



City of Boyne City

Founded 1856

319 N. Lake Street

Boyne City, Michigan 49712
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Phone 231-582-6597
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AGENDA

BOYNE CITY PLANNING COMMISSION Monday, September 16, 2013, 5:00 p.m. Boyne City Hall



Scan QR code or go to
www.cityofboyne-city.com
click on Boards & Commissions for complete
agenda packets & minutes for each board

1. Call to Order
2. Roll Call - Excused Absences
3. Consent Agenda

The purpose of the consent agenda is to expedite business by grouping non-controversial items together to be acted upon by one Commission motion without discussion. Any member of the Commission, staff, or the public may ask that any item(s) on the consent agenda be removed to be addressed immediately following action on the remaining consent agenda items. Such requests will be respected.

Approval of minutes from August 19, Boyne City Planning Commission meeting.

4. Hearing Citizens Present (*Non-Agenda Items*)
5. Reports of Officers, Boards, Standing Committees
6. Unfinished Business
7. New Business
 - A. Marvin Loding Award review
 - B. Review Boyne City Master Plan Natural Resources Section
8. Staff Report
9. Good of the Order
10. Adjournment – Next Meeting, October 21, 2013

Individuals with disabilities requiring auxiliary aids or services in order to participate in municipal meetings may contact Boyne City Hall for assistance: Cindy Grice, City Clerk/Treasurer, 319 North Lake Street, Boyne City, MI 49712; phone (231) 582-0334

**Meeting of
August 19, 2013**

Record of the proceedings of the Boyne City Planning Commission meeting held at Boyne City Hall, 319 North Lake Street, on Monday, August 19, 2013 at 5:00 pm.

Call to Order

Chair MacKenzie called the meeting to order at 5:03 p.m.

Roll Call

Present: Gretchen Crum, George Ellwanger, Jim Kozlowski, Jane MacKenzie, Lori Meeder, Tom Neidhamer, Aaron Place, and Joe St. Dennis
Absent: Chris Frasz

Meeting Attendance

City Officials/Staff: Planning Director Scott McPherson, Assistant Planner / Zoning Administrator Annie Doyle and Clerk / Treasurer Cindy Grice
Public Present: Four

Consent Agenda

2013-08-19-11
Ellwanger moved, Meeder seconded, PASSED UNANIMOUSLY, a motion to approve the consent agenda. Approval of the July 15, 2013 Planning Commission minutes as presented.

**Comments on
Non-Agenda Items**

None

**Reports of Officers, Boards and
Standing Committees**

None

**Unfinished Business
New Business**

None

**Lewis Street Alley Vacation
Request**

Planning Director McPherson discussed the application submitted by Leon Dyer at 530 Lewis Street for the vacation of a public way. Also submitted was a petition from four other property owners. They are requesting the alley located between Franklin Street and Division, west of Lewis Street be vacated. The alley is 16.5' wide and 450 feet in length and runs between lots 28, 30, 32, 34, 35, 36, 37 and 50, 51, 52, 53, 41, 40, 39, 38 of C. G. Lewis Addition. Before an alley can be vacated by the City Commission, a recommendation on the proposed vacation request from the Planning Commission is required. There is one property owner who is not in favor of the alley vacation request.

Gretchen Crum confirmed with Scott that the objecting property owner did not use that area for parking and utilities in that alley.

Joe St. Dennis inquired about leaving an easement for future utilities. Scott said staff looked at the area and so no need for future utility installation on that property. Utility poles can be installed in right of ways.

Tom Neidhamer inquired if there was criteria the Planning Commission had to use to in that process. Scott, no. Mr. Neidhamer also inquired if we are land locking access and said we need to be careful to zone the property, not ownership? At this point, the alley would have to be developed in order to develop Alice Street.

Lori Meeder asked if there were others who might be impacted by this and do we have a lot of vacated alleys in town? Scott stated yes. It is a request that comes thru a few times a year. There are a few alleys that are accessed and maintained by the City.

George Ellwanger said it doesn't seem fair to that property owner who is not in favor of this because it will impact her taxes. The other property owners are fine and agree to this. Scott added that Mr. Dyer is the only one who doesn't have

access to the street right now. Any kind of access road would not be allowed to be built on that alley.

Jim Kozlowski said he would like to see it all vacated, not just portions of it.

2013-08-19-12

Crum moved, St. Dennis seconded, PASSED UNANIMOUSLY, a motion to approve to recommend to the City Commission, the proposed alley vacation request from Mr. Dyer.

**Pre-application for a
Maintenance Building
addition request by The
Harborage**

Planning Director Scott McPherson discussed the pre-application of The Harborage Condominium Association that was requested by their representatives to review the possibility of construction of a new building or adding on the existing building located on Association property at the corner of Division and Second Streets. In 1995, the City approved the relocation of a 40' x 70' maintenance building from its location on Second Street to be used for the storage of maintenance equipment owned and used by the association for maintenance and upkeep of the association properties. At the time of the approval, conditions were established that included no outdoor storage, landscaping and paving. A land reconfiguration was approved by the City that created the parcel in 1995 as well. In 2001, the Master Deed for the Harborage was amended to reconfigure the Maintenance Building parcel by acquiring approximately 3 acres of adjacent property. While the master deed amendment was recorded at the County, no record was found of a review of the lot reconfiguration being completed by the City. Also since 2001, the building has served as the maintenance and storage facility for The Harborage and the property has been used to varying degrees for outdoor storage. While the storage is well screened with a berm and mature vegetation, formal approve for the use of the property for outdoor storage has not been requested or approved.

Chair MacKenzie inquired if this is part of the PUD. Scott McPherson said it looks like a part of it is, then after another look, it is reviewed under a TRD.

Kevin Lavin from The Harborage said improvements to the property are taking place. They are cleaning off the shoreline and the maintenance area is a staging area for that project. They need an additional 1,400 square feet of unheated area to store their equipment. They don't want to store their boat trailers near their area. Scott said he has received calls concerning outdoor storage there in general. Mr. Lavin added they also think they can do a little more to screen the area. More screening to make it more appealing to the neighbors is a must.

Tom Neidhamer said the current building seems pretty unnoticeable.

George Ellwanger said he would like to see more screening, but would have no problem recommending this.

Jim Kozlowski asked if this parcel is fenced or secured and was informed it is buffered.

Staff Report

Scott McPherson said he and Annie Doyle went to the RCC Planning meeting recent. Annie is currently working on a public participation plan and that will need to be formalized. We are getting \$7,500 from an MEDC grant for the design charette. We are also going to try to initiate the Marvin Loding award. The idea came up at a recent City Commission meeting. Tom Neidhamer said he thinks it is fantastic to redo it. We should try to stick to residential and commercial awards. Maybe it should be reviewed before it's reinstated. Gretchen Crum added the spirit is there. Scott said he will bring it back on the next agenda.

Good of the Order

Jim Kozlowski said the people are driving on the sidewalk on the west end of the ball field on Vogel Street, near the Brook.

Adjournment

The next meeting of the Boyne City Planning Commission is scheduled for September 16, 2013 at 5:00 pm in the Auditorium.

****MOTION**

2013-08-19-13

Crum moved, Meeder seconded, PASSED UNANIMOUSLY a motion to adjourn the July 15, 2013 meeting at 6:03 p.m.

Jane MacKenzie, Chair

Cindy Grice, Clerk / Treasurer

Draft

CITY OF BOYNE CITY

To: Chair Jane MacKenzie and fellow Planning Commissioners

From: Scott McPherson, Planning Director

Date: September 16, 2013

Subject: Marvin Loding Award



The Marvin Loding Community Pride Award was established in 1986 and was designed to recognize individuals, businesses and industry. Awards were based on physical appearance of the property which included landscaping, renovation, appearance, maintenance or harmony with the neighborhood and for community spirit which included community involvement, civic contributions, leadership qualities or special contributions to the City.

The award was given out annually by the planning commission. Nominations could be submitted by anyone and the planning commission would review the nominations and vote on the awardees by a secret ballot. From 1986 to 2006 approximately 64 awards were given out to various individuals, groups, businesses and industries. Since 2007 the award has not be given out. At a recent City Commission meeting an inquiry was made in regards to the status of the award and the issue is being brought to the Planning Commission for discussion and direction.

Criteria

THE MARVIN LODING COMMUNITY PRIDE AWARD

for

CIVIC INVOLVEMENT AND HOME, BUSINESS OR INDUSTRY

Established December 15, 1986
Revised January 21, 1992 and August 16, 1999

Marvin Loding was a former Boyne City Mayor (3 terms), was an alderman on the Common Council before the adoption of the City Charter, and was Mayor Pro-tem of the first City Commission in 1960. He was also a Planning Commissioner, was active on the Zoning Board of Appeals, Commission on Aging, and served two terms on the Charlevoix County Board of Commissioners. He was active in the development of the North Boyne Launch Ramp and the Shelter House at Veterans Memorial Park. He and Commissioner Austin Sevener traveled around the country inspecting Wastewater Lagoons and were later instrumental in the engineering of the Boyne City Wastewater Lagoon System. As a volunteer, he spent a great deal of time working on the former Barn Mountain Ski Hill (now known as Avalanche Preserve).

Therefore, in recognition of this outstanding citizen, the City of Boyne City is proud to present these awards to honor those individuals who take pride in their home, business, or industry, and also those individuals who exhibit outstanding community spirit.

MARVIN LODING COMMUNITY PRIDE AWARD

Criteria

1. There are two divisions:
 - * Home, business, or industry.
 - * Community spirited individual or group.

2. The criteria for judging the Home, Business, or Industry Award will be principally for completed improvements of existing property in one or more of the following categories:
 - a. Landscaping.
 - b. Renovation.
 - c. Appearance.
 - d. Maintenance.
 - e. Harmonious with the neighborhood.

3. The criteria for judging the Community Spirited Individual or Group Award will be:
 - a. Outstanding community involvement.
 - b. Civic contributions.
 - c. Leadership qualities.
 - d. Special contributions to the City.

4. The selection process will be:
 - a. Step 1: By July 1, nominations will be made to the Planning Board by any citizen of Boyne City. The nomination form will be available at City Hall and the Chamber of Commerce.
 - b. Step 2: At the July meeting, the Planning Board makes the selections by secret ballot.
 - c. Step 3: The Mayor announces the winners and presents the awards in August.

NATURAL RESOURCES

Without a doubt, the greatest attractions for the residents and visitors of northwest Michigan is the area’s environment and natural features. Recreational activities such as hunting, fishing, golfing, skiing, snowmobiling, boating and a multitude of other outdoor activities attract people from all areas of Michigan, as well as from other states. Many long time visitors decide to move to the area upon retirement. Because of the abundant outdoor recreation opportunities, the natural environment significantly contributes to the quality of life in Boyne City as well as being an economic base and income generator.

Climate

The lake effect on Boyne City’s climate is significant throughout most of the year. The prevailing westerly winds, in combination with Lake Michigan to the west, produce this lake influence. The lake effect increases cloudiness and snowfall during the fall and winter and also modifies temperatures, keeping them cooler during the late spring and early summer, and warmer during the late fall and early winter. In the late winter as ice builds up on the lakes, Boyne City is subjected to temperature variations which are more closely associated with interior locations of the State. Diminished wind speeds or winds which do not traverse large unfrozen lakes often produce clearing skies and the colder temperatures expected at continental locations. Because the day-to-day weather is controlled by the movement of pressure systems across the nation, this area seldom experiences prolonged periods of hot, humid weather in the summer or extreme cold during the winter. Temperature and precipitation averages are shown in **Table 1**.

Period	Average Temperature			Average Precipitation	
	Max	Min	Mean	Total	Snow
Jan	28.3	13.1	20.7	2.34	31.0
Feb	32.0	13.0	22.5	1.55	20.8
Mar	42.3	20.0	31.2	1.82	10.6
Apr	57.2	31.8	44.5	2.48	4.1
May	69.8	41.8	55.8	2.92	0.3
Jun	78.7	51.7	65.2	2.91	0
Jul	82.9	56.4	69.7	2.65	0
Aug	80.8	55.5	68.1	3.67	0
Sep	72.6	49.0	59.0	3.83	0
Oct	59.2	38.6	48.9	3.89	0.8
Nov	44.8	29.9	37.3	3.05	12.7
Dec	32.7	20.0	26.3	2.66	31.3
Annual	56.8	35.1	45.9	33.77	111.6

Source: Michigan State Climatologist Office. Site: Boyne Falls MI, station 200925

Climate data from 1981 through 2010 show that the prevailing wind is westerly, averaging 9 mph. The average 1 P.M. relative humidity varies from 51% for May to 78% for December, and averages 63% annually. Summers are dominated by moderately warm temperatures with an average of 9 days exceeding the 90 F mark. In July and August of 2006 temperatures 100 F or higher recorded. The lake influence was reflected in the minimum temperatures; an average of 173 days was 32 F or lower, an average of 22 days was 0 F or lower. Historically, the highest average monthly maximum temperature of 88.8 F was recorded July 2006, and the lowest average monthly minimum temperature of 0.9 F was recorded February 1994.

Climate data from 1981 through 2010 show the average date of the last freezing temperature in the spring was June 5, while the average date of the first freezing temperature in the fall was September 11. The freeze-free period, or growing season, averaged 97.2 days annually. The average seasonal snowfall was 116.2 inches with 122 days per season averaging 1 inch or more of snow on the ground, but varied greatly from season to season.

Precipitation is usually distributed throughout the year with the crop season, April-September, receiving an average of 18.3 inches or 56 percent of the average annual. The average wettest month is September with 3.9 inches, while the average driest month is February with 1.39 inches. Summer precipitation comes mainly in the form of afternoon showers and thundershowers. Annually, thunderstorms will occur on an average of 26 days. Michigan is located on the northeast fringe of the Midwest tornado belt. The lower frequency of tornadoes occurring in Michigan may be due, in part, to the effect of the colder water of Lake Michigan during the spring and early summer months, a prime period of tornado activity.

Soils

The various kinds of soils in Boyne City differ from each other mainly because they developed from different kinds of parent materials, under different conditions of drainage, and for different lengths of time. The mineral soils were formed after the glaciers melted and the processes of soil formation began to alter the glacial debris. These soils are grouped by texture of parent material and natural drainage.

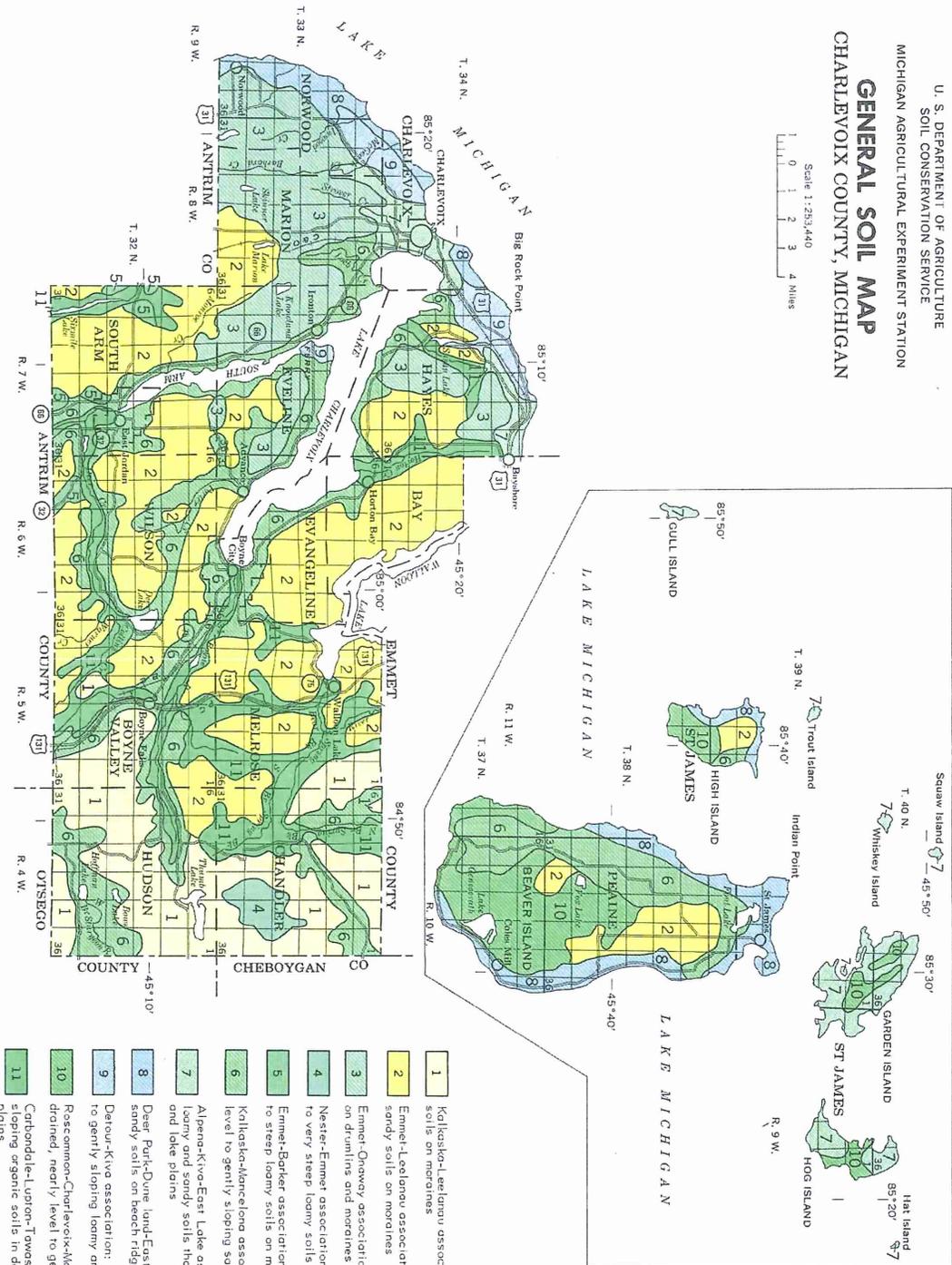
The descriptions of the general soil types in Boyne City are listed in **Table 2**. In Boyne City the majority of the soils are comprised primarily of Emmet-Leelanau Association and the Kalkaska-Mancelona Association. **Figures 1 - 5** show the general soil types and soils suitability and constraints in Boyne City.

Table 2 Boyne City General Soil Types	
Soil Type	Description
Emmet-Leelanau	Well drained, nearly level to very steep loamy and sandy soils on moraines
Kalkaska-Mancelona	Well drained or moderately well drained, nearly level to gently sloping sandy soils on lake plains and valley plains
Carbondale-Lupton-Tawas	Very poorly drained, nearly level to gently sloping organic soils in depressional areas on till plains, outwash plains, and lake plains

Source: Soil Conservation Service

U. S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE
GENERAL SOIL MAP
CHARLEVOIX COUNTY, MICHIGAN

Scale 1:253,440
1 0 1 2 3 4 Miles



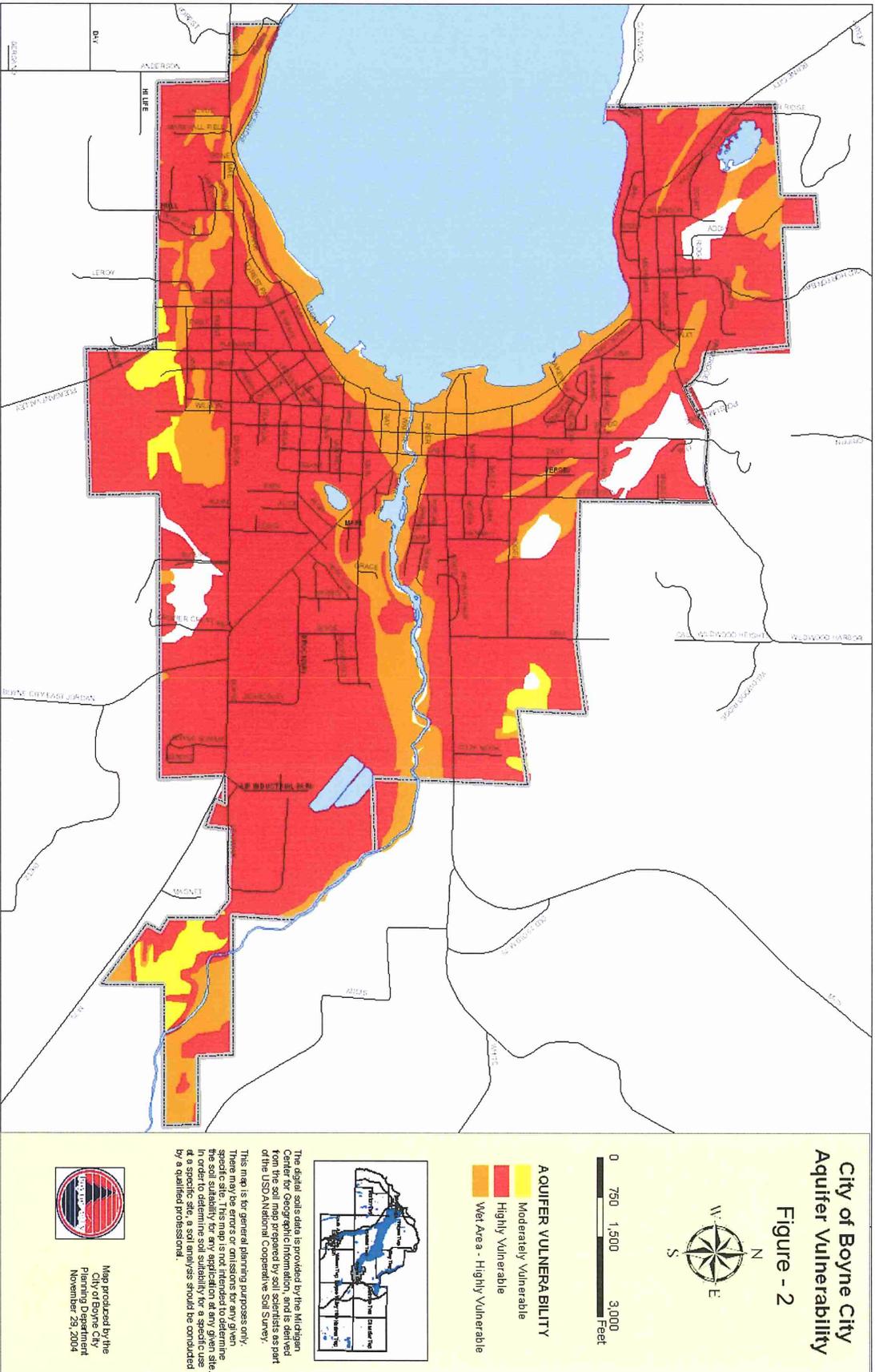
SOIL ASSOCIATIONS *

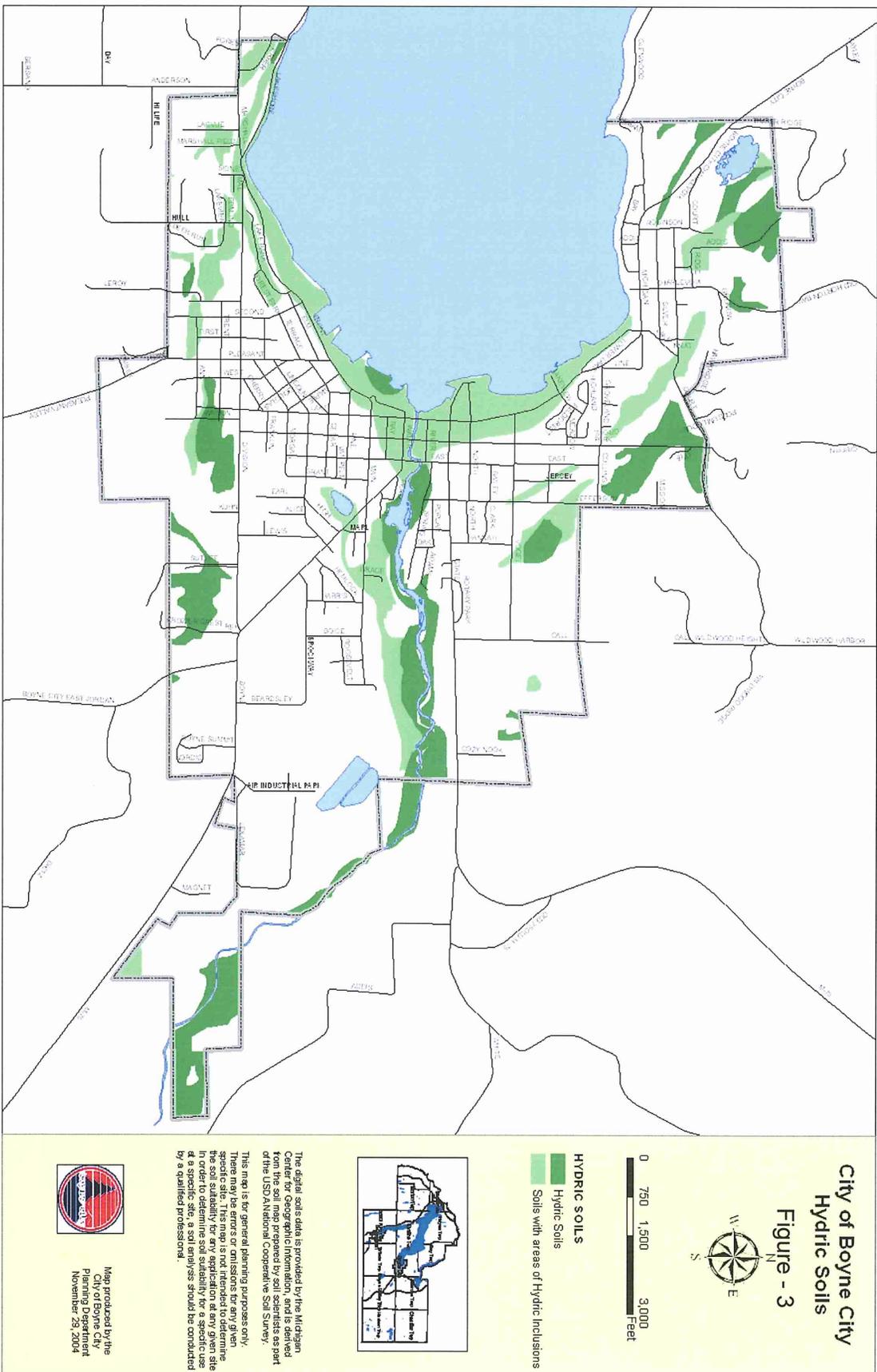
- 1 Kalkaska-Leelanau association: Well-drained, mainly sloping to very steep sandy soils on moraines
- 2 Emme-Leeleau association: Well-drained, nearly level to very steep loamy and sandy soils on moraines
- 3 Emme-Onaway association: Well-drained, nearly level to very steep loamy soils on drumlins and moraines
- 4 Nester-Emme association: Well drained or moderately well drained, nearly level to very steep loamy soils on hill plains and moraines
- 5 Emme-Barker association: Well drained or moderately well drained, gently sloping to steep loamy soils on moraines
- 6 Kalkaska-Leelanau association: Well drained or moderately well drained, nearly level to gently sloping sandy soils on lake plains and valley floors
- 7 Alpena-Kiva-East Lake association: Well-drained, nearly level to gently sloping loamy and sandy soils that are gravelly in places, on beach ridges, lake terraces, and lake plains
- 8 Deer Park-Dune land-Caspert association: Well-drained, nearly level to very steep sandy soils on beach ridges and dunes
- 9 Detour-Kiva association: Somewhat poorly drained and well-drained, nearly level to gently sloping loamy and sandy soils that are cobbly or gravelly on lake plains
- 10 Racemom-Charlevoix-Blackline association: Poorly drained and somewhat poorly drained, nearly level to gently sloping sandy and loamy soils on lake plains
- 11 Carbondale-Upton-Tawas association: Very poorly drained, nearly level to gently sloping organic soils in depressional areas on fill plains, outwash plains, and lake plains

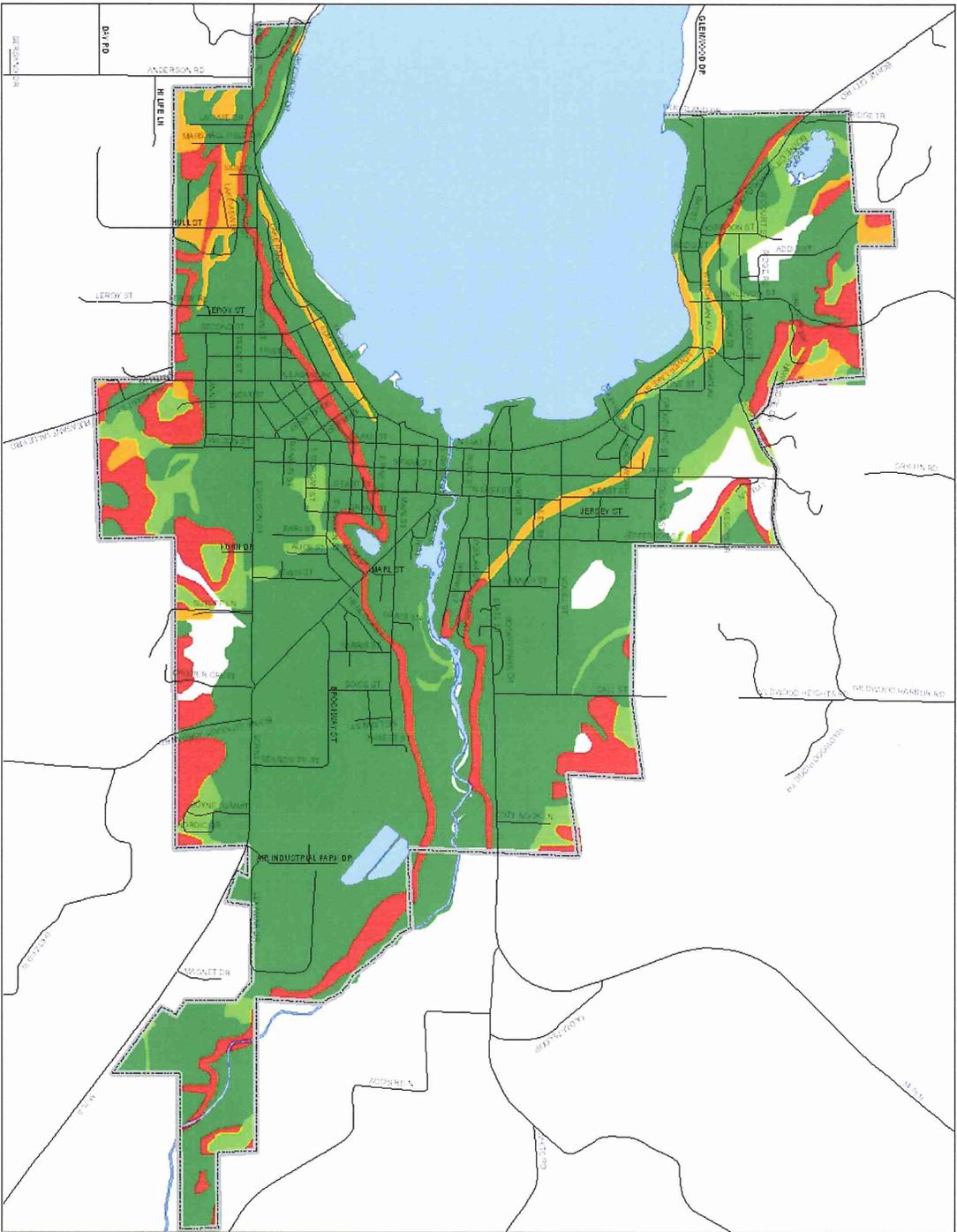
* Texture in the descriptive name refers to the surface layer of the major soils in each association

Compiled 1971

This map is for general planning. It shows only the major soil types and does not contain sufficient detail for operational planning.







City of Boyer City
Percent Slope

Figure - 4



PERCENT SLOPE

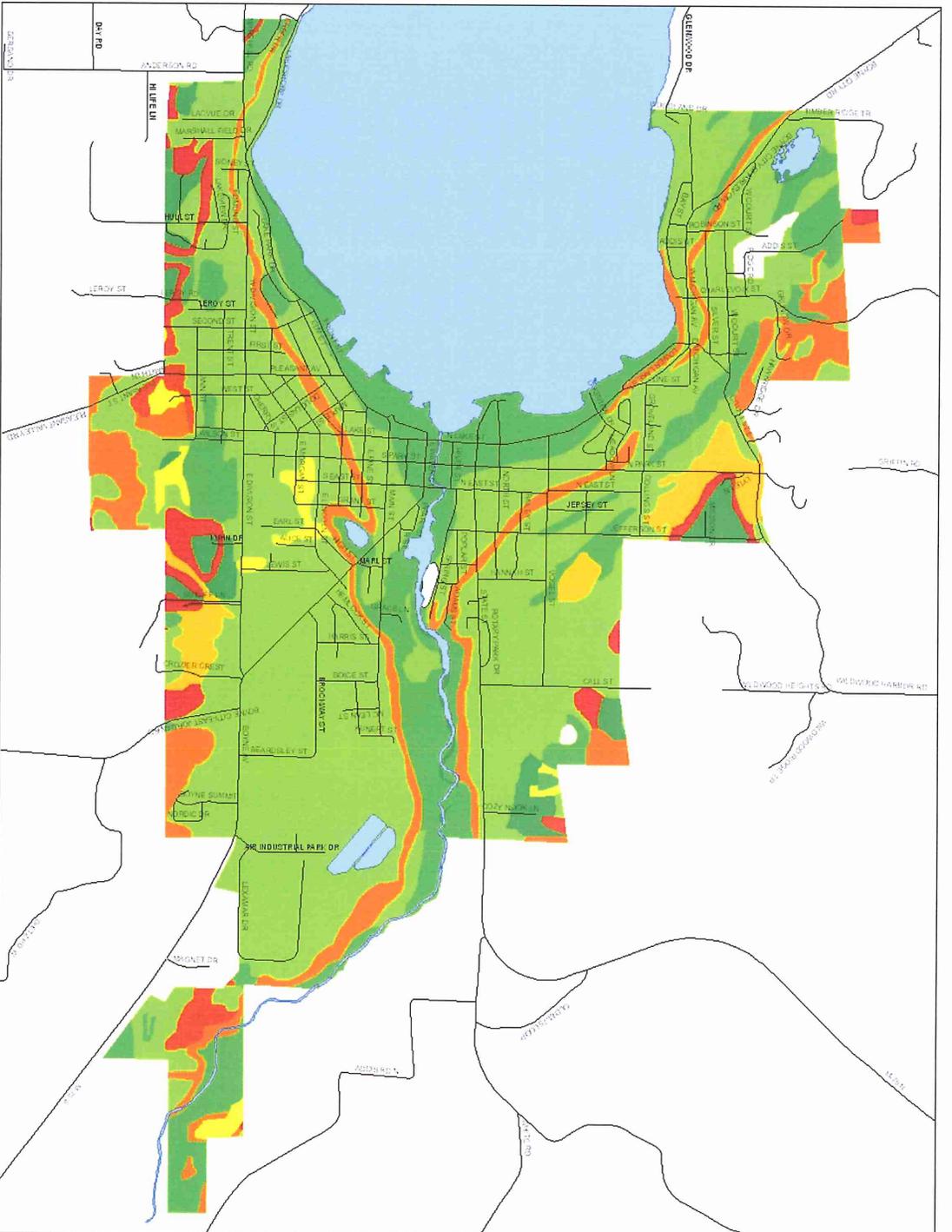
0 to 6%
6 - 18 %
12 - 18%
18% +



The digital slope data is provided by the Michigan Center for Geographic Information, and is derived from the digital elevation model (DEM) data point of the USDA National Cooperative Soil Survey. This map is for general planning purposes only. There may be errors or omissions for any given specific site. This map is not intended to determine soil stability or suitability for a specific use. In order to determine soil stability for a specific use at a specific site, a soil analysis should be conducted by a qualified professional.



Map produced by the
City of Boyer City
Planning Department
November 29, 2004



**City of Boyer City
Septic Limitations**

Figure - 5



0 750 1500 3000 Feet

- SEPTIC LIMITATIONS**
- Not Rated
 - Wetland Areas
 - Moderate Limitations: Permeability
 - Severe Limitations: Wet
 - Severe Limitation: Filter
 - Severe Limitation: Four Filtering Capacity
 - Severe Limitation: Wet and/or Permeability
 - Severe Limitation: Four Filter and/or Slope
 - Severe Limitation: Four Filtering Capacity and/or Slope
 - Severe Limitation: Slope



The digital soils data is provided by the Michigan Center for Geographic Information, and is derived from the soil map prepared by soil scientists as part of the USDA National Cooperative Soil Survey. This map is for general planning purposes only. There may be errors or omissions for any given specific site. This map is not intended to determine the soil suitability for any application at any given site. In order to determine the soil suitability for a specific site, a soil analysis should be conducted by a qualified professional.



Map produced by the
City of Boyer City
Planning Department
November 29, 2004

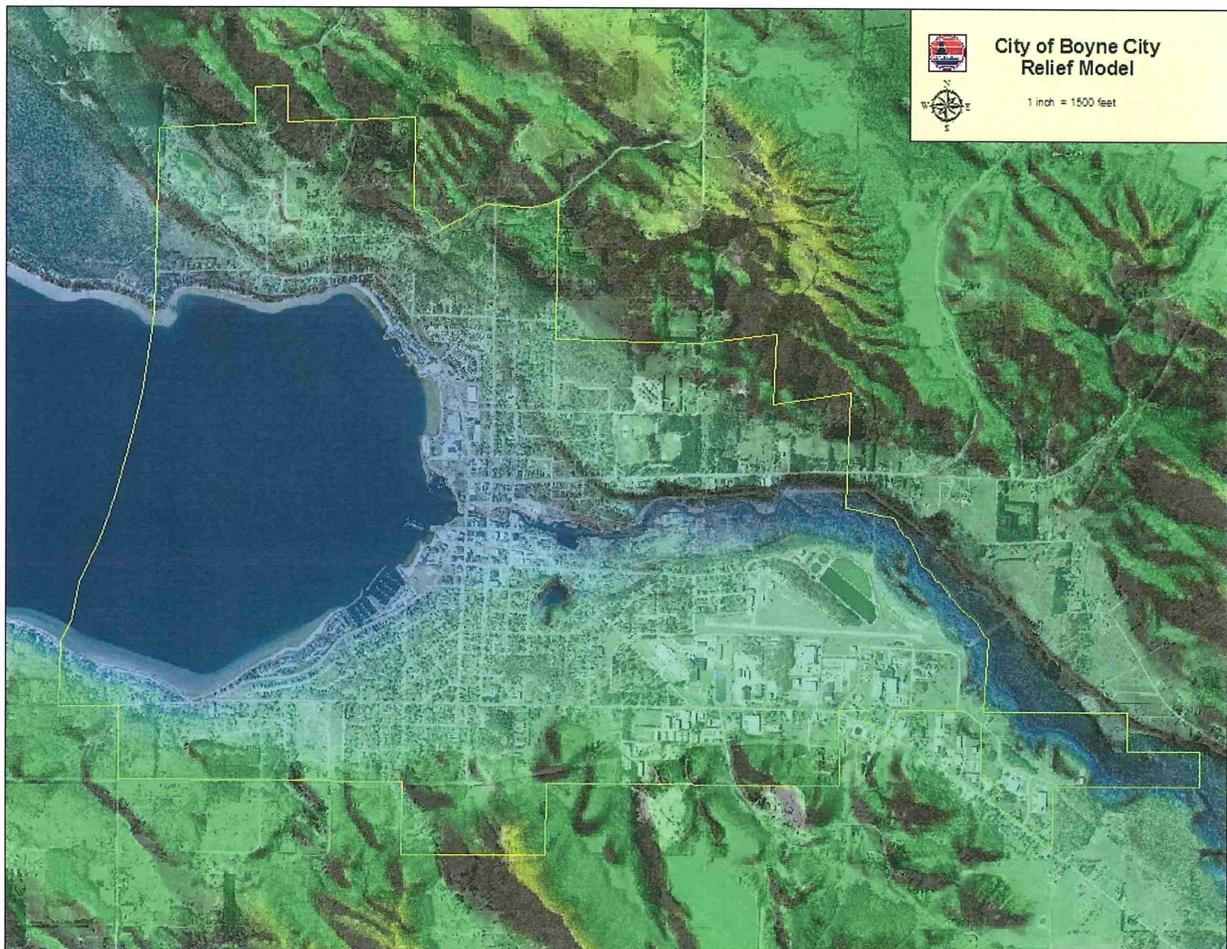
Geology

The basic structure and texture of the land found in northwest Michigan are products of geological forces occurring centuries ago. The foundation upon which northwest Michigan rests is the result of glacial advance and retreat that shaped northern Michigan’s landscape. Depending on their proximity to the surface, the bedrock formations deposited during these glacial activities have a direct bearing on where certain types of development can occur. Fortunately, these formations are not a constraint in Boyne City, although outcroppings of bedrock are found in other areas of Charlevoix County.

One of the most notable features of Boyne City’s landscape is ground moraines. Moraines are accumulations of sand and gravel that were carried by a glacier and then deposited when the glacier melted. Moraines form the northern and southern boundaries of the City and provide topographic relief as well as scenic beauty. Avalanche is a prime example.

Large sections of Boyne City rest in a lake plain that is sandwiched between glacial ground moraines. The relative flatness of the center of the City near Lake Charlevoix and the Boyne River is characteristic of this lake plain area. From a geological standpoint, development constraints associated with this area are essentially nil.

Figure 6



Topography

An evaluation of the community's topography provides insight into site construction limitations, potential erosion problems and concerns regarding drainage. The hills within Boyne City obviously provide visual relief and aesthetic beauty for community residents. However, they must be carefully managed if the problems just mentioned are to be avoided.

Boyne City's terrain is characterized by a lake plain where the business district is located and gently rolling hills within the community's residential neighborhoods. These features stand in sharp contrast to the City's steeply sloping northern and southern boundaries which can be clearly seen in **Figure 6** Boyne City Relief Map. In terms of topographic relief, areas in the City range from an elevation of just under 586 feet above sea level along Lake Charlevoix to more than 984 feet at Avalanche.

Water Resources

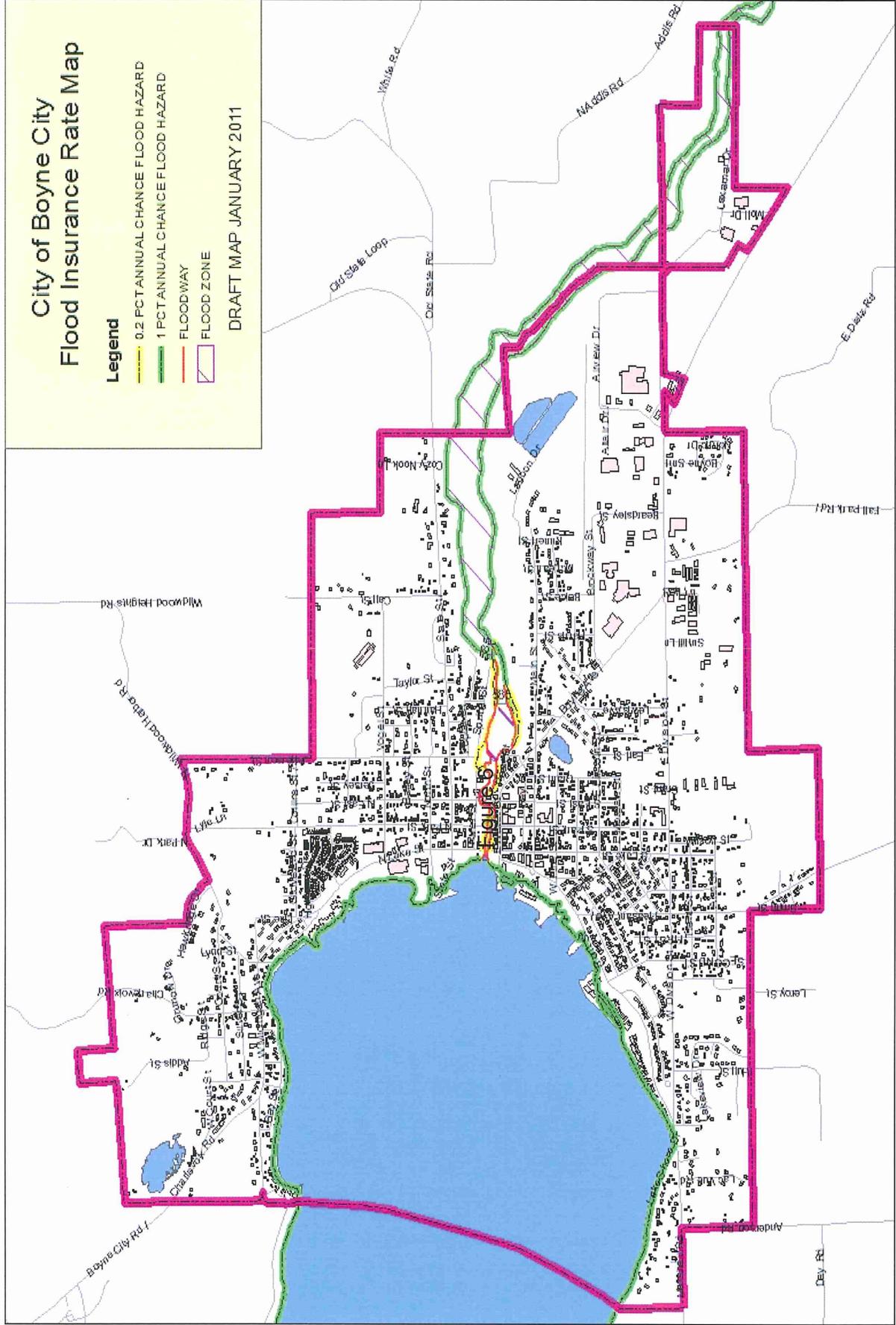
Boyne City's water resources can be classified into two major types: ground water and surface water. Groundwater is significant to the community as its quality and quantity determine how well the resource can satisfy the demand for water by City residents. In the City ground water resources are abundant and supply far exceeds demand and water is provided to most of the developed areas of City through the City's public water system. For areas not serviced by the public water system private wells are used by many residents.

Although not used for domestic water purposes, the community's surface water areas are extremely important natural resources. The surface waters help recharge the community's groundwater, create a distinctive natural landscape, attract and provide natural habitats for wildlife and have immeasurable recreational and aesthetic value.

Lake Charlevoix and the Boyne River are two of the regions most valued resources. There has been considerable interest in managing the City's water resources and over the years multiple planning efforts have been undertaken with the purpose to protect, preserve and enhance the resource. The most recent and comprehensive planning effort occurred in 2006 with the development and adoption of the Boyne City Waterfront Master Plan.

The characteristics associated with these water resources are not totally positive as both have the potential for flooding. To help protect residents from flooding the City participates in the National Flood Insurance Program (NFIP). In 2011 FEMA developed draft copies of the updated Flood Insurance Rate Map (FIRM) as shown in **Figure 7** and distributed hard copies and digitized maps to all the municipalities for review and comment. The City is currently waiting for the final drafts to be distributed for adoption, however due to funding issues at the federal level there have been significant delays in developing the finalized maps. The initial FIRM maps were developed in the early 80's and the updates will significantly change the appearance, accuracy and applicability of the flood maps. It is vitally important to keep apprised of the status of this program as communities that are enrolled in the NFIP need to take specific steps to adopt the maps before the new maps become effective or the community will be suspended from the NFIP. In the City of Boyne City there are 33 NFIP policies that total \$2,335,000 in coverage. Figure 7 shows the revised Flood Insurance Rate Map and the 100 and 500 year flood levels suggest construction within the flood plain must observe certain development guidelines relative to elevations. Also poor soils and sensitive forms of vegetation and wildlife tend to constrain development in this area. In several cases, however, development already has occurred with the flood plain.

Figure 7



Wetlands

Michigan's wetland statute, Part 303, Wetlands Protection, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended, defines a wetland as "land characterized by the presence of water at a frequency and duration sufficient to support, and that under normal circumstances does support, wetland vegetation or aquatic life, and is commonly referred to as a bog, swamp, or marsh." The definition applies to public and private lands regardless of zoning or ownership.

Most people are familiar with the cattail or lily pad wetland found in areas with standing water, but wetlands can also be grassy meadows, shrubby fields, or mature forests. Many wetland areas have only a high ground water table and standing water may not be visible. Types of wetlands include deciduous swamps, wet meadows, emergent marshes, conifer swamps, wet prairies, shrub-scrub swamps, fens, and bogs.

Wetlands are a significant factor in the health and existence of other natural resources of the state, such as inland lakes, ground water, fisheries, wildlife, and the Great Lakes. Michigan's wetland statute recognizes the following benefits provided by wetlands:

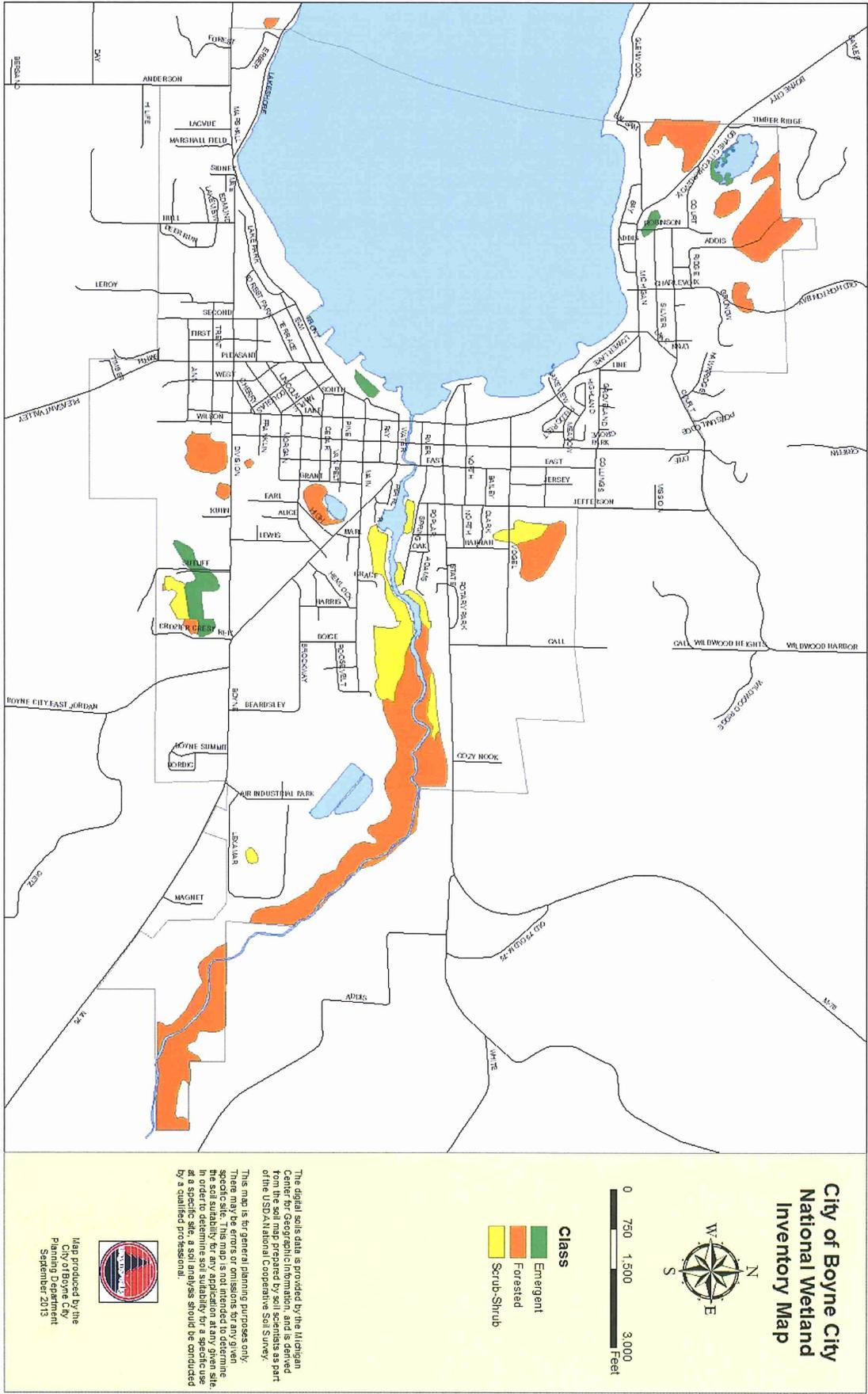
- Flood and storm control by the hydrologic absorption and storage capacity of wetlands.
- Wildlife habitat by providing breeding, nesting, and feeding grounds and cover for many forms of wildlife, waterfowl, including migratory waterfowl, and rare, threatened, or endangered wildlife species.
- Protection of subsurface water resources and provision of valuable watersheds and recharging ground water supplies.
- Pollution treatment by serving as a biological and chemical oxidation basin.
- Erosion control by serving as a sedimentation area and filtering basin, absorbing silt and organic matter.
- Sources of nutrients in water food cycles and nursery grounds and sanctuaries for fish.

These benefits, often referred to as wetland functions and values, often play a vital role in recreation, tourism, and the economy in Michigan. According to a 1991 United States Fish and Wildlife Service Wetland Status and Trends report, over 50% of Michigan's original wetlands have been drained or filled, thereby making the protection of remaining wetlands that much more important

The following wetland inventory map as shown in **Figure 8** was drafted pursuant to Part 303, Wetlands Protection, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended. The wetland inventory map shows potential and approximate locations of wetlands and wetland conditions. It is intended that the inventories be used in planning for development, open space designations, etc. as a way to protect wetland resources. The maps are **not** intended to be used to determine the specific locations and jurisdictional boundaries of wetlands for regulatory purposes. Only an on-site evaluation performed by the DEQ in accordance with Part 303 can be used for jurisdictional determinations. The DEQ has a Wetland Identification Program to assist property owners with identifying the location of any wetlands on their property and whether the wetlands are regulated.

Figure 8

Natural Resources

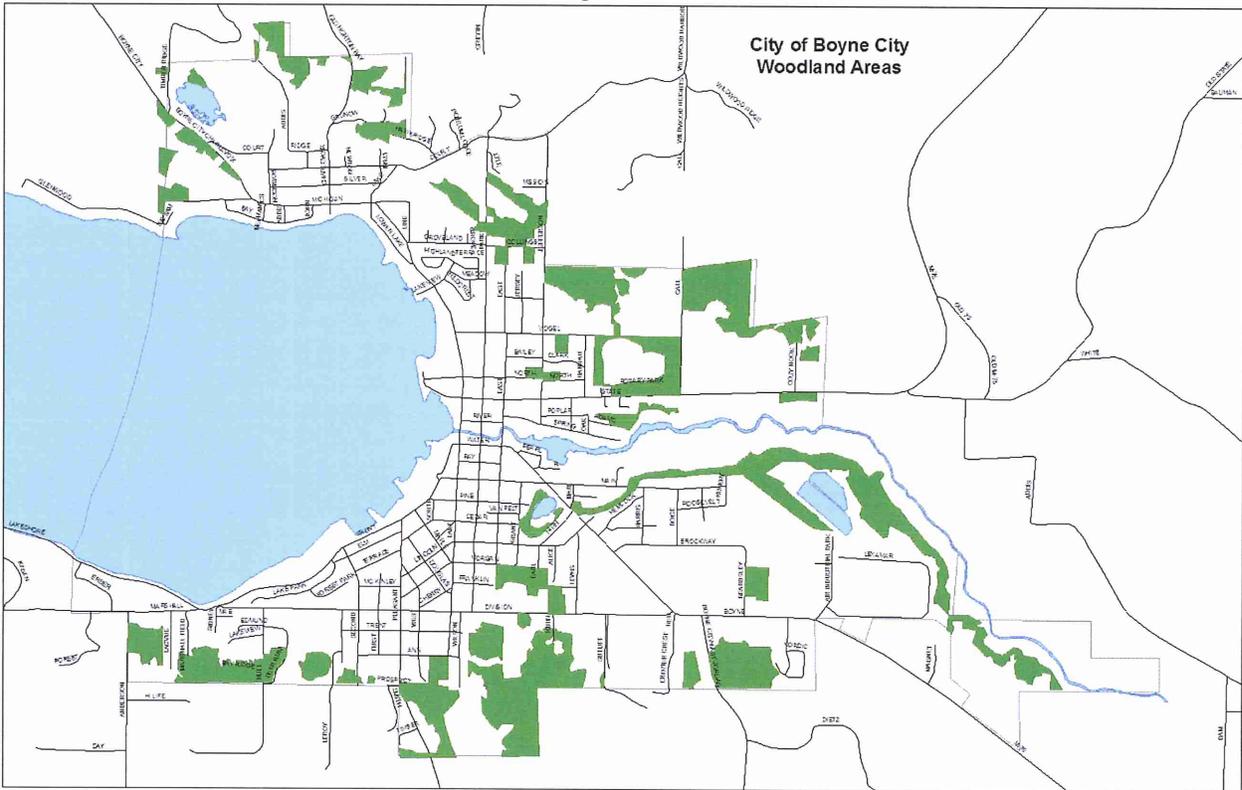


Woodlands

As shown on Figure 9, the United States Geological Survey data for the City of Boyne City shows the existence of several woodlands located primarily in undeveloped portions of the City. These woodlands are valuable as wildlife habitat and for aesthetic enjoyment. Woodlands moderate certain climate conditions such as flooding and high winds and protect watersheds from siltation and soil erosion caused by storm water runoff and wind.

Woodland also can improve air quality by absorbing certain air pollutants as well serve as buffers between property uses. Future development projects should be laid out and designed so as to incorporate existing woodlands to maximum feasible extent.

Figure 9



Lake Charlevoix Watershed

A watershed is the area of the land's surface that drains to a particular water body. Boundaries are generally based on high elevations. For instance, the continental divide is North America's most famous watershed boundary. On the east side of the continental divide, the rivers and other water bodies all drain to the Atlantic Ocean. On the west side of the continental divide, all of the waters drain to the Pacific Ocean.

The City of Boyne City is located entirely within the Lake Charlevoix Watershed which collects water from a 214,400-acre area. The Lake Charlevoix Watershed is predominantly forested. Lake Charlevoix Watershed includes: Lake Charlevoix, the Jordan River, Boyne River, Stover Creek, Horton Creek, Loeb Creek, Deer Creek, Porter Creek, and Monroe Creek. Beech/maple, white

pine, and other upland forest account for just over 50% of the land in the Watershed. Wetlands are estimated to account for 22% of land use. Agricultural uses occupy approximately 15% of the land. The urban areas of Boyne City, Boyne Falls, Charlevoix, and East Jordan account for approximately 4% of the land use in the Watershed. The remaining 9% consists of water and other miscellaneous uses. Although this Watershed is still predominantly forested, development is occurring at a rapid pace reducing the amount of forests, agricultural lands, and wetlands.

The Lake Charlevoix Watershed Management Plan was written to address threats to the watershed, primarily from non-point source pollution. The Lake Charlevoix Watershed Advisory Committee was created to implement management plan steps, and in the past decade has been one of the most active watershed groups in the state. The Advisory Committee is a partnership between the Lake Charlevoix Association, Charlevoix Conservation District, Charlevoix County, Little Traverse Conservancy, Grand Traverse Regional Land Conservancy, Little Traverse Bay Bands of Odawa Indians, local township governments, friends groups, interested citizens, and Tip of the Mitt Watershed Council. The goal of the Advisory Committee is "to protect the water quality and high quality uses of the water resources of Lake Charlevoix and its tributaries by reducing the amount of non-point source pollution and preventing future contributions." The Lake Charlevoix Watershed Advisory Committee seeks to educate and involve the community in watershed management issues, and has had many successes.

Representatives from four townships and two cities in Charlevoix met on four occasions to discuss shoreline zoning issues, and opportunities for coordination and consistency between communities. The sessions were facilitated by MSU Extension staff. The products were reports detailing study group recommendations and specific language that each community could use to implement the recommendations. The reports are available for review and download at Tippi of The Mitt Website at <http://www.watershedcouncil.org>. One of the significant issue that emerged is the fact that approaches and challenges to shoreline protection were quite a bit different between the cities, as a group, and the townships.

