interactive Clerks Dept. website - internal)
- Building & Engineering (Interactive Building Dept. website - internal)
- Parks & Recreation (Interactive Parks Dept. website - internal)

Planning & Zoning **MapMuskego**

Overview Zoom In Zoom Out Zoom Full Pan Identify Find Measure Clear Print Map Print Report

Layers Legend Search FAQ Links

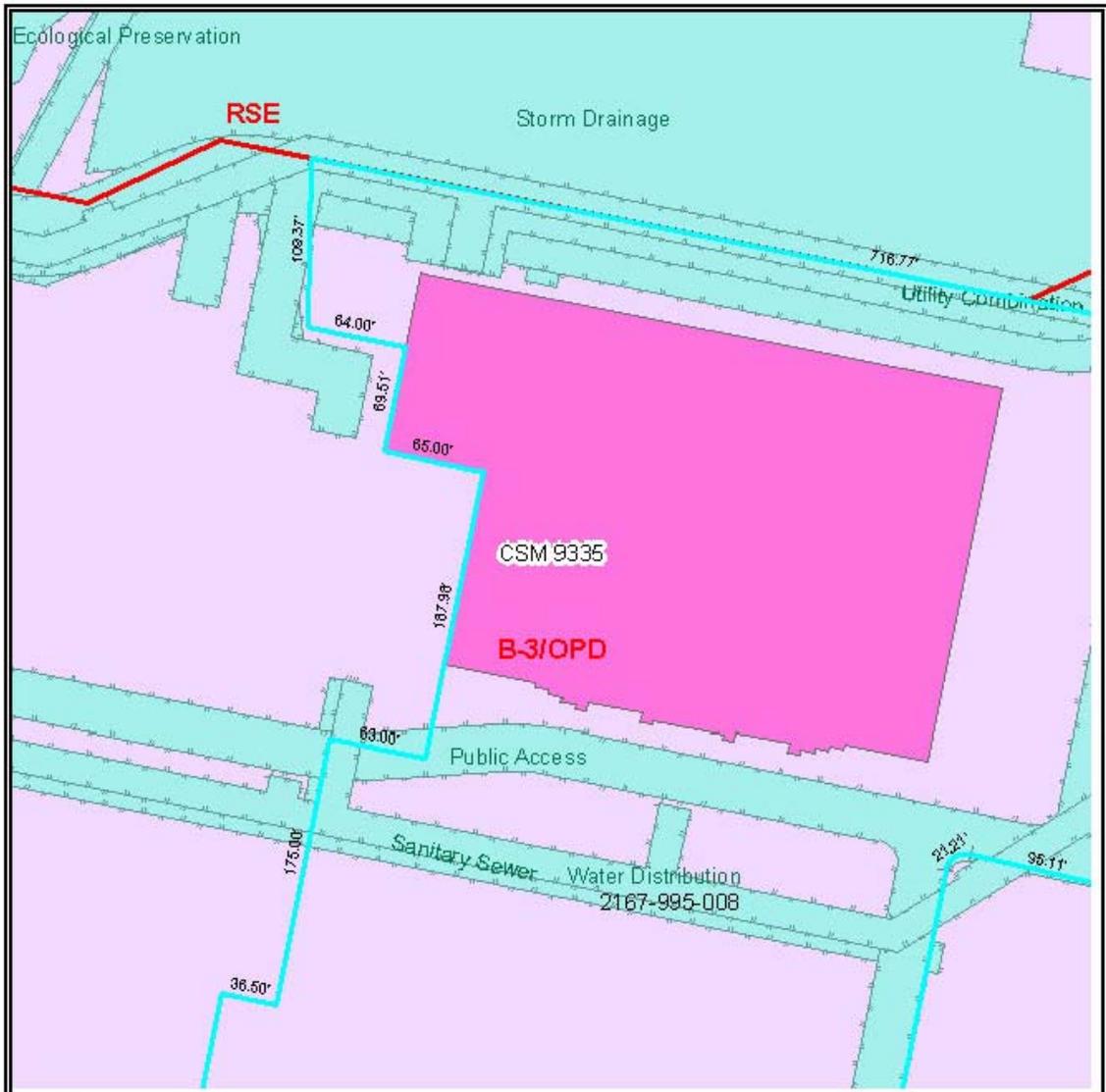
Property
Result 1 of 1

Taxkey	MSKC2167995008
Owner	KOHL'S DEPARTME
Mailing Add	N56W17000 RIDGEWOOD DRIVE
City ST	MENOMONEE FALLS WI
Property Add	S68W15388 JANESVILLE
Acres	11.38
TOTALV	6222200

Map created with ArcIMS. Copyright (C) 2004 ESRI, Inc.

Building | Voting | Parks | Utilities | Identify

Above: Intranet (in-house) Planning Dept. website.



Property					
Rec#	TAXKEY	OWNER	MAIL ADDRESS	CITY STATE	ZIPCODE PROPERTY ADDRESS
1	MSK2167995008	KOHL'S DEPARTMENT STORES INC	N56W17000 RIDGEWOOD DRIVE	MENOMONEE FALLS WI	53051 S68W15388 JANESVILLE
Structures					
Rec#	TAX KEY	PROPERTY ADDRESS			
1	MSK2167995008	S68W15388 JANESVILLE RD			
Zoning					
Rec#	ZONING	DESCRIPTION			
1	B-3/CPD	General Business with a Planned Development Overlay			
NOTES					

Above: Example of Customized Print Report Tool.

Web statistics indicate that MapMuskego.com averages 4,000 hits per day. Since its launch in March 2005, the website has had a total of 551,628 hits and 6,473 visitors. Approximately 83% of visitors are from the general public and 17% are internal City staff.

New modifications to MapMuskego have allowed City Staff to navigate the websites more easily. Changes include the separation of the Layer/Legend tab as well as displaying table records in vertical instead of horizontal sequence. The consulting firm, Applied Data Consultants, Inc., who originally assisted in the creation of MapMuskego, worked with City GIS staff to further modify the websites.

Another modification that has greatly improved MapMuskego is the addition of hyperlinked HTML webpages. City GIS staff created an interactive webpage for each City park can be accessed by hyperlinks within MapMuskego's Parks website. The webpages include photographs of the parks and their amenities. This hyperlinking tool is also used in the Utilities website to bring up asbuilt maps of sewer and water plans.



Above and below: Hyperlinked webpage for Denoon Park.



Due to its experience with MapMuskego and expertise in ArcIMS, GIS staff served on the Evaluation Committee for Waukesha County's ArcIMS Webmapping Programming Tool RFP.

GIS User Survey

A questionnaire was sent to all City Departments in May of 2005 about MapMuskego and the City's GIS. User responses indicated a majority used MapMuskego for internet GIS, followed by Waukesha County's Map website. The Standard PDF Maps website was the most often used, followed by the General Public interactive site, and the customized Department interactive websites were the least used. MapMuskego's ease of use was rated "Okay" by 47% of respondents, "Good" by 26%, and "Excellent" by 5%. 22% had no opinion.

Customization features requested were pre-set custom searches (e.g., all properties in the WCA District), label creation, links to non-GIS data, more detailed maps, and more historical information.

Other comments from the Survey included requests for more training sessions and making the websites easier to navigate.

GIS Staff used the results of the survey to further customize and modify features in all the MapMuskego interactive websites.

GIS Training - Staff and Public

GIS staff conducted a number of training sessions on how to use MapMuskego throughout March and April 2005. These sessions were taught to interested staff in City Departments and at the Library. Public training sessions were also organized.

A "How To Use" pamphlet for MapMuskego was distributed to all City and Library staff. The pamphlets provided instructions on how to navigate the MapMuskego websites. Free copies were provided to the general public at the Planning/Engineering counter public access computer and at the Library.

City GIS staff also continued to keep their GIS knowledge current by taking online courses on ESRI software. These courses included:

- Storing Raster Data in a ArcSDE Geodatabase
- Creating and Editing Geodatabase Topology with ArcGIS 9
- Creating, Editing, and Managing Geodatabases in ArcGIS 9
- Geoprocessing with ArcGIS Desktop
- Customizing ArcIMS

Maps Created and Updated

A wide variety of maps are created and maintained by GIS staff for the City. Almost every department in the city has customized mapping needs. Examples of departmental maps are as follows:

- Assessor: Cadastrals, Revaluations, Lake Districts
- Chamber of Commerce: folded City Street and Points of Interest
- Election: Polling Locations, Ward and Aldermanic Districts
- Engineering: Sewersheds, Capacity Areas, MMSD
- Parks: Trails, Future Park Locations, Program Guide supplemental maps, Lake access, Waterbugs
- Planning: Zoning, Plan Commission & Public Hearing Exhibits, Cadastral
- Public Works: Hydrant Flushing, Sewer Laterals, System Areas
- Urban Forestry: Conservation Priorities, Rx Burn Areas, Prairies, Wetlands, Woodlands
- Police: Street Maps, Dispatch, Neighborhood Watch, Custom incidents
- Fire: Street Maps, Fire Station boundaries
- Other: General public requests (e.g., aerial photograph maps of properties)

ArcSDE

ArcSDE is a gateway to spatial data that is housed in a database management system on the City's PLANNING server. ArcSDE has been beneficial by allowing connections to data in separate servers that can be converted into GIS data.

In addition to the existing open database connection (ODC) to Tidemark Permit System files on the Building server (as documented in the Planning Dept. 2004 Annual Report) another connection was made to Water Utility data on the City server. This connection was developed by City GIS staff with the assistance of consultant firm, R.A. Smith & Associates, Inc., as part of the Water Distribution System geodatabase model design. Waterview software tables were designed to copy into SQL tables in ArcSDE and link to GIS Water Distribution data. These linked tables provided detailed information about valves, meters, and hydrants.

ArcSDE continues to improve Muskego GIS through disconnected editing. These tools allow asbuilt engineering consultants, such as Ruckert-Mielke, Inc. and R.A. Smith & Associates to remotely check-in water and sewer edits directly to Muskego's ArcSDE databases. This ensures that editors have the most up-to-date and accurate city data as well as reducing the amount of City staff time for quality control and data editing clean-up. This process has resulted in more efficient and timely updates to utilities GIS data.

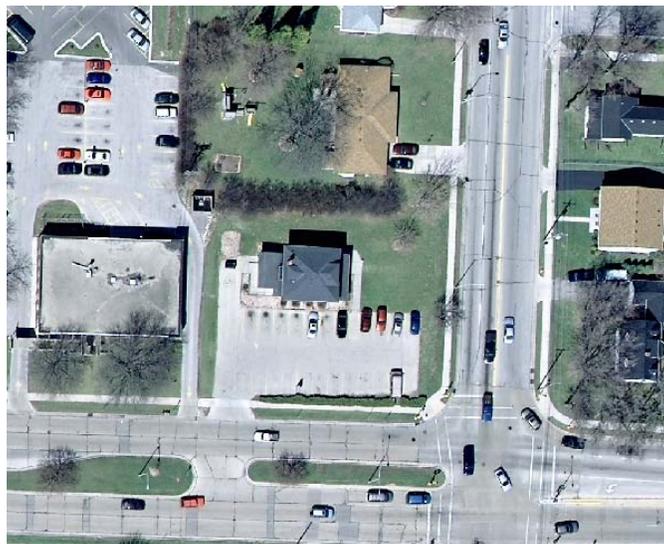
Water Distribution Geodatabase Model

Muskego GIS added a comprehensive geodatabase to ArcSDE in 2005. Existing water utility data was reorganized into a model diagram schema developed by R.A. Smith & Associates. Water points, lines, and polygons were reclassified and cleaned up to fit into the new geodatabase model. The geodatabase enables geometric network connections to be made between different data layers. These connections provide the ability for water flow analysis and scenario tests to be done using GIS.

A major feature of the new Water Distribution geodatabase is the built-in link to Waterview table data. The Public Works Department uses Waterview software to record and update information about hydrants, valves, and meters. Using ArcSDE, the Water Distribution geodatabase connects to these tables and allows GIS users to view Waterview information in ArcMap.

Orthophotography Flight/ Planimetric Mapping

In May 2005 Southeastern Wisconsin Regional Planning Commission (SEWRPC) contracted with AEROMETRIC, Inc. to take digital aerial photography (i.e., orthophotos) of Muskego and surrounding municipalities and counties. This flight was part of SEWRPC's Orthophotography Program project that is done on a revolving five-year basis. The flight was taken at 3,000 ft height with a direct digital camera (Z/I Imaging DMC). The flight will produce black & white and color aerial photographs at 100 scale accuracy with 0.5' pixel resolution. Waukesha County opted to receive color orthophotos as their deliverables from this project. The City of Muskego, along with all other Waukesha County municipalities and townships, will receive digital copies of these color orthophotos at no charge courtesy of Waukesha County.



Above: Sample of color orthophotography 100 scale, 0.5' pixel resolution. Image shows Pewaukee Road intersection near Waukesha County Courthouse.

The budget savings provided by this has given Muskego a unique opportunity to do planimetric mapping based off the new orthophotos. The City currently has a limited number of planimetric feature data from Waukesha County's Planimetric Mapping project in 1999-2000. It was decided that it would greatly benefit the City to update existing features and map new features.

Planimetric features are GIS data digitized from orthophotography. These mapped features can include topography, structures, fence lines, water boundaries, utility poles, or trails. Planimetric data is useful to GIS and can provide better, more accurate maps for many different departments in the City (e.g., Engineering, Planning, Public Works).

Together with the Cities of Brookfield, Waukesha, and the Village of Menomonee Falls, a RFP for Planimetric Mapping Updates was created. Each community identified different planimetric features to be mapped based on data need and cost benefit. The communities awarded Ayres & Associates, Inc. the contract to perform the mapping. (Ayres & Assoc. is a consulting firm which has done orthophotography work for the City of Muskego in the past - e.g., 2003 Orthophotography project). Ayres & Assoc. will begin mapping Muskego's planimetric features in January with delivery of product estimated for March 2006.

Planimetric features chosen by Muskego to be mapped include:

- Buildings
- Culverts
- Driveways
- Tanks/Silos
- Gravel Areas
- Paved Areas
- Paved Roads
- Poles
- Water Body
- Water Line

ArcGIS 9.1

Muskego's GIS software, ArcGIS, was upgraded to a new version (9.1) in fall, 2005. This upgrade involved minor changes to the City's maps. The addition of an advanced label tool, Maplex, provided an opportunity to redesign and reprint many City standard maps. Also advanced Export tools allowed for faster and easier conversion of GIS data into AutoCAD file types.

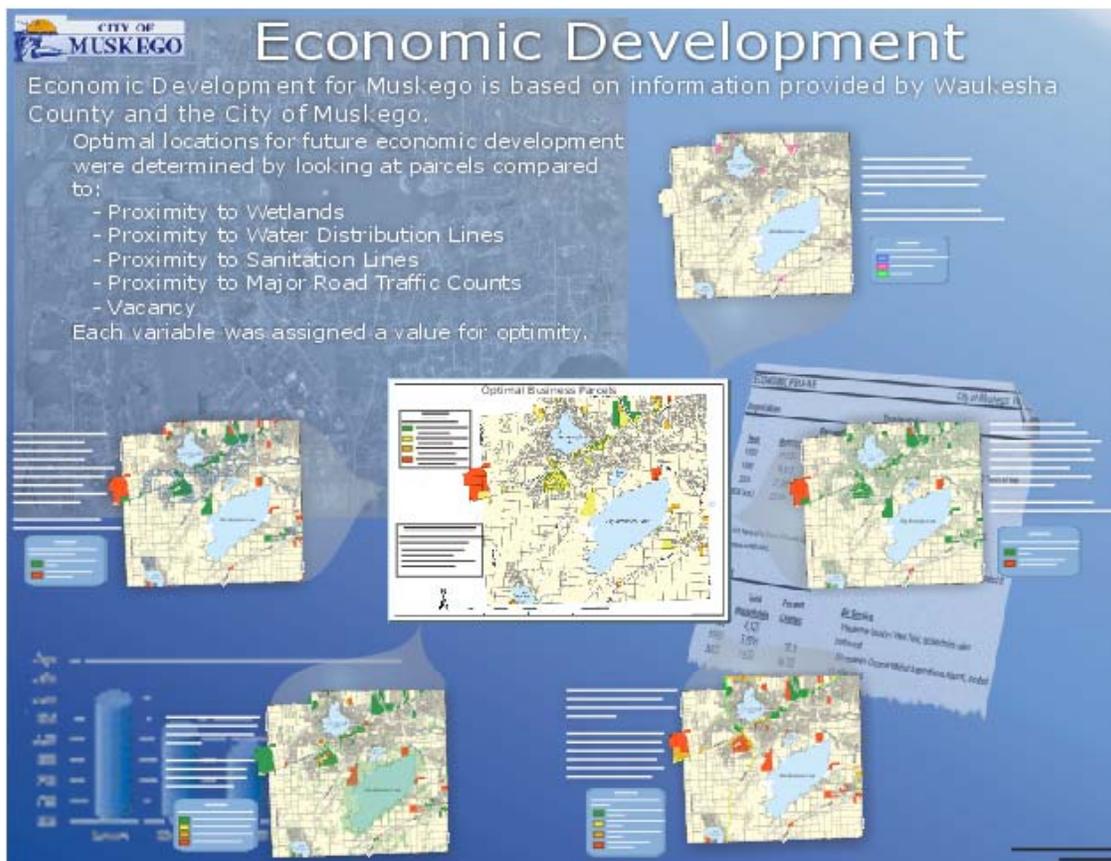
Economic Development Study

City GIS staff produced a study on Economic Development in Muskego during the summer of 2005. The project looked for optimal locations for future economic development based on various attributes. These included:

- Business parcel vacancy
- Business parcels related to Traffic Counts
- Business parcels related to the location of Wetlands
- Business parcels related to Water Distribution lines
- Business parcels related to Sanitation lines

Once each business parcel was calculated according to the above attributes, they were added to determine the overall economic development opportunities within the city.

An Economic Development GIS map poster was created to summarize and detail the study's results.



As part of the project, business parcels by business type were also categorized. Results include:

Automotive include gas stations, service centers, or auto related retail.

Banking include banks.

Church & Religious Services include churches within a business zone.

Clothing & Fashion include clothing stores.

Construction & Contractors include heating, concrete, masonry, asphalt, and similar uses.

Distribution/Manufacturing/Industrial include distribution, manufacturing, and industrial uses.

Equipment Rental includes leased or rental equipment uses.

Home & Garden include florists, lawn & garden equipment, landscaping, and pest control uses.

Insurance/Real Estate includes insurance offices and real estate offices.

Medical & Dental include medical and dental services.

Moving & Storage includes storage facilities.

Commercial include 3 or more tenants and are generally retail.

Pets & Vets include grooming and veterinarian clinics.

Restaurants & Lounges include restaurants, taverns, bowling alleys with a tavern, taverns & resort, and similar uses.

Retail/Services include general business, salons, cabinet making, grocery stores, craft stores, and similar uses.

Sports & Recreation include golf courses, country clubs, sporting goods retail, and similar uses.

Easements & Structures

City GIS staff created and updated subdivision easements in 2005. Using Final Plat files from the Assessor's office, easement boundaries were mapped using ArcMap editing tools in geodatabase format. The edits were then imported into Muskego's ArcSDE.

Structure polygons were updated by City GIS staff as part of an ongoing project.

GIS Day

The City of Muskego celebrated its 5th annual National GIS Day with presentations for 4th Grade students at Country Meadows Elementary School and 7th Grade students at Lake Denoon Middle School. Students were shown a PowerPoint presentation about GIS. The Country Meadows students participated in a Geography quiz while the Denoon Middle School students learned to use MapMuskego.com to search for properties.

New versions of GIS Day information posters were created and displayed at a kiosk in the Muskego Public Library during National Geography Week.



ESRI Wisconsin User Group

For the 5th year in a row, City GIS staff served on the EWUG Conference Committee as the Vendor Relations Coordinator. The annual conference, held in Green Bay was a success with over 200 individuals with interest in GIS and ESRI products attending.

Wisconsin Land Information Association

Muskego continued its membership in the Wisconsin Land Information Association (WLIA). The City won 1st place in the Brochure Map category for the Chamber of Commerce Street Map at the 2005 WLIA Annual Conference in Green Bay.

Conservation and Forestry Activities

Conservation

The goals and objectives of the adopted Conservation Plan continued to be implemented in 2005. To specifically address land management activities within City-owned properties, the Conservation Coordinator drafted a 5-year conservation work plan that was later adopted by the Conservation Commission. The work plan covers invasive species management, prescribed burning, prairie planting, and other restoration projects.

Engel Property Acquisition and Development

Development of the 140-acre former Engel farm as a conservation area continued to be the biggest project of the year. The City received a payment of \$137,000 for enrollment of approximately 67 acres of lands into USDA's Wetlands Reserve Program. This program grants an easement to the USDA to assure that the land remains managed as wetland and also pays 100% of the wetland restoration costs. Grant payments were used to pay down much of the debt service for the property. Other major developments on the site:



Prairie at Bluhm Park

- ❑ A site development plan and timeline were drafted.
- ❑ With assistance from the Conservation Coordinator, Ryan Agner led an eagle scout project in which over 1,300 trees were planted.
- ❑ A prescribed burn was conducted on approximately 2 acres of oak woodlands
- ❑ Invasive shrubs were cut and herbicide-controlled on 3.5 acres of woodlands.
- ❑ A network of almost five miles of hiking trails was planned. Bill McCormick led a project that established 1,000 feet of woodchip trail and constructed signs that will hold mapping and interpretive information for self-guided nature hikes.
- ❑ Over 18 acres of prairie that had been planted in the previous fall were maintained and showed successful establishment for a first year planting.
- ❑ A prairie seed mix containing 49 species of wildflowers and grasses were planted on 12 additional acres of upland agricultural fields in the late fall of 2005. This brings the total prairie plantings on the site to over 30 acres.

Prescribed Burns for 2005

Prescribed burning, also called controlled burning, is a valuable tool for restoring native areas, wildlife habitat restoration, hazard reductions, control of plant diseases, and invasive species control. In 2005, prescribed burns were conducted at Ridges Conservation Property, Bluhm Park, Guernsey Meadows, Denoon Park, Luther Parker Cemetery, and the Engel Conservation Area. Burn sites collectively totaled about 60 acres and showed significant success in controlling weeds and woody invasive plants. The system employed to provide notification and information regarding prescribed burns to adjacent property owners proved to be quite effective - a few residents called for further information and only one complaint was received regarding smoke.

Other Conservation Activities for 2005

- The Conservation Commission met six times in 2005 to guide implementation of the objectives of the adopted Conservation Plan. The Commission reviewed development plans and made recommendations to minimize the impact to the City's remaining lands of environmental significance.
- Conservation volunteers contributed over 40 man-hours to help eradicate invasive teasel from the Engel property, cut weeds from the library prairie planting, and collect seed at Luther Parker Cemetery.
- Invasive buckthorn and honeysuckle shrubs were controlled in other City woodlands (Denoon Park, and Guernsey Meadows) through cutting, removal, and herbicide application.
- A more durable structure was created to hold interpretive signs on the boardwalk trail through Betty's Woods at Veterans' Memorial Park. This design will also be utilized at the Engel site.
- Recent prairie plantings in Horn, Manchester Hill, Veterans, Kurth, Bluhm, and Denoon parks were maintained and showed good development in 2005.

Urban Forestry

The urban forest consists of street trees, park trees, natural woodlots, and everywhere else trees grow in the City. Highlights for Muskego's 2005 urban forestry management:

- Successfully obtained a \$3,575.00 grant from DNR to defray program costs. Projects included hosting a workshop, staff training, and planting of seedling trees.
- Planned Janesville Road and Moorland Road street and boulevard tree plantings. Oversaw the installation of trees by contractor.
- Continued routine care of park trees including mulching, watering, and pruning.
- Investigated and identified hazardous trees and planned for their removal.

- Monitored Gypsy moth reports in the City.
- Reviewed commercial & residential landscape plans and subdivision street tree plans.
- Muskego received Tree City USA designation for the sixth consecutive year.



Parent Ospreys with "Pedro" their male offspring
at Big Muskego Lake

Lakes

Muskego's major surface waters, perhaps more than any other feature, define our community's character. Collectively, surface waters occupy about 15% of the City's surface area. Assuring their health improves the quality of life in the community. Through the year, the Conservation Coordinator fielded numerous

citizen inquiries regarding lake ecology and shoreline development issues – serving as a local source of information and a liaison to the DNR. Projects to control purple loosestrife and Eurasian Water Milfoil were also conducted.

Water Quality of Muskego's Major Water Bodies

To keep a finger on the pulse of their health, water quality data were collected on five sampling days for Lake Denoon, Little Muskego Lake, Bass Bay, and Big Muskego Lake. Water quality data collected in 2005 generally showed that for most parameters measured, all of Muskego's lakes sustained their water quality from previous years.

Lake Denoon, over the past few years, has showed improved water transparency (clarity) than readings taken in the early nineties. Most of the other parameters have remained constant.



Testing Water Quality on Bass Bay

Little Muskego Lake continued to have remarkably good water transparency readings that began around 2000. However this improvement is a mixed blessing as the invasion of zebra mussels (with their filter feeding habits) is the primary reason for this improvement. With clearer water, rooted aquatic plants can grow more prolifically – subsequently Little Muskego Lake has had a greater need for nuisance weed control for plants like Eurasian Water Milfoil.

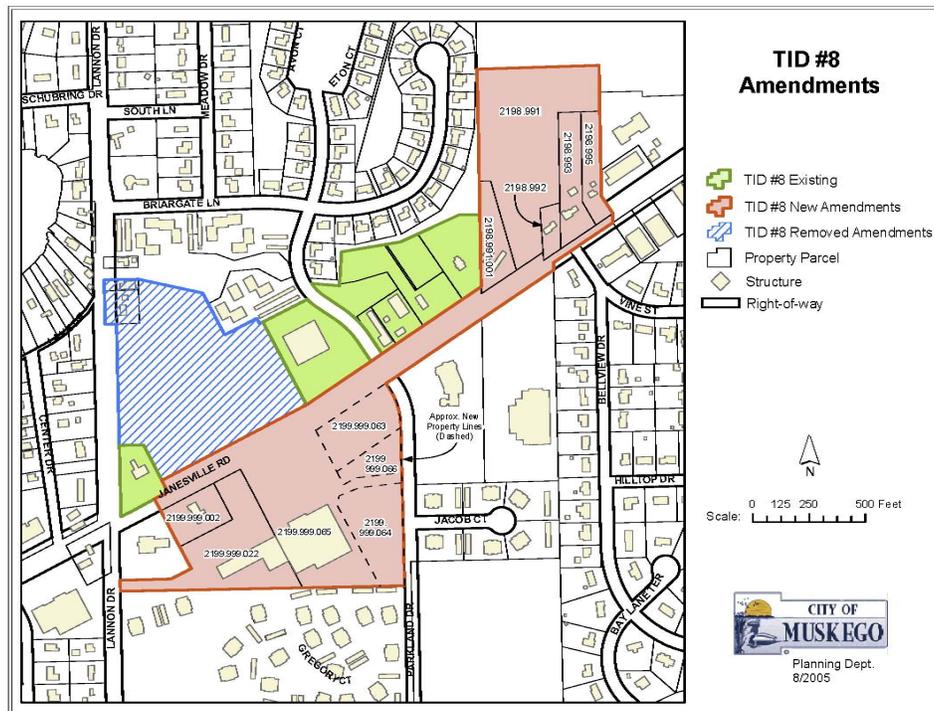
Following the rehabilitation project of 1996, Big Muskego Lake continued its trend of water quality improvement. The lake has significantly clearer water, lower levels of algae, and a more diverse plant community than before the restoration. As a result there has been outstanding fishing, hunting, and wildlife viewing. A milestone was reached in 2005 with the first successful nesting of ospreys on Big Muskego Lake in several decades.

Economic Development Activities

TID 8 Amendment

During 2005, Planning Department staff teamed with Ehler’s and Associates to amend the current Tax Incremental Financing District #8 (TID #8). The existing TID is located along Janesville Road in downtown Muskego and had seen limited development activity since it was adopted. The originally anticipated developments didn’t occur while certain infrastructure improvements were implemented. Due to the lack of development, the TID was not on pace to pay itself off in the years allowed.

In order to assure that the TID does become viable staff proposed to remove some parcels from the existing TID while adding a few others (See Map below). The parcels added to the TID are perceived to have more economic development opportunities upon them. Once those developments would take place, the TID could then be repaid faster. Ultimately, the amendment was anticipated to spur new development and pay off the TID debt quicker which would in turn relinquish the new tax bases created back onto the City tax roll.



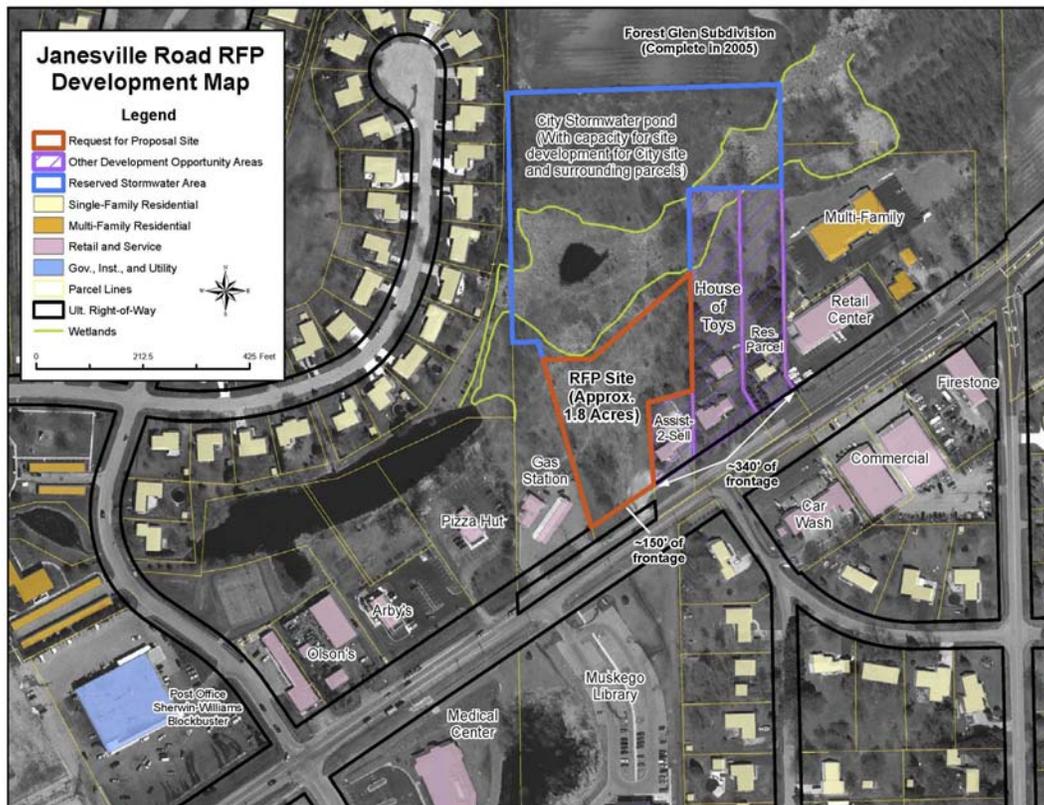
The amendments to the TID were reported to and approved by the Community Development Authority and the Common Council. Lastly, the TID amendment had to be approved by a Joint Review Board (JVB) made up of representatives from Waukesha County, WCTC, Muskego/Norway School District, a City Representative, and a City resident. The JVB approved the TID after many requested changes were made. Ultimately, the JVB reported that that the City of

Muskego TID #8 Amendment is exemplary and will be used as a guide for other municipalities as a quality written document.

Now, the TID #8 is scheduled to pay itself off within 15 years. The parcels amended into the TID may end up paying it off even faster as many development opportunities have already begun to occur (See Janesville Road RFP below).

Janesville Road – Request for Proposal (RFP)

In the early 2000s, the City bought a 5-acre property along Janesville Road in order to build a future regional stormwater pond due to drainage problems in the surrounding vicinity. The City completed that regional pond in 2005. Upon completion it was found that only the northern half was required for the stormwater pond and that area directly fronting Janesville Road could be used for development potential. Planning Department staff went to the City Council to get approval to allow the Community Development Authority (CDA) to have the development rights to the developable portion of the lands. The intention was to allow the CDA to orchestrate a Request for Proposal (RFP) that hopefully would produce a quality development meeting the design guides and redevelopment plans that were in place governing the parcel. In April 2005 the Common Council did allow the CDA to begin an RFP process.



Planning staff sent out an initial RFP in May 2005, although due to the lack of incentives, the RFP was not answered. However, upon implementing the lands

into the aforementioned TID #8, the RFP was again sent out in November 2005. This time around the RFP was answered. The developers not only intended on developing the City owned parcel, but also were looking to redeveloping existing parcels abutting the City owned land. The proposal included conceptual plans for a 30-unit condominium building to the north of the property and a 10,000 square foot retail convenience center abutting the Janesville Road frontage.



During the course of 2006 staff will be seeing the proposed development thru the implementation stages making sure the proper approvals are found via the CDA, Planning Commission, and City Council. This opportunity is a first for the City of Muskego in many ways as the City has not orchestrated a private development via an RFP process before and has not issued TID funds for private developments in the past. With time, the retail/condo mixed use development should be a catalyst for the downtown, while also aiding in paying off the existing TID #8 in a faster pace.



GIS User Survey 2005

- Results -

Surveys completed: 19/ 45 (42% response rate)

1. GIS Applications used:

Majority of respondents use MapMuskego (12), followed by Waukesha County Mapping (4), and ArcMap (2). Five respondents indicated they do not use GIS.

2. MapMuskego usage

Majority of respondents (5) didn't use MapMuskego. Others visit the site Rarely (4) and were evenly split between Weekly and Monthly (3). One respondent used it Daily.

3. Priority of use of MapMuskego's websites:

Standard PDF	232211111111	Most
Public Interactive	113332222222	Occasionally
Department Staff interactive	221123333333	Least

4. Primary reasons given for using MapMuskego:

"To help our customers (calls) find a particular property."

"To look at lot dimensions and to show/ tell taxpayers/ appraisers how to access."

"Find property information."

"Look at aerial, lot size, building locations - how property sits on site."

"Check to see what distance (voting) a property is located."

"For making sewer and water maps (system), hydrant and valves, manholes."

"Reference questions and to familiarize myself with the product."

"Both aerial and specific property."

"I've had reference questions on both (property search/ aerial photo)."

"Familiarize myself with the sites."

"Look for aerial photo."

5. MapMuskego's ease of use was rated "Excellent" by 5% of respondents, "Good" by 26%, "Okay" by 47% and 22% had no opinion.

6. Most respondents favored keeping MapMuskego the same over adding new customizations. (6/4)

7. Examples of customizations requested were a [pre-set custom search](#) (e.g., all properties in a WCA District), [create labels](#) for selections, [links to non-GIS data](#), [links to other websites](#), [more detailed maps](#), and [more historical](#) information.

8. The help guides and FAQ were considered more useful (6/2) than not.

9. Other suggestions to improve MapMuskego:

"When I need information regarding water mains or locates, I ask Scott or George to look on GIS for me."

"To be useful to the public, tax and other data should be provided. The "clicks" that pop-up and choice of legend/ layers is a bit cumbersome."

"Training sessions would be helpful."

"Keep it simplified - ease of use is important for those who need it to be user-friendly."

"Need more training or instruction."

"Needs to be easier to navigate."

"More specific as to how to type in an address. People get frustrated when they type their address and nothing comes up."