

# 2030 COMPREHENSIVE PLAN UPDATE

*Approved by the Metropolitan Council on June 24, 2009  
Adopted by Baytown Township on July 6, 2009*



*Baytown Township, Minnesota*

Last Revised on May 4, 2009  
Project No. 13851.000

*Baytown*  
**TOWNSHIP**

**TKDA**

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## **ACKNOWLEDGEMENTS:**

The planning process for the 2030 Comprehensive Plan Update for Baytown Township began in 2007 and was completed in May of 2009. Many thanks are extended to the members of the Township for their time and effort in attending workshops, public hearings, and open houses in a combined effort to complete a thoughtful and complete vision for Baytown Township.

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## I. Introduction

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As part of the Twin Cities Metropolitan Area, Baytown Township is required by the Metropolitan Land Planning Act to update the Township's Comprehensive Plan. All cities, townships and counties in the Seven County Metropolitan Area are required to do the same. The original Baytown Township Comprehensive Plan was adopted in December of 1981. The Plan was updated and adopted again in 1998.

This plan represents a second update of the existing land use, natural resources, transportation, housing and other sections of the plan. This Plan encompasses the requirements of the Metropolitan Council's *Local Planning Handbook* and the *2030 Regional Development Framework*, the Metropolitan Land Planning Act, and the Washington County Comprehensive Plan. The Township anticipates an approximated 40% increase in population from 2000 to 2030 based on Metropolitan Council forecasts. This anticipated growth necessitates a revision of the Township's Plan and review of the overall goals and policies which set the direction of the Township's growth. The study and review of these issues are reflected in this 2030 Comprehensive Plan update.



## **A. PURPOSE**

A comprehensive land use plan is a general guide for planning commissions and town boards to use in reviewing and evaluating future development proposals. Based on the principles set forth in the plan, decisions for guiding uses into desirable locations can be made.

Unplanned development often results in an undesirable mixture of land uses. Land use relationships affect the stability of property values in a community. Conflicting land uses can lower property values while compatible land use relationships may raise these values. Therefore, one purpose of the land use plan is to minimize land use conflicts in the future, thereby protecting property values.

A second purpose of the Township's plan is to preserve the existing character of the Township. The land use plan provides for logical development of future land use patterns while preserving and enhancing areas of existing development. With implementation of this plan, future residents will find Baytown Township as attractive and appealing as it is today.



## **B. LAND USE PLAN AND ZONING MAP/ORDINANCE**

The land use plan is general in nature and long range; the land use plan is a guide for planning commissions and town boards when reviewing and evaluating development proposals. The land use map delineates land use areas by type such as residential, industrial, commercial and agricultural. The zoning ordinance is the tool to implement the comprehensive plan. The zoning ordinance prescribes permitted uses in each zone along with minimum dimensional requirements for each use. A zoning map must also be adopted along with the text of the zoning ordinance. The zoning map specifies exact boundaries of each respective district.

## C. 2030 REGIONAL DEVELOPMENT FRAMEWORK

The Metropolitan Council's unifying policy document for metropolitan growth is the *2030 Regional Development Framework*. This document outlines the Council's goals, policies, and strategies that form the basis for the regional system plans and other policy documents such as the *Local Planning Handbook*. Policy documents such as these provide the context for local planning efforts and provide guidelines on which the Comprehensive Plans are developed and local planning decisions are made.

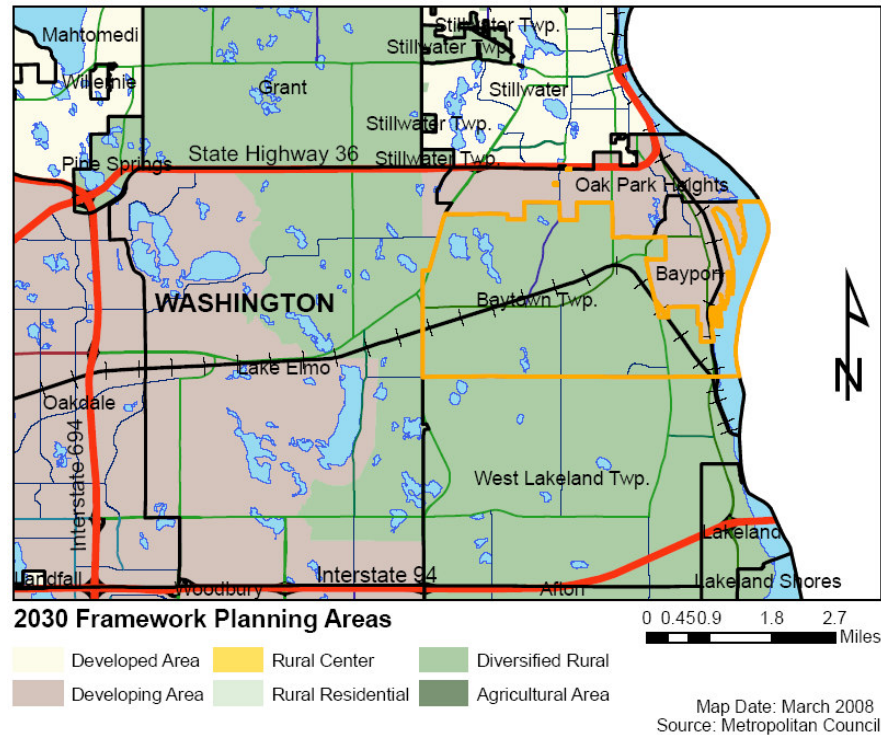
### 1. *Planning Area Designation*

As a historically rural community close to several developing communities, Baytown Township has been categorized by the Metropolitan Council as a "diversified rural community." According to the *2030 Regional Development Framework*, "diversified rural communities host the widest variety of farm and non-farm land uses in patterns that include a mix of a limited amount of large-lot residential and clustered housing with agriculture and other uses, including facilities and services requiring a rural location." Regional investments in the diversified rural communities generally consist of parks and open space areas.

Baytown Township is a unique community. Given the historically rural characteristics of the Township, the development patterns have typically been large lot single family housing. This type of development breaks up the former large acre farm land into 2.5-acre and 5-acre lots. These lot sizes are typically difficult to plan for future public services (water and sewer) and generally fit more in the characteristics of the rural residential designation.

According to the *2030 Regional Development Framework*, rural residential areas are "areas immediately adjacent to Developing Areas and have large numbers of subsurface sewage treatment systems at densities of 2.5 acres or less." Baytown Township has a development pattern with areas of 2.5-acre lots with subsurface sewage treatment systems. The adjacent communities of Lake Elmo, Oak Park Heights and Bayport are all designated as developing communities. Areas that have developed at the 5-acre density in the Township have created a development pattern in the center of the community in which providing future public services would be difficult. The rural residential designation would seem to fit these areas more appropriately than the diversified rural classification. As part of this Comprehensive Plan Update, the Township is requesting that the areas outside of the proposed Long-Term Sewer Service Area (LTSSA) be re-designated as Rural Residential.

**Exhibit 1:  
Regional Planning Area Designation**



In addition, as part of the planning for future growth, the Township has the opportunity to identify and preserve natural resources. The Township has incorporated natural resources into local planning efforts and plans to direct growth away from sensitive natural areas.

**2. Framework Policies**

The Metropolitan Council’s *2030 Regional Development Framework* has four primary policies for diversified rural and rural residential communities, as listed below.

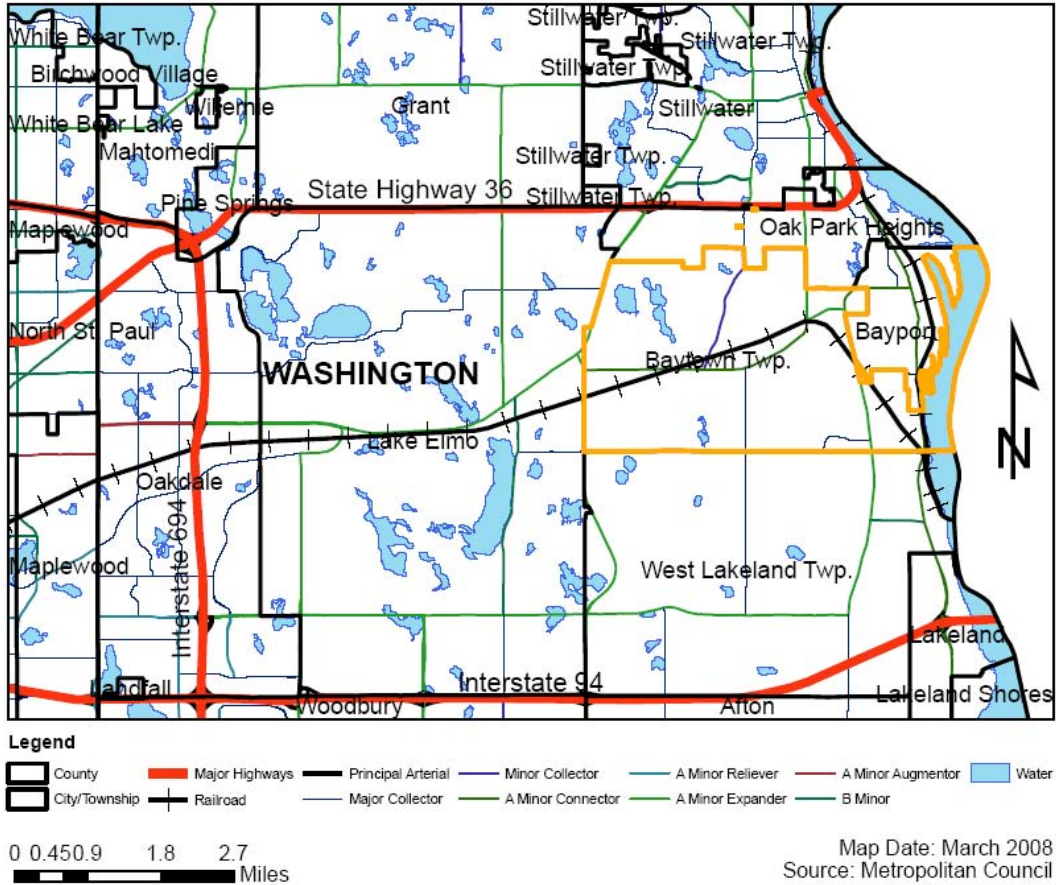
- a. Work with communities to accommodate growth in a flexible, connected and efficient manner.
- b. Plan and invest in multi-modal transportation choices based on the full range of costs and benefits, to slow the growth of congestion.
- c. Encourage expanded choices in housing location and types, and improved access to jobs and opportunities.
- d. Work with local and regional partners to conserve, protect and enhance the region’s vital natural resources.

Insofar as it can as a Township, the Baytown Comprehensive Plan Update addresses these policies in areas designated as Diversified Rural.

## II. Background

Baytown Township is located in the east central part of Washington County. Baytown Township is bounded on the north by the City of Oak Park Heights, on the south by West Lakeland Township, on the west by the City of Lake Elmo and on the east by the City of Bayport and the St. Croix River. Baytown Township contained approximately 6,500 acres in 1981 when the original plan was completed. With subsequent annexations to the Cities of Oak Park Heights, Lake Elmo, and Bayport, the Township now contains approximately 5,865 acres.

**Exhibit 2:  
Regional Context**



## A. HISTORICAL BACKGROUND

Baytown Township was organized in 1858 and named by Commissioner Socrates Nelson for the adjoining bay of Lake St. Croix, divided from the main lake by Mulvey's Point to the south of Stillwater. It was laid out as a fractional Township of 12 full and 3 partial sections.

The first settlement was made by Francis Bruce in 1842. In that same year, Norman Kittson of the American Fur Company built a cabin on a narrow neck of land existing out in Lake St. Croix known thereafter as Kittson's Point.

In 1852 Ambrose Secrest, his wife and six children, his father and mother and three brothers came up the river on the Cholera-infested steamer Nominee on their way from Indiana, and settled in the Bruce house. They were stricken with cholera, and within days, Secrest's mother, father, wife, one child and two brothers died. Other early settlers from 1847-1850 were John Short, Albert Harris, Joseph Perro, A.B. Fist, and J. and F. Marty.

The first town meeting was held in Secrest's and Perro's store located in what was known later as South Stillwater. The meeting was adjourned to the school for need of more space, and the following officials elected: Ambrose Secrest, John Parker and W.H. Crosby, Supervisors; John Hale, Clerk; Henry Beach, Collector; David Loomis, Assessor; Joseph Perro, Overseer of the Poor; Henry Beach, A. Flynn, Constables; William Gowen and Richard McDonald, Road Overseers; W.H. Crosby, Pound-Master; James Crofut and George Kern, Justices.

The first school district organized was number 3, and the building was erected by subscription on the flat in the north part of the village.

The St. John's German Lutheran Church was organized in 1855, and money raised for building construction in 1856. A Union Church was erected in South Stillwater in 1890 on a site donated by the St. Croix Railway and Improvement Company.

The first settlers located in what was later called South Stillwater. Few improvements were made until 1852 when Socrates Nelson and D.B. Loomis, under their company name of Nelson, Loomis and Company, surveyed and platted a town there which was called Baytown. (Bayport later became the accepted name.) Nelson and Loomis built a sawmill and operated from 1853 to 1858, when the company dissolved, and Baytown with all improvements became the property exclusively of Socrates Nelson.

In 1854 Secrest and Perro laid out an addition in Baytown, and in 1856 Ex-Lieutenant Governor Holcomb laid out another addition called Middletown which was annexed to Baytown. About this same time, Isaac Staples and

others laid out a village on the south of Baytown which they called Bangor, after a lumbering town in Maine.

In 1872, the St. Croix Lumber Company was founded, and the period between 1872 - 1878 saw a flurry of sawmill ventures, most plagued by fire or financial difficulty.

In 1877, an organization called "The South Stillwater Agricultural Works" was formed to build threshing machines. It failed after two years and the property was taken over by the St. Croix Lumber Company. Among its varied pursuits, this company operated a door, sash and blind factory, a machine, blacksmith and foundry, and here manufactured the famed "Crystallized Iron Plow". The lumber mill had an annual capacity of 15,000,000 feet of lumber and 10,000,000 shingles, as well as 4,000,000 lath.

The Stillwater Dock Company, organized in 1877, concentrated on building steamers and produced about three per year. Among the most famous creations were the Pauline, the R.C. Wheeler, and the Kit Carson. These steamers were the pride of the river for some time.

The Baytown Flour Mill was built in 1853 and the South Stillwater Soap and Rendering Plant in 1868.

The Township was blessed by the St. Paul, Stillwater and Taylors Falls Railroad as a junction was located here, with one branch running to Stillwater and the main line southeast to Hudson, Wisconsin.

The population of Baytown was mainly German and Irish, but the influx of people between 1875-1880 represented many more countries of the world and many eastern states as well.<sup>1</sup>

Today, after the incorporation of Bayport (1881) and Oak Park Heights (1959) and several subsequent annexation of lands to those cities and to neighboring Lake Elmo, the Township remains with 5 full sections and 7 partial sections, approximately 5,865 acres.

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<sup>1</sup> Rosenfelt, Willard E., "Washington: A History of the Minnesota County", 1977.

## B. DEMOGRAPHICS

The basis for comprehensive planning is population, household and employment forecasts and historic trends. Understanding past and expected change allows for anticipating Baytown Township's land, transportation, parks and other types of future needs. The Metropolitan Council prepares forecasts for future change in population, household and employment for local government within the seven-county region. Demographic data from the United States Census is available every ten years and illustrates long term patterns of community change or stability.

### 1. *Historic Demographic Trends*

Baytown Township's population has had sustained growth since 1970. The 2000 United States Census shows that Baytown's population growth between 1990 and 2000 was notable, at a rate of 63 percent over the ten year period, or by an increase of nearly 600 people. According to the Metropolitan Council's 2005 population estimate, growth did not continue at that pace between 2000 and 2005, when the Township grew by nearly 200 people.

Household growth correlates to population growth and also follows a national trend in declining household size. Average household size in Baytown in 2005 is 3.12 persons per household, which compares to 2.77 persons per household in Washington County and 2.53 persons per household in the seven-county metropolitan area.

### 2. *Past Growth*

**Table 1:  
Past Growth**

Year	Population	Ten year percent change	Households	Ten year percent change	Average Household Size
1930	520	--	--	--	--
1940	631	21.3	--	--	--
1950	620	-1.7	--	--	--
1960	471	-24.0	--	--	--
1970	723	53.5	183	--	4.0
1980	851	17.7	237	29.5	3.6
1990	939	10.3	308	30.0	3.0
2000	1,533	63.3	492	59.7	3.1
2005 (est.)	1,725	--	556	--	3.1

*Source: Baytown Township Comprehensive Plan (1997), Metropolitan Council, TKDA*



### 3. *Demographic Forecasts*

The Metropolitan Council provided population, household and employment forecasts to Baytown Township through the Systems Statement in September of 2005. Forecasts are useful to the Township in estimating the amount of land that will be needed.

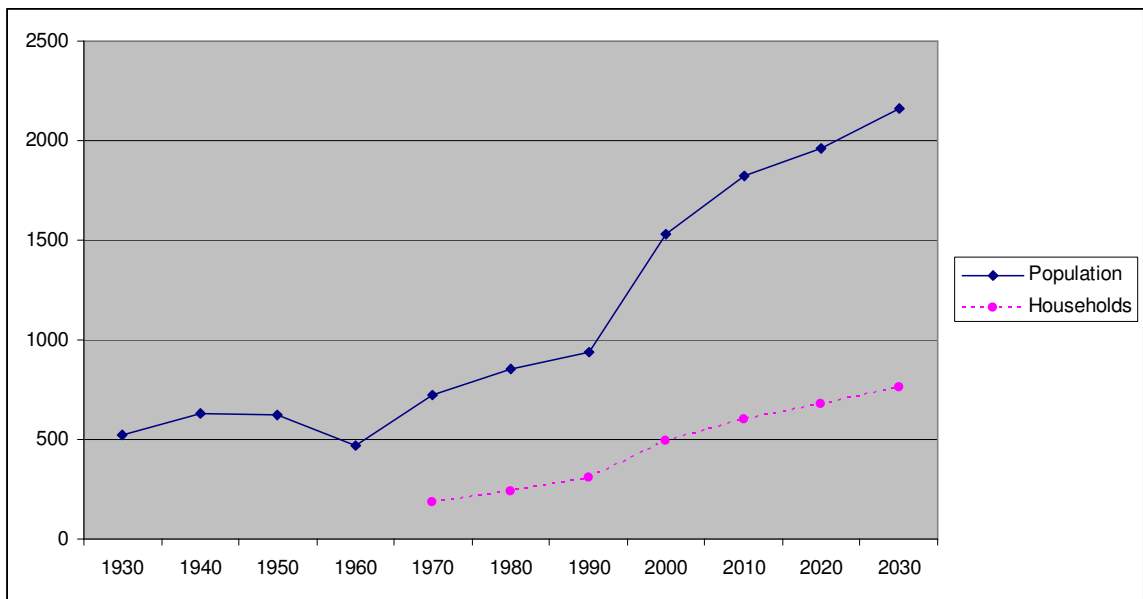
The population forecasts show that the Township is expected to have relatively rapid growth through 2010, though at a lesser pace than experienced between 1990 and 2000. The population growth rate is expected to lessen somewhat from 2010 to 2030. See Tables 1 and 2 for past trends and future growth.

**Table 2:  
Forecasts**

	2000	2010	2000-2010 percent change	2020	2010-2020 percent change	2030	2020-2030 percent change
<b>Population</b>	1,533	1,820	18.7	1,960	7.7	2,160	10.2
<b>Households</b>	492	600	22.0	680	13.3	760	11.8
<b>Employment</b>	50	70	40.0	100	42.9	120	20.0

*Source: Metropolitan Council, TKDA*

**Chart 1:  
Household and Population Growth: 1930 - 2030**



Households, which are the primary basis for demand for public services and equate to building permits, are expected to grow to 600 by 2010 or by about 10 houses per year. With the recent slowdown in new housing units, it is unlikely the Township will reach this number in 2010. The Township is expected to grow by 80 households each decade between 2010 and 2030 with a total number of 760 households by 2030.

#### **4. *Population Characteristics***

An analysis and projection of population are at the base of almost all major planning decisions. The primary goal of the population analysis is to anticipate the future need of Baytown Township with regard to land use, transportation, and community facilities. In order to do this, it is necessary to have some idea of the number and the characteristics of present residents of the Township.

In addition to reviewing past trends and future forecasts, it is important to understand the composition of the population. Age structure, family size, education, and income levels are a few of the characteristics that can affect the need for services of a township such as Baytown. In the section that follows, a few of these characteristics will be reviewed.

##### **a. Age**

The percentage of the population of Baytown Township 18 years of age and older stayed the same between 1990 and 2000. In 1990, 69.5 percent of the population was 18 or older, whereas in 2000, 70.6 percent of the population was 18 or over. However, in 2000, the median age of Baytown residents (39) was significantly higher than the median age of Washington County (35.1) and the seven county metropolitan area (34.3). At the same time, Baytown has a lower percentage of residents 65 years of age and over (5.9) compared to Washington County (7.6) and the seven county region (9.6). The Township does include a significantly higher percentage of residents between the ages of 35 and 54 years of age (40.2) compared to Washington County (34.3) and the seven county region (31.6). This higher percentage in this age category can be attributed to the relatively higher cost of housing in the Township, which results in people buying their second home in Baytown, after they have built up equity somewhere else. The population will continue to age in the Township over the next ten years as these people age. After that period, there likely will be turnover as these empty nesters look to downsize and move to other, smaller living choices in the vicinity. Also, with the expansion of Boutwell's Landing Senior Facility in the Township, the number of more elderly residents will increase over the next ten years.

b. Family Size

Family size is a reflection of many variables, which in Baytown is most likely related to the age of the population. With a higher percentage of residents in the late child bearing ages and beyond, most families have their full complement of children. Thus, family size is larger. In Baytown in 2000, family size was 3.34 persons per family, which compares to 3.19 in Washington County and 3.14 in the seven county region. As the population ages, children leave home, and it is likely the family size in Baytown will decrease over the next decade.

c. Educational Attainment/Income Levels

Baytown Township is highly educated compared with Washington County and the seven county region. Almost half (48.3 percent) of the population in Baytown has either a bachelors, graduate, or professional degree. This compares to 33.9 percent in Washington County and 34.9 percent in the Metro Area. Again, this is reflective of the high costs of housing in Baytown, the lack of other housing choices, and the proximity to businesses such as 3M that attract highly educated people. This is reflected in the fact that average commute times to work are slightly lower (20.2 minutes) compared to Washington County (24.6 minutes) and the seven county region (23.0 minutes).

Income is closely correlated with educational levels. In Baytown in 2000, median family income was \$102,231 compared to \$74,576 in Washington County and \$65,665 in the Metropolitan Region. Again, the income levels correlate with higher costs of housing, and probably reflect the proximity of well-paying jobs and the likelihood of both spouses working.

**5. *Economic Background***

Baytown is not a large employment center, with only 50 employees in 2000. This number is expected to grow slowly to 70 in 2010, to 100 in 2020, and to 120 in 2030.

The Township is anticipating growth in employment due to the addition of the St. Croix Preparatory Academy, a charter school. The school anticipates approximately 55 staff persons to be employed when the school reaches capacity in 2015.

In addition, there is a proposed Boutwell's Landing senior housing facility expansion project anticipated in the northern portion of the Township. Boutwell's Landing's employment information is not

known at this time, but it is reasonable to anticipate employment increases contributed from this facility.

Given the information available, the Township anticipates meeting the 2030 employment forecasts for the Township.

### **III. Goals and Policies**

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The first step in any planning process after the initial inventory and analysis is the formulation of goals and policies. Goals frame the general direction the Township wishes to go as provided in the Comprehensive Plan. Policies guide the actions of community leaders in making decisions on how to achieve the goals of the community. These goals and policies have been revised from the 1998 Comprehensive Plan and amended to address new issues and give the appropriate emphasis to reflect community values.

Simply developing the goals and policies is not enough. Tools must be available to implement these general statements. Standards are one such tool. Standards determine the size, shape, area or amount of activity or development which may occur. The standards are contained in various ordinances, regulations, and official controls used by the Township which reflect the Baytown Township Comprehensive Plan.

The goals and policies contained in this Chapter are arranged in the following subject categories:

- A. Natural Resource Protection
- B. Land Use
- C. Commercial Development
- D. Waste Management
- E. Transportation
- F. Housing
- G. Surface Water Management
- H. Parks, Trails, Open Space, Recreation, and Fish & Wildlife Habitat
- I. Solar Access Protection
- J. Aggregate Resources
- K. Historic Preservation

## **A. NATURAL RESOURCE PROTECTION**

### **1. Goal**

Protect, preserve, and manage the existing environmental and natural features and ecological resources of Baytown Township.

### **2. Policies**

- a. The Township will encourage the protection and preservation of wetlands, lakes, woodlands, hills, woods, wildlife, water resources, and other valuable natural resources within the Township.
- b. Natural native vegetation will be encouraged to be retained and protected to reduce the incidence of flooding and erosion.
- c. The Washington Conservation District will be requested to review all proposed subdivisions or development on steep slopes or other naturally sensitive areas. Baytown Township will work with the WMO's to ensure that all proposed plans for subdivisions or development that trigger review will be reviewed by the respective WMO and held to the performance standards set forth by each WMO in their Watershed Management Plans.
- d. The design of subdivisions will encourage the preservation of natural drainage systems.
- e. The goals and policies of the DNR Wildlife Management Area and the DNR Scientific and Natural Area will be supported by the Township.
- f. The DNR Wildlife Management Area and the DNR Scientific and Natural Area within Baytown Township are valuable natural resources, and surrounding areas will be encouraged to be preserved as open space.
- g. The Valley Branch Watershed District and the Middle St. Croix Watershed District will be used as resources of the Township in preserving and protecting natural waterways and drainage ways.
- h. Land will not be developed in a manner which will significantly increase surface water run-off or cause potential erosion of natural drainage routes and river basin. New development and redevelopment will be required to meet performance standards for water quality and quantity (including volume and rate control) as outlined by the respective WMO.

- i. Wetlands, buffers, and natural ponding areas will be preserved. Wetlands and their buffers will be protected in a manner consistent with the Wetland Conservation Act and as outlined by the respective WMO.
- j. All mining or excavations will be required to be conducted in compliance with all Township and County codes.
- k. Reclamation of exhausted mines, including sand and gravel pits, will be required.

## **B. LAND USE**

### **1. Goals**

- a. Protect and preserve the rural character of the Township.
- b. Maintain the geographic boundaries of the Township.
- c. Encourage development to occur in a manner that makes Baytown more attractive to residents and retains the rural character of the Township.
- d. Encourage development that protects or restores the health of water and natural resources in the Township.
- e. Develop in accordance with the adopted Comprehensive Plan.
- f. Encourage the continuation of commercial and/or hobby farming as a viable land use to maintain rural character and as a way to contribute to the economic activity of the Township.
- g. Plan for a slow, orderly population growth by limiting housing densities and encouraging low-density residential development.

### **2. Policies**

- a. Due to the lack of public services, single family homes will be the preferred type of housing allowed in the Township.
- b. Cluster type development will be an option to preserve and protect agricultural land, natural resources, and open space.
- c. Open spaces designated through cluster development will be contiguous to existing open spaces as deemed appropriate by the Township.
- d. Designated open spaces and greenways will preserve areas where natural features exist and Township policies shall be implemented

to direct development in a manner that maintains and enhances the creation and preservation of natural features, woodlands, streams, landscapes, and other topographical features and encourages the protection of wildlife and wildlife habitats.

- e. Designated open space will be held through a conservation easement where appropriate. The Township shall direct the developer on the appropriate agency/governmental body to hold the conservation easement and on the conditions of the conservation easement.
- f. All land development cost will be borne by the developer including but not limited to road construction, drainage improvements, landscaping, attorney fees, planning fees, and engineering fees associated with each.
- g. Developers of new subdivisions must demonstrate that each newly created lot can accommodate, first, two (2) proper subsurface sewage treatment systems and, second, a house meeting all setback requirements in both the zoning ordinance and subsurface sewage treatment system ordinance.
- h. Requests for subdivisions of land must meet current Township and County regulations regarding adequate lot frontage, access, provision of septic/water, and other minimum lot requirements.
- i. Subdivision proposals which include requests for variances from minimum lot requirements in Township and County Ordinances will be carefully reviewed.
- j. If landowners propose to develop lands prior to 2030 and thus prior to service availability, the Township may require that lands are ghost-platted for eventual high density development when public services become available.

## **C. COMMERCIAL DEVELOPMENT**

### **1. Goal**

- a. Provide reasonable access to goods and service with a minimum of conflict with surrounding land uses and minimum impact to surface and ground water resources.

### **2. Policies**

- a. Limited commercial development will be allowed in locations compatible with neighboring properties and as deemed appropriate by the Township.



- b. Commercial development will be focused in areas where the use is compatible with existing development as well as land uses in adjoining communities.
- c. Commercial development will be consistent with the development philosophy outlined in this Comprehensive Plan and with an architectural style that reflects the Township's rural character.
- d. Commercial development will be prohibited in agricultural zones and residential districts.
- e. Commercial development will be encouraged to use Best Management Practices (BMP's) to reduce impervious surfaces and environmental impacts.
- f. Excellence in site planning and building design will be required and proper circulation and parking requirements shall be required.
- g. Any new commercial developments will be landscaped and screened according to Township standards to aid in achieving compatibility between adjacent uses.
- h. Commercial signs will be carefully regulated so as to be attractive and placed in a safe manner.
- i. Potential commercial uses will be carefully reviewed and regulated to assure there will be no contamination of the soil or groundwater supplies.

**D. COMMUNITY FACILITIES / WASTE MANAGEMENT / WATER SUPPLY**

**1. Goal**

- a. Protect the health, safety and welfare of the present and future residents of Baytown Township.

**2. Policies**

- a. The location, design, use and maintenance of subsurface sewage treatment systems will be regulated so as to prevent contamination of the surface and groundwaters with the Township. All new septic systems will be placed above the 100-year flood levels of lakes, wetlands, ponds, and streams.
- b. Individual water supply wells of the community will be protected from contamination by inadequate or improperly designed, located, or maintained subsurface sewage treatment systems.

- c. The capability of existing subsurface sewage treatment systems will be maintained to adequately and safely serve existing development within the Township and the identification and upgrading of existing systems will be pursued.
- d. Public awareness of proper use and maintenance of subsurface systems will be required. Baytown Township will require tri-annual inspections of septic systems through Washington County.
- e. All new development requiring subsurface sewage treatment systems will be permitted only where soil capabilities are adequate to provide for proper treatment system installations.
- f. Each lot developer will continue to be required to prove through soil borings and percolation test that there is sufficient area of suitable soils for the location of two (2) sewage system drainfields.
- g. Receipt of a sewage treatment system permit prior to the issuance of a building permit is required.
- h. As stated in Township Ordinance No. 38, new well construction is regulated by the Minnesota Department of Health (MDH) pursuant to Minnesota Statutes, Chapter 103I and Minnesota Rules, Chapter 4725 and may only be constructed with the written approval of MDH.
- i. The Township supports MDH's study efforts and planning for monitoring and other activities related to the Special Well Construction Area (SWCA) in Baytown Township.

## **E. TRANSPORTATION**

### ***1. Goal***

- a. Provide safe and efficient movement of persons and vehicles through and within Baytown Township without undue maintenance costs to the Township.

### ***2. Policies***

- a. New roads will meet road right-of-way width, roadway width and other construction requirements recommended in the Washington County Subdivision Ordinance. Right-of-way needs will be balanced with needs to minimize impervious surface to protect water resources.

- b. New roads and road improvement projects will be completed in a manner that incorporates performance standards set forth by the MSCWMO and VBWD in their respective areas.
- c. Individual driveway access points will be limited on minor arterial and collector roadways.
- d. A road network which provides for accessibility to necessary services such as police and fire vehicles and school buses will be developed.
- e. All newly constructed roads in major subdivisions will have a bituminous surface to reduce maintenance cost to the Township.
- f. The Township will be active in participating in land use decisions concerning the Lake Elmo Airport to the fullest extent possible and to the extent that it affects the residents of the Township.
- g. Requirements regarding the notification to the Federal Aviation Administration (FAA) defined under code of federal regulations CFR-Part 77, using FAA Form 7460-1 “Notice of Proposed Construction or Alteration” shall be implemented when required.
- h. The Township will consider MnDOT/Office of Aeronautics Airport Compatibility Manual Best Management Practices when reviewing land uses in areas impacted by the Lake Elmo Airport.
- i. The Township will participate in review and comment on any Environmental Assessments that are undertaken as a result of the proposed airport expansion projects.
- j. The Township supports the location of a carpool/vanpool or park and ride lot within the Township.
- k. The Township encourages the location of a carpool/vanpool or park and ride lot next to state or county roads, particularly along State Highway 5 or County Road 15 (Manning Avenue), to encourage traffic concentration near the existing regional transportation network.

## **F. HOUSING**

### ***1. Goal***

- a. Retain low-density single family residential development and the rural character of Baytown Township. Support suitable and moderate cost housing in the Township.

## **2. Policies**

- a. Single family detached homes will be the preferred type of housing in Baytown Township.
- b. Individual property owners will be encouraged to rehabilitate existing homes where needed.
- c. Future housing development will work within the existing framework of the Township to promote the rural character and rural quality of life.
- d. Washington County and Regional programs that meet the residential needs of a diverse and/or aging population through home improvement and housing assistance programs will be supported by the Township.
- e. Township's Ordinances will be used to encourage maintenance of the existing housing within the Township.
- f. The Township will support the County and its Housing and Redevelopment Authority (HRA) to meet the need for future senior housing.
- g. Home occupations will be regulated so as not to create problems with adjoining land uses.

## **G. SURFACEWATER MANAGEMENT**

**Goal 1:** Baytown Township is committed to a goal of nondegradation of the lakes, wetlands, streams, and groundwater within the Township, and will work with local WMO's, Washington County and State agencies to achieve this goal.

### **1. Policies**

- a. The Township will work cooperatively with local Watershed Organizations, state agencies and landowners to protect local wetlands, lakes, streams and groundwater, to preserve the values of these resources for future generations.
- b. The Township concurs with the Valley Branch Watershed District's Water Management Plan and rules and the Middle St. Croix Watershed Management Organizations Watershed Plan and rules.
- c. The VBWD will continue to enforce surface water regulations within the Township area that is within the District's boundaries.

- d. The Township will update its Ordinance to include the MSCWMO performance standards and requirements for stormwater management, wetland management, and resource protection. The Township will enforce these requirements, with review and implementation assistance from MSCWMO staff and Board. The ordinance revisions will be completed after adoption of the Comprehensive Plan, along with other Ordinance updates to implement the plan, and will include the following:
- A revised erosion and sediment control ordinance that is consistent with NPDES Construction Stormwater permit and MS4 permit requirements and incorporates the MSCWMO's policies and performance standards for erosion and sediment control.
  - Wetland management requirements that include the MSCWMO's policies and performance standards for wetland management, buffer standards, and results of the wetland functions and values assessment completed by the MSCWMO.
  - Standards for control of peak runoff so that land-altering activities do not increase peak stormwater flow from development sites for a 24-hour precipitation event with a return frequency of 2, 10 and 100 years, and encourages the use of filtration and infiltration to control runoff.
  - Standards for management of stormwater quantity and quality that are consistent with the MSCWMO performance standards. The Ordinance will incorporate volume control standards that require retention of the first 1.0" of runoff for all impervious areas of the site, plus 0.25" of runoff for areas with compacted soils.
  - Standards that require the use of best management practices for development and redevelopment to reduce Total Suspended Solids (TSS) and Total Phosphorus (TP) to 80% and 50%, respectively.
  - Standards that prohibit construction on slopes greater than 12%, prohibit construction within 40 feet of the top of bluff lines in urban areas and 100 feet in rural areas, and prohibit land alteration activities within 20 feet of the top of the bluff.
- e. The Township will support the VBWD implementation of its standards for control of peak runoff, infiltration and filtration, and

best management practices to control Total Suspended Solids (TSS), Total Phosphorus (TP), and runoff from development or redevelopment within the Township. The District will play the primary role in reviewing the stormwater plans for development applications within its portion of the Township, and implement its rules through the review and permit process. The Township will play the primary role in stormwater permitting within the MSCWMO portion of the Township. The MSCWMO will review applications and provide comments to the Township for these reviews.

- f. The Township will manage land use to support protection of surface and ground waters within the Township through its Zoning and Subdivision Ordinance, including:
  - Land Use Plan and Zoning Regulations
  - Subdivision Regulations #131 (County ordinance)
  - Shoreland Ordinance #2002-01 (County ordinance)
  - Floodplain Ordinance #2002-94 (County ordinance)
  - Erosion and Sediment Control Ordinance
  - Revision of its Stormwater Management Ordinance.
- g. The Township will cooperate with the County in managing land use to protect ground water resources.

**Goal 2:** Protect the quality of local lakes.

**2. Policies**

- a. The Township supports the Valley Branch Watershed District’s goals for managing lakes in the Township.
- b. The Township will implement its land use plan, and zoning and subdivision ordinances to protect shoreland areas and lake water quality, and work with the VBWD to achieve lake management goals.
- c. The Township will continue to cooperate with Washington County to manage shoreland areas under the Washington County Shoreland Ordinance, which has been approved by the Minnesota DNR.

**Goal 3:** Protect wetland resources.

**3. Policies**

- a. The Township will support the Watershed Organizations’ Wetland Management Plans. These plans include functions and values

assessments of the wetlands in the Township, and wetland management requirements.

- b. The Township will continue to contract with the Washington Conservation District to provide wetland management services to the Township.
- c. The Township supports and will adopt Watershed Management Organization requirements for pretreatment of stormwater prior to discharge into all wetlands, and will enforce these requirements throughout the Township.
- d. The Township supports and will adopt VBWD and MSCWMO requirements for wetland buffers based on the functions and values assessments and wetland classifications identified in the WMO Wetland Management Plans, and will enforce these requirements.
- e. Wetlands that have not been inventoried will be required to complete a functions and values assessment as a part of the development application. VBWD and MSCWMO rules regarding wetland management will be applied based on the results of the assessment and the wetland classification.

**Goal 4:** Protect the quality of Outstanding Resource Value Waters (ORVW), including the St. Croix River and Valley Creek.

#### **4. Policies**

- a. The Township will work with the Watershed Management Organizations and other agencies to achieve the nondegradation goals for ORV Waters by implementing its Zoning and Subdivision Ordinances, including new standards identified in this Plan.

**Goal 5:** Protect groundwater quality.

#### **5. Policies**

- a. The Township will cooperate with the Minnesota Pollution Control Agency, Minnesota Department of Health, and local watershed management organizations to address groundwater quality issues, and enforce its Zoning and Subdivision ordinance to protect groundwater quality.

**Goal 6:** Manage ground water recharge areas.

**6. Policies**

- a. The Township will cooperate with the Minnesota Pollution Control Agency, Minnesota Department of Health, and local watershed management organizations to manage groundwater recharge areas.

**H. PARKS, TRAILS, OPEN SPACE, RECREATION, AND FISH & WILDLIFE HABITAT**

**1. Goal**

- a. Encourage the development of parks, trails, open space, recreation and fish and wildlife areas that are consistent with the rural character of the Township and that are maintained through neighborhood organizations, homeowner’s associations, and other groups so that substantial costs to the Township will not be incurred.
- b. Support local recreational facilities and/or land that benefits the residents of Baytown Township.
- c. Protect and enhance fish and wildlife habitat and water recreational facilities in the Township.

**2. Policy**

- a. Development of a Township trail system will be encouraged through the development process to provide an interconnected system for the safety and benefit of the residents of Baytown Township. The Township will identify opportunities to connect and restore natural areas as it develops its trail system.
- b. The Township will provide a portion of park dedication fees to those communities in which the Township’s residents utilize the park system, at its discretion and as deemed appropriate by the Township.
- c. Open space will be encouraged to be preserved through the development process and through the use of cluster development design for the preservation of ecologically sensitive areas, wildlife habitat, natural resources, open spaces, and natural and scenic views.
- d. Fish and wildlife habitat will be considerations included in the planning and management of recreation and open space areas. The



Township will manage parks to minimize impacts to natural resources, restore and enhance natural areas, and improve water quality.

- e. The Township will consider connections to other local, county, or state trail systems that may be proposed.
- f. The Township will support and participate in County or State planning efforts to create trail connections within the Township.
- g. The Township supports funding through grants, donations, or other funding opportunities which will assist in the development of regional, county, and local trail systems.

## **I. SOLAR ACCESS AND ALTERNATIVE ENERGY SOURCES**

### ***1. Goal***

Assure adequate solar access for Township residents and regulate alternative energy sources.

### ***2. Policies***

- a. All new subdivisions and planned unit developments will be designed to accommodate extensive use of passive and active solar energy systems with special attention given to street, lot and building orientation.
- b. New residential development will be encouraged to include solar energy systems.
- c. Existing residential development will be encouraged to add solar energy systems and to consider other energy sources such as wind power as an alternative to the use of fossil fuels.
- d. Alternative energy sources, such as wind power, will be carefully reviewed so as not to impact the rural character of the Township.

## **J. AGGREGATE RESOURCES**

### ***1. Goals***

- a. Protect the Township's aggregate resources and provide for reasonable economic use of aggregate.
- b. Regulate any active mining operations in order to minimize undesirable effects on the environment and ensure that an acceptable reclamation plan for the land is being implemented.

**2. Policies**

- a. Manage aggregate resources to provide for the extraction of high quality aggregate prior to nonagricultural development on the site.

Ensure that the development of aggregate resources limits adverse adverse environmental impacts and impacts on adjacent land uses as practically as possible.

- c. Require adequate buffering, landscaping, and end use plans.
- d. Ensure the reclamation of mining sites in a manner compatible with the surrounding land uses, natural conditions, and public safety.
- e. Adopt regulations to minimize nuisances from aggregate extraction that affect developed areas and that ensure restoration of extraction sites to protect other natural resources and natural functions.

**K. HISTORIC PRESERVATION**

**1. Goal**

Encourage the preservation and retention of identified historic sites, including structures that contribute to the rural character of the Township.

**2. Policies**

- a. The Township will encourage private owners to restore historically significant buildings.
- b. The Township will encourage the preservation and/or rehabilitation of structures that contribute to the rural character of the Township, including barns, silos, etc.

## IV. Natural Resources and Physical Features

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Baytown Township's environment is a delicate one; one that should be respected, cared for and maintained in order to preserve the land and the existing development. Fortunately, the citizens of Baytown Township have a high regard for their environment and have made major efforts to preserve their Township. However, the preservation of Baytown's natural features has not been an easy task considering the soils, steep slopes, drainageways, vegetation, lakes and streams that make up the Township. All of these delicate features need protection through careful planning which recognizes the Township's developing needs. Following is a discussion of Baytown's various natural features.

### A. SOILS

A soils map was completed using data from the U.S. Department of Agriculture, Natural Resources Conservation Service Soil Survey Geographic (SSURGO) Database. SSURGO is the most detailed level of soil mapping done by the Natural Resources Conservation Service (NRCS) and is designed for use by landowners, townships, and county natural resource planning and management. The SSURGO soil survey is an inventory of soils found in a particular area and is illustrated in Exhibit 3A. The soil survey indicates, among other things, the type of soil, the slope gradient, the suitability of the soil as a source of selected materials and features affecting use, and the degree and kind of soil limitation for selected uses. The soil map is very useful as a planning tool and for suggesting the kinds of problems that may be expected in a certain area. However, soil maps do not eliminate the need for sampling and testing at a specific site.

Hydrologic soils groups shown in Exhibit 3B describe soils based on runoff potential of soil. The four Hydrologic Soils Groups are A, B, C, and D, where A's generally have the smallest runoff potential and D's the greatest. More detailed descriptions of the hydrologic soils groups are found in the Appendix. The hydrologic soils group most prevalent in Baytown is Type B. Type B soils have moderate percolation rates and have moderate limitations for the installation of subsurface septic systems. Soil types with more severe limitations are present throughout the central portion of the Township, especially in the north-central areas. Slow percolation rates indicate soils that are too tight to accept sewage. Thus, systems placed in these soils could fail if sewage percolates to the ground surface or backs-up in the residence.

Indicated on Exhibits 3C - 3E are soils having varying degrees of limitations for septic tank absorption fields for trench, at-grade, and mound septic systems. As can be seen from the soil maps, a significant portion of Baytown Township has either extreme or moderate limitations for these systems. Slow percolation rates, wet or periodically flooded areas, steep slopes, or bedrock

near the surface cause soils to have degrees of limitations for septic tank drainfields.

Wet areas are scattered throughout the central portions of the Township and are especially present in the southwestern areas of the Township. These soils are those that are periodically flooded or have a high water table. The flooding referred to is local ponding which occurs after heavy rains, and may persist for several weeks or longer in the spring. Usually, a soil that has flooding characteristics will also have a high seasonal water table. The depth to the water table is the highest known elevation at which the soil profile is totally saturated. Thus, if a soil treatment system is installed at this depth or deeper, no sewage effluent will be able to move into the soil since the soil is already saturated. Hence, the sewage will either back-up in the residence or seep to the surface of the ground.

Steep slopes indicated on the Topography map are especially present along the St. Croix River and in the southeastern portion of the Township.

Bedrock within three feet of the surface is encountered along the St. Croix River and in a small area in the southeastern corner of the Township. Soil treatment systems which are placed too close to fractured bedrock do not perform adequate treatment of sewage effluent. Under these conditions, sewage may move through the rock and enter wells without receiving sufficient filtration to remove the chemical and bacteriological contamination.

The following observations and problems were identified during the soils analysis:

- \* A good number of existing homes in the Township lie within soil conditions with moderate or low percolation rates.
- \* Shallow wells and proximity to sewage disposal systems or systems placed in bedrock are susceptible to groundwater pollution and well contamination.

### ***1. Prime Agricultural Soils***

Baytown Township is a community founded on agricultural land uses. Prime agricultural soils found in the community are identified on Exhibit 4. Much of the Township consists of soils that are classified as prime agricultural soils (Class I and II Soils). Class III soils are shaded on this map and are classified as secondary agricultural soils. However, for planning purposes, these Class III soils should also be considered as productive agricultural soils. Concentrated areas of prime soils are located in the southwestern corner of the Township. Other areas exist surrounding the lakes in the northwestern corner of the Township, although these areas have been developed into residential lots.



The prime agricultural soils map indicates that most of the soil in the Township is considered productive agricultural land. When reviewing this data for long term use of the land, additional factors such as existing land use, topography and vegetation must be considered.

The following soil types are considered Class I, II and III soil by the Soil Conservation Service:

<u>Map Symbol</u>	<u>Soil Name</u>	<u>Map Symbol</u>	<u>Soil Name</u>
2 B, C	Ostrander	302 B, C	Rosholt
49 B, C	Antigo	327	Dickman
75	Bluffton	340 B, C	Whalan
100 B	Copaston	342 B, C	Kingsley
113	Webster	367 B	Campia
120	Brill	408	Faxon
123	Dundas	411 B	Waukegan
132 B, C	Hayden	449	Crystal Lake
151 B	Burkhardt	452	Comstock
153 B, C	Sanitago	453 B	DeMontreville
155 B	Chetek	467	Barronette
159 B	Anoka	460 B, C	Baytown
166	Ronneby	468	Otter
169 B	Braham	472 B	Channahon
170	Blomford	481	Kratka
174	Gale	504 B, C	Duluth
189	Auburndale	507	Paskin
225 B	Nessel	529 B, C	Ripon
259 B	Grays	1813 B	Lino
264 B	Freeon	1321	Algansee
266	Freer	1827 B	Waukegan
298 B	Richwood	1847	Barronette
301 B	Lindstrom		





# Oak Park Heights

Lake Elmo

Bayport

West Lakeland Township

## Legend

-  Baytown
-  Municipal Boundaries
-  Lakes
-  SSURGO Soils Data

## BAYTOWN TOWNSHIP Soil Survey Geographic (SSURGO) Database

0 0.25 0.5 1 Miles



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DATE: MAY 2009










Oak Park Heights

Lake Elmo

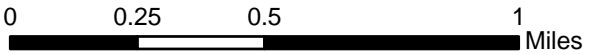
Bayport

West Lakeland Township

Legend

-  Municipal Boundaries
- Hydrologic Soils Group**
-  A
-  A/D
-  B
-  B/D
-  C
-  C/D
-  D
-  Not Rated

**BAYTOWN TOWNSHIP  
Hydrologic Soils Groups**



Sources: Metropolitan Council, Washington County, USDA, NCRS, TKDA  
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Oak Park Heights

Lake Elmo

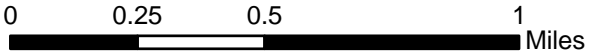
Bayport

West Lakeland Township

**Legend**

-  Municipal Boundaries
- Trench Suitability**
-  Extremely limited
-  Moderately limited
-  Slightly limited
-  Not rated

**BAYTOWN TOWNSHIP  
Septic Tank  
Absorption Fields -  
Suitability for  
Trench Systems**



Sources: Metropolitan Council, Washington County, USDA, NCRS, TKDA  
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Oak Park Heights

Lake Elmo

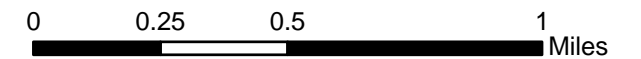
Bayport

West Lakeland Township

**Legend**

-  Municipal Boundaries
- At Grade Suitability**
-  Extremely limited
-  Very limited
-  Moderately limited
-  Slightly limited
-  Not limited
-  Not rated

**BAYTOWN TOWNSHIP  
Septic Tank  
Absorption Fields -  
Suitability for  
At-Grade Systems**



Oak Park Heights

Lake Elmo





Bayport

West Lakeland Township

**Legend**

 Municipal Boundaries

**Mound Suitability**

-  Extremely limited
-  Very limited
-  Moderately limited
-  Slightly limited
-  Not limited
-  Not rated

**BAYTOWN TOWNSHIP  
Septic Tank  
Absorption Fields -  
Suitability for  
Mound Systems**

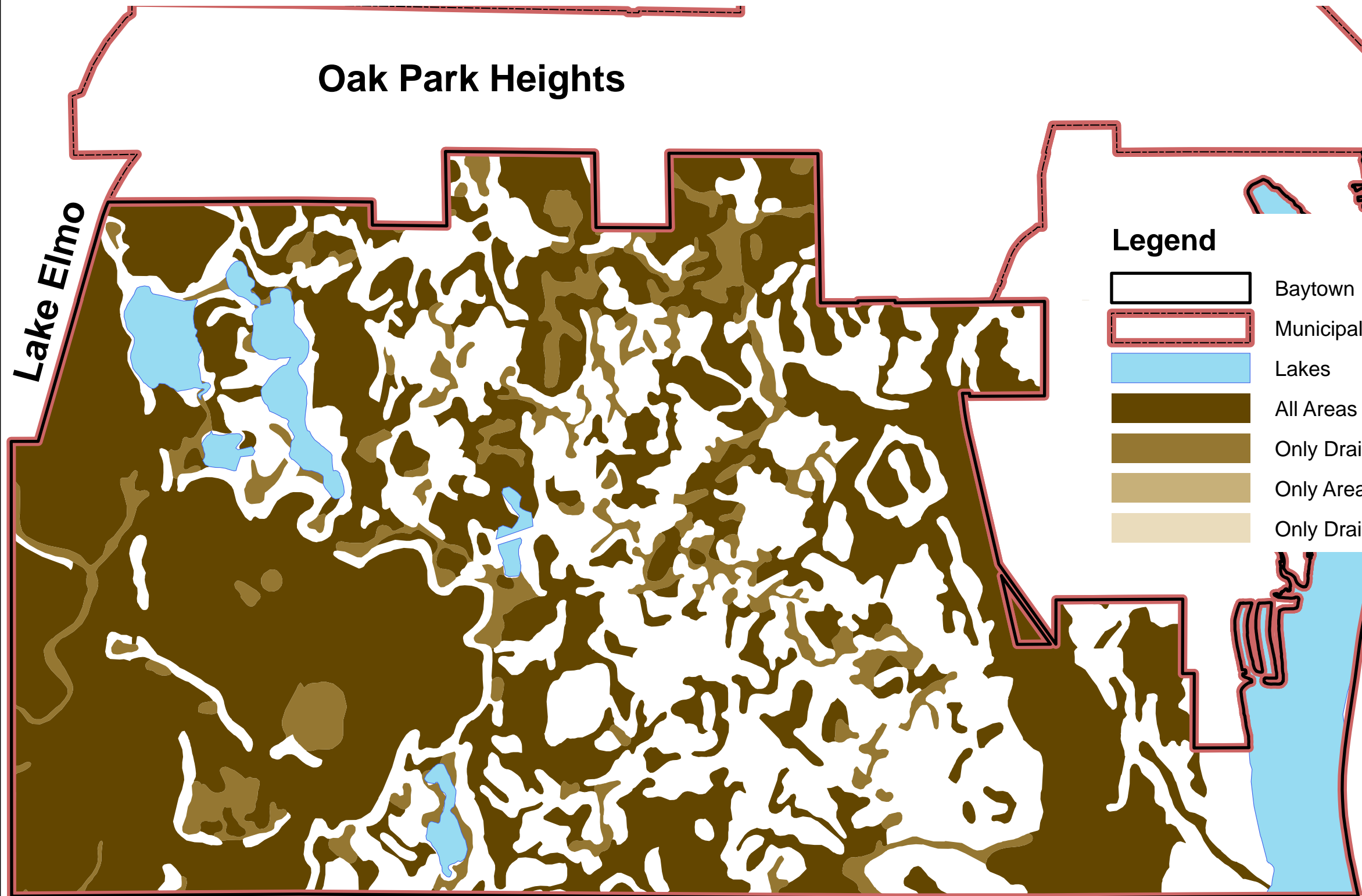
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DATE: MAY 2009

Oak Park Heights

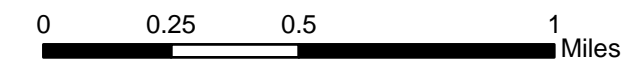
Lake Elmo



Legend

-  Baytown
-  Municipal Boundaries
-  Lakes
-  All Areas are Prime
-  Only Drained Areas are Prime
-  Only Areas Not Frequently Flooded are Prime
-  Only Drained Areas Not Frequently Flooded are Prime

**BAYTOWN TOWNSHIP  
Prime Agricultural Soils**



West Lakeland Township



## B. TOPOGRAPHY

Baytown Township is characterized by a diversified landscape consisting of level areas, ravines and moderate to excessive slopes. The land formations along the St. Croix River are indicative of the natural settings along major rivers that are formed by the surface water run-off process. Outside the river area, the topography is varied with some steep slopes along lakeshore areas and in the southeastern portion of the Township.

Slopes 12% to 18% and 18%+ are indicated on the Topography map. Slopes may also be calculated from the topographic map (Exhibit 5) by measuring the distances between contour lines. Distances for 12% and 18% slopes are:

12% Slope ----- 83 feet between contours

18% Slope ----- 55 feet between contours

Areas with more than 83 feet between contours have slopes of less than 12%. Where contours are between 55 and 83 feet apart, the slope is between 12% and 18%. Areas with less than 55 feet between contours have slopes greater than 18%.

In conclusion, based on the topographic map, areas with slopes over 12% exist in scattered portions of Baytown Township. Extreme caution should be considered when contemplating any development within these areas due to:

- \* The possibility of erosion
- \* Septic systems function poorly on steep slopes
- \* Erosion may result in foundation damage



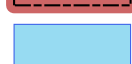





Oak Park Heights

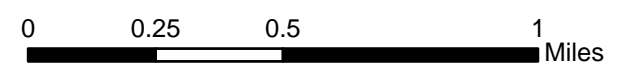
Lake Elmo

Bayport

**Legend**

-  Baytown
-  Municipal Boundaries
-  Lakes
- Steep Slopes**
  -  General Area with 12% to 18% Slope
  -  General Area with greater than 18% Slope
  -  Topography (10-foot contours)

**BAYTOWN TOWNSHIP  
Topography**



West Lakeland Township



## C. VEGETATION

The major areas of vegetative cover are mapped on the Environmental Features Map (Exhibit 6). The predominant areas of tree cover correspond to the areas of steep slopes and along the St. Croix River. This vegetation is composed mainly of scattered deciduous trees and conifers.

Care must be taken during potential development of existing vegetative features. Development which does not consider vegetation satisfactorily could result in the following:

- \* An increased chance of erosion and siltation
- \* Loss of landscape diversity
- \* An increased danger of flooding
- \* Decreased land values
- \* Lessening of water quality
- \* A possible change in the surrounding ecology of wildlife and associated herbs and shrubs



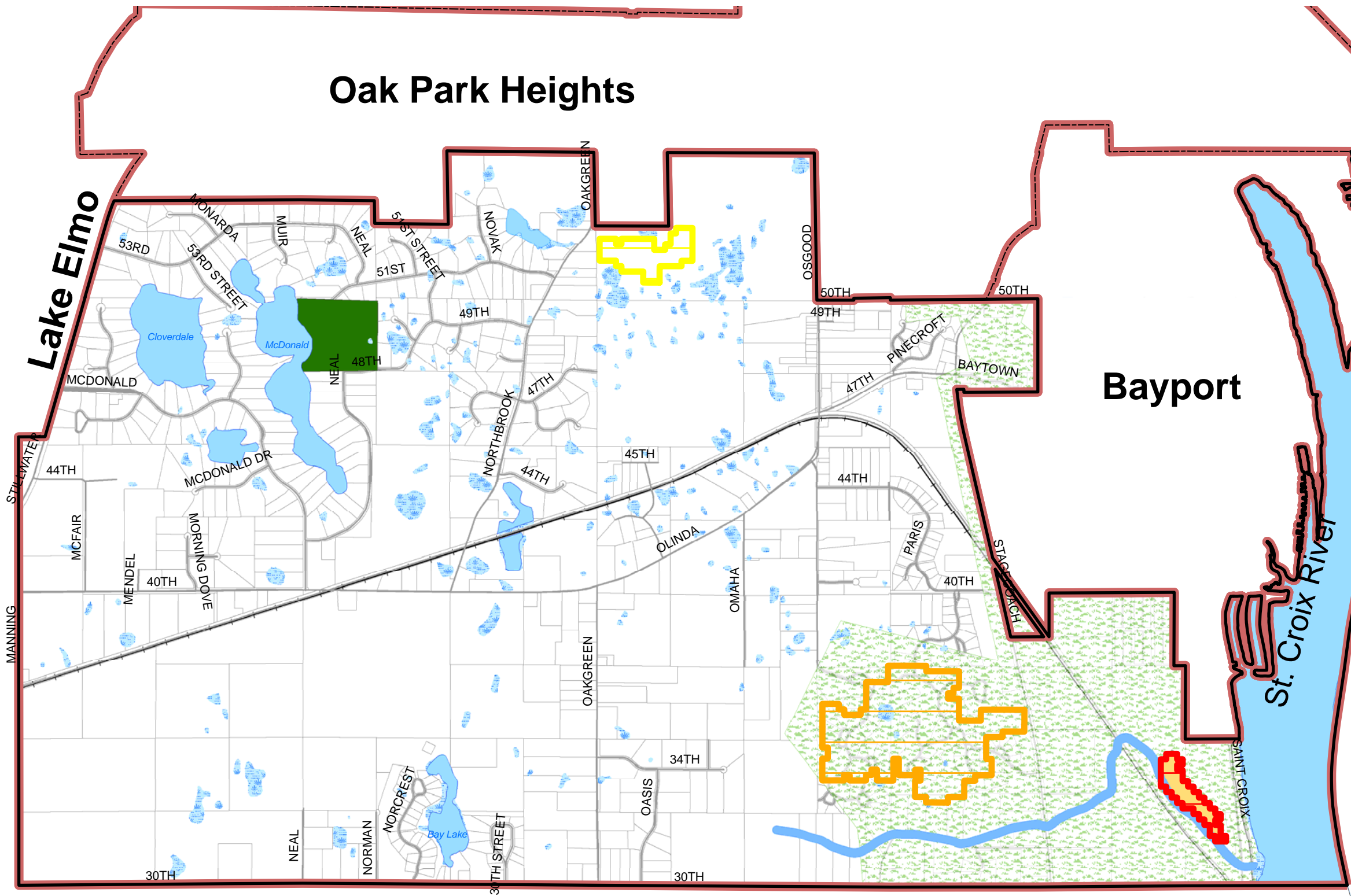
## D. WETLANDS

Numerous wetlands and ponding areas exist throughout the Township. In addition, three small lakes are present in the Township. The lakes, wetlands and waterways of the town are extremely valuable. Wetlands are important in their capacity to filter and purify surface waters. They naturally function as nutrient traps and as settling ponds. They act as water reservoirs during times of drought and as sponges during periods of high rain and run-off, retarding run-off and reducing the severity of flooding. Wetlands also provide essential breeding, nesting, resting and feeding grounds, and predator escape cover for myriad forms of wildlife. Wetlands are also important for recreational purposes.

Water resource management is an important concern for the town, both as it directly affects residential development and also in its more subtle and long-range effects on the health, safety and welfare of the residents of the Town. Reference the Surface Water Management Plan within this Comprehensive Plan for more detailed discussion of the Township's water resources.

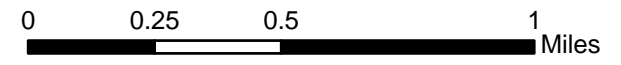


[http://www.mnwcd.org/wetlands\\_can\\_i.php](http://www.mnwcd.org/wetlands_can_i.php)



- Legend**
- Baytown
  - Municipal Boundaries
  - Parcels
  - Lakes
  - Stream
  - National Wetland Inventory
  - DNR Regionally Significant Ecological Areas**
    - Outstanding
    - High
    - Moderate
  - DNR Metro Conservation Corridors
  - County Biological Survey**
    - Hardwood Forest
    - Dry Savanna Prairie

**BAYTOWN TOWNSHIP  
Environmental Features**



Sources: Metropolitan Council, Washington County, TKDA  
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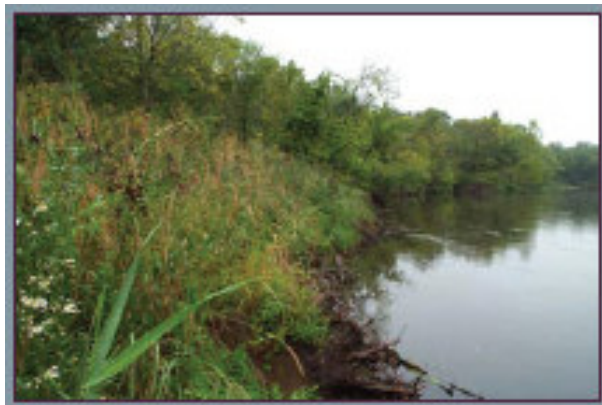
## E. WATERSHED MANAGEMENT

The western portion of Baytown Township is within the Valley Branch Watershed District as indicated on the Watershed Management Authorities Boundaries Map. The Valley Branch Watershed District includes portions of Baytown and West Lakeland Townships, a majority of the City of Afton and Lake Elmo, and portions of other cities some of which include Grant, Pine Springs, Oakdale, Oak Park Heights, and Mahtomedi. The head of the watershed is at the western boundary of Washington County in Mahtomedi. The watershed flow is in a southeasterly direction to the Old Village of Afton.

The Valley Branch Watershed District is directed by a Board of Managers assisted by a consulting engineer. This Board of Managers reviews all development proposals that impact on major drainage features and proposed subdivisions with the district as they are affected by the plan prepared for the district. The overall plan indicates the drainage pattern and the normal and flood elevations of water bodies and storage ponds along the main stem (Valley Branch) and the Valley Branch South Fork of the Watershed.

The eastern half of Baytown Township lies within the Middle St. Croix Watershed Management Organization. The Middle St. Croix Watershed Management Organization includes portions of Stillwater, Oak Park Heights, Bayport, Baytown Township, West Lakeland and others. Basically, runoff waters from the Middle St. Croix Watershed Management Organization (MSCWMO) flow east. The portion of Baytown that is located in the MSCWMO has a runoff pattern that drains east to the St. Croix River, which is aided by Perro Creek in the north and another small stream in the south of the Township.

The Watershed Management Authority Boundaries within the Township are shown on Exhibit 7.



<http://www.vbwd.org/ValleyCreek.htm>

Oak Park Heights

Lake Elmo






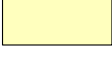

Bayport

VALLEY BRANCH WD

MIDDLE ST. CROIX WMO

West Lakeland Township

Legend

-  Baytown
-  Municipal Boundaries
-  Parcels
-  Lakes
-  Valley Branch WD
-  Middle St. Croix WMO
-  Orphan Areas

**BAYTOWN TOWNSHIP  
Watershed  
Management Authority  
Boundaries**

0 0.25 0.5 1 Miles



**TKDA**  
ENGINEERS • ARCHITECTS • PLANNERS  
DATE: MAY 2009

## F. GEOLOGIC CONDITIONS

### 1. *Bedrock Topography and Geology*

Bedrock is made up of layers of rock that have accumulated through time. The bedrock in Washington County is from the Paleozoic Era. The upper most layer of bedrock varies through the county due to reasons such as erosion from movement of flowing water and glacial movement across the county.

In Baytown Township, the highest elevation of bedrock is located in two areas of the Township's south central region, south of CSAH 14. The elevation is approximately 1,000 feet above sea level and the types of bedrock are Platteville and Glenwood Formations. Platteville Formations consist of fine grain dolostone and limestone and are underlain by Glenwood Formations, which consist of green sandy shale.

Other plateaus of bedrock in south central Baytown peak at around 900 feet above sea level. These areas are capped by St. Peter Sandstone. St. Peter Sandstone is the highest layer of bedrock for about 1/4 of the Township. It is made up of fine and medium grade sandstone with the lower part of the layer also containing mudstone, siltstone, and shale interbedded with coarse sandstone.

The majority (over 60%) of the Baytown has bedrock at elevations from 800 to 850 feet above sea level; the bedrock associated with these areas is Prairie du Chien Group. Prairie du Chien bedrock in the upper two thirds to half is composed of sandy or thin bedded dolostone with thin beds of sandstone and chert. The dolostone in the lower part is massive to thick bedded and not sandy.

Around McDonald Lake and thence in an easterly path to Oak Park Heights and then southerly along the St. Croix River bluffline, the elevation of the highest layer of bedrock is approximately 750 feet above sea level. The bedrock associated with this elevation is Jordan Sandstone. The upper part of Jordan Sandstone is medium to coarse grained, quartzose sandstone. The lower part is fine grained sandstone that is commonly feldspathic, bioturbated and massively bedded.

East of the bluffline and the St. Croix River the elevation decreases to approximately 700 feet above sea level. The bedrock that are the top layer at this elevation are St. Lawrence and Franconia Formations. St. Lawrence Formations consist of dolomitic shale and siltstone that is thin bedded. The Franconian is composed of fine grained glauconitic sandstone.

## **2. *Depth of Bedrock***

About two thirds of the bedrock in Baytown Township is less than 100 feet from the surface soil. In central and south central Baytown, the bedrock is often less than 50 feet from ground level. Much of the north, west and southwest perimeters of the Township have a depth to bedrock of 51 to 100 feet.

The area of McDonald Lake and the St. Croix River have depths to bedrock of 201 to 250 feet. This depth is continued from McDonald Lake in a narrow band to the northeast to Oak Park Heights and west from the St. Croix River halfway to CSAH 21. With these areas are pockets which have a depth to bedrock that reach 300 feet.

Adjacent to the regions where the bedrock is over 201 feet from the surface, the depth to bedrock decreases to meet the predominant 100 foot or less depth. The slope of bedrock depth from 200 feet to 100 feet is abrupt adjacent to the St. Croix River, whereas the 200 foot to 100 foot slope of bedrock around McDonald Lake is fairly gradual.

## **3. *Hydrogeology***

The ground-water resources of Baytown Township are located in four underground aquifers. Three of the aquifers are located in bedrock and one is a Quaternary or water-table aquifer. The three bedrock aquifers are the Prairie du Chien-Jordan, Franconia-Ironton-Galesville, and the Mt. Simon. In the bedrock aquifers, which are overlain with a confining geologic layer, the ground-water is under artesian pressure. The artesian pressure causes the water within the aquifer to move from high to lower pressure elevations. In water-table aquifers, the ground-water is under atmospheric pressure. The elevation an aquifer's static water level is at is called the potentiometric surface.

The water-table is located below where the ground is completely saturated with water and the water-table exist in many types of ground or geologic material. Some of this geologic material, such as gravel or sand, will yield water to wells. About half of Baytown is located over the water-table aquifer that will yield water to wells. The extreme north west corner and a wide strip running north to south though the center of the Township do not have access to this aquifer, because of the geologic matter of the areas. The movement of the ground-water is to the east and the elevation of the water-table decrease gradually from 850 feet above sea level in the west to under 700 feet above sea level along the St. Croix River.

The ground-water that is most heavily used is from the Prairie du Chien-Jordan aquifer. This aquifer exists under all of Baytown except

the southeast corner, south of Bayport to the St. Croix River. The ground-water of the aquifer flows to the east. The potential yield from the aquifer is less than 1,000 gallons per minute in the northwest half of the Township and from 1,000 to 2,000 gallons per minute from the southeast half. The static water levels of the aquifer range from 900 feet above sea level to less than 700 feet where the aquifer halts south of Bayport. The water level elevations show a similar pattern to the water-table aquifer, except that the higher elevations are naturally located farther to the east. The difference in the water level between the Prairie du Chien-Jordan aquifer and the water-table aquifer is from 10 to 50 feet.

The Franconia-Ironton-Galesville aquifer underlies the entire Township. The ground-water also flows eastward and the potential yield is under 1,000 gallons per minute. The static ground level of the aquifer ranges from 850 feet above sea level and gradually decreases to a level below 700 feet at its junction with the St. Croix River. The difference in water level between the Prairie du Chien-Jordan and the Franconia-Ironton-Galesville aquifers is from 25 to 50 feet.

The Mt. Simon aquifer also underlies the entire Township. The ground-water flows in an easterly pattern to the St. Croix River and the potential yield from the aquifer is from 1,000-2,000 gallons per minute. The static water level of the aquifer slopes downward at a slight angle from the east and it is approximately 700 feet above sea level throughout the Township. The difference between the water level of the Mt. Simon and Franconia-Ironton-Galesville aquifers varies greatly from 100 feet at the west edge of the Township to zero in the eastern part of the Township adjacent to the river.

#### **4. *Sensitivity of Groundwater Systems to Pollution***

As part of the Washington County Geologic Atlas, a map of sensitivity of groundwater systems to pollution was prepared for the water-table system (aquifer) and one was prepared for the highest bedrock aquifer. The highest bedrock aquifer for most of Washington County is the Prairie du Chien-Jordan, but Baytown Township has the Franconia-Ironton-Galesville aquifer as the highest aquifer along the St. Croix River. It is noted on the maps that were prepared using assumptions and, therefore, the classifications are not absolute.

The sensitivity to pollution of the ground-water of the water-table system in Baytown is mostly in the "High" rating category. The "High" rating indicates the "contaminants will probably reach the system in weeks to years." The western half of the Township has some small sporadic areas rated as "Very High: contaminants will almost certainly reach the system in hours to months." The north central region of the

Township has a substantial area that is rated as "Moderate: contaminants will reach the system in years to decades."

The Prairie du Chien-Jordan aquifer's sensitivity to pollution ranges from "High" to "Low-Moderate." There is no real pattern to the changes in sensitivity except that the area west of the St. Croix River bluffline and on either side of CSAH 21 is "High." The most common ratings are "High" and "High-Moderate," but also dispersed in the area are the ratings of "Moderate" and "Low-Moderate: contaminants will probably not reach the system for a decade."

As noted earlier the Franconia-Ironton-Galesville aquifer is the highest bedrock aquifer in Baytown where the Township meets the river. The rating for this small area is entirely "High-Moderate."

The above information pertaining to geologic conditions can be seen in graphic form by consulting the Washington County Geologic Atlas.

In 1987, contamination was first found in groundwater in Baytown. The primary kind of contamination is due to Trichlorethylene (TCE), which emanates west of the Lake Elmo Airport in Lake Elmo. The plume of contamination spreads east from the Airport area through the center of Baytown. Concentrations range from 5-10 ug/l to greater than 30 ug/l through much of the Township. The Township is currently under a well advisory. TCE is a chemical used for degreasing and is used in the textile industry, adhesives, lubricants, paint, paint strippers and cleaning agents.

Because of the well advisory, precautions must be taken for private wells. Where possible, the Township encourages common water systems, which enables wells to go deeper to avoid the contaminated aquifer, which is primarily the Prairie du Chien. This is discussed in more detail in the Community Facilities chapter of this Plan.

## V. Land Use

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### A. EXISTING LAND USE

In order to plan for the future of Baytown Township, it is necessary to examine the existing pattern of land use. The Metropolitan Council provides existing land use based on 2005 data. The Existing Land Use Map (Exhibit 8) is categorized according to use. Acreages from 1997 are shown for comparison and the 2020 Future Land Use Map is included in the Appendix for reference. The Table below indicates the distribution of land uses by acreage in Baytown Township for the years 1997 and 2005.

**Table 3:  
Existing Land Use**

<b>Land Use Designation</b>	<b>1997 Acres</b>	<b>Land Use Designation</b>	<b>2005 Acres</b>
Vacant and Agriculture minus wetlands	3,492	Agricultural	1,689
Isolated Farm Residential	45	Farmstead	38
Single Family Residential	771	Single Family Detached	998
Industrial & Industrial Vacant	21	Industrial and Utility	3
Extractive	64	Extractive	83
Public & Public vacant	261	Institutional	108
Commercial	9	Park, Recreation, Preserve	149
Highway	12	Airport	271
Airport	554	Undeveloped	1,834
Wetlands	159	Water	692
Water	691	<b>Total</b>	<b>5,865</b>
<b>Total</b>	<b>6,079</b>		

*Source: Metropolitan Council (1997 and 2005 land use data), TKDA*

The following sections discuss existing land uses within the Township.

#### ***1. Agriculture***

Agriculture lands make up over one quarter of the Township's area, particularly concentrated in the area surrounding the Lake Elmo Airport.

Prior to 1960, Baytown Township was almost entirely agricultural, but since then urbanization has been spreading throughout the area. This urban expansion includes roads, hobby farms and large lot residential development. Baytown Township has been steadily losing productive agricultural land over the past years.

As local farmers throughout the county have found, the spread of urbanization means spiraling land prices, higher property taxes and

special assessments, stricter regulation of farm practices (nuisances, odors, noise), heavy traffic that interferes with slow moving farm equipment, and increased incidence of trespass and vandalism. Scattered residential development often prevents economic agricultural use of the remaining interspersed farmland, and large areas are, thus, effectively lost for food production. The psychology of urbanization turns many farmers into land speculators even though there are clearly not enough buyers to make all farmers wealthy. Oftentimes, farm investments are postponed in the hope of selling the land, and soon farm operations deteriorate.

In order to preserve agricultural land, yet allow farmers to develop a portion of their property, the Township should encourage cluster developments, especially in the agricultural zones as shown on the 2030 Land Use Map (Exhibit 10).

a. Cluster Developments

Cluster development is defined as residential development in which a number of single family dwelling units are grouped on smaller than usual lots, leaving some land undivided for common use by all residents of the development or retained in agriculture by the subdivider. The number of dwellings allowed does not exceed the total number of dwelling units allowed if the development were a standard subdivision.

Clustering offers benefits to both the property owner and the Township. For the property owner, development cost will be less, (surveying, construction of the road, etc.). It is also beneficial to the farmer since it would allow a farmer to develop a portion of his property and farm the remainder. For the Township, since the units are more closely together, it is more economical to provide basic community services such as police and fire protection. In addition, since the road constructed is shorter, it is cheaper to maintain than a road platted under the standard platting method.

In 2005, the Township completed a Cluster Development Study. This study assessed areas best suited for cluster subdivisions on remaining parcels over 25 acres in size within the Township. The purpose of the analysis was to evaluate which remaining large tracts of land in the Township would be better suited for cluster development rather than traditional subdivision, and which parcels would be better for traditional-type developments.

For the study, sites over 25 acres in size were analyzed with consideration to zoning, type of adjacent subdivision, topography, location of wetlands and mature trees, and the well advisory area.



Twenty sites were identified, including some already in the development process and some that would never be developed (DNR land). The Township may choose to update this study at any time and development should not be determined on the basis of this plan, but on the basis of discussion with the Township at the time of submission of a development proposal. The Cluster Development Study is attached in the Appendix of this Plan.

b. Agricultural Preserves

In April 1980, the State Legislature passed and the Governor signed the Metropolitan Agricultural Preserves Act. This act provides a package of benefits to enable farmers near urban areas who want to continue farming to do so on an equal footing with farmers not affected by urban pressures. The intent is to allow farmers to make long-term agricultural investments with the assurance that their land would continue in farm use.

Farmland in Agricultural Preserves is taxed according to its agricultural use rather than market value, and mill rates are reduced to a level comparable to outstate agricultural areas. The act limits property taxes in two ways: first land in agricultural use is valued solely according to its agricultural use value; second, a maximum rate of tax is set, based on 105 percent of the statewide average for Township gross mill rates. Any revenue shortfall resulting from limiting the mill rate is reimbursed by the state.

State agencies are directed to presume in favor of Agricultural Preserves. Eminent domain actions require that no reasonable alternative to the proposed land taking exists. The Agricultural Preserve designation runs with the land with no limitation on ownership. Land can be bought and sold as farmland with no penalties. Special assessments for urban sewer and water systems are prohibited. Limits are placed on local regulations that interfere with normal farm practices. Land can not be annexed to a municipality without certain conditions being met.

To be eligible for designation as an Agricultural Preserve, Metropolitan Area farmland has to be planned and zoned for long-term agriculture. To obtain the designation, any owner of 40 acres or more of such farmland must sign an agreement establishing an Agricultural Preserve for the land. The land must be kept in farm use for a minimum of eight years and must be farmed according to good conservation practices. The act provides that the Preserve continues indefinitely until either the farmer or local community notifies the other of the intent to terminate the contract.

## **2. Residential Development**

Baytown Township consists of primarily large lot single family residential land uses as the agricultural land uses within the Township have steadily decreased. The number of households within the Township will steadily increase from 600 households in 2010, to 680 in 2020, to 760 in 2030. This is a 13.3% increase from 2010 to 2020, and an 11.8% increase from 2020 to 2030. This growth in households and the corresponding growth in population will result in further development within the Township.

The existing lots in Baytown Township have a development pattern containing a mix of 2.5 and 5 acre lots. These subdivisions have created a development pattern in the center of the community to which providing future public services would be difficult.

## **3. Public/Semi Public**

The Lake Elmo Airport is mostly located within the boundaries of Baytown Township. This facility consists of approximately 530 acres in the southwestern corner of the Township owned by the Metropolitan Airports Commission. In addition, the Washington County Fairgrounds is located in the eastern portion of the Township along 40th Street and Manning Avenue and is approximately 120 acres of land owned by the Washington County Agricultural Society. These properties are semi-public lands.

The State of Minnesota owns approximately 337 acres in the Township. The area in the north-central portion of the town on the west side of Osgood Avenue is used as a game management area and is managed by the Minnesota Department of Natural Resources. This area is the Bayport Wildlife Management Area. The State also owns property on the west side of the Union Pacific Railroad tracks, south of the City of Bayport and up to the St. Croix River. The southernmost part of this area is managed by the Minnesota Department of Natural Resources, a portion north of that is managed by the Minnesota Department of Transportation, and the remaining northernmost portions are used by the Minnesota Department of Corrections. This area is the St. Croix Savanna Scientific and Natural Area. These properties are public lands.

## **4. Commercial**

At the time of the last Comprehensive Plan, all commercial development in the Township was located in the northwest corner of the Township in what is referred to as Kern Center. This 23 lot commercial light industrial business park has since been annexed to the

City of Oak Park Heights. There are no existing commercial land uses within the Township.

**5. *Extractive***

Aggregate resources within the Township are included in this land use. There are two active extractive areas within the Township. Generally after extractive (gravel or mining operations) land uses are complete, the land use returns to residential uses.

**6. *Parks***

The Township has two significant regional park areas within the Township. Both are DNR-owned areas and thus in addition to parks, are considered public lands and discussed above in that section. The Bayport Wildlife Management Area and the St. Croix Savanna Scientific and Natural Area are both publicly owned park areas which also provide recreation opportunities for the Township's residents.

The Township owns no park land although a neighborhood organization, Baytown Neighbors, has created a small passive park area on the Community Center property at McDonald Drive and 40th Street.












Oak Park Heights

Lake Elmo

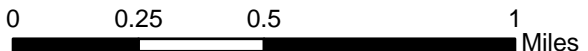
Bayport

West Lakeland Township

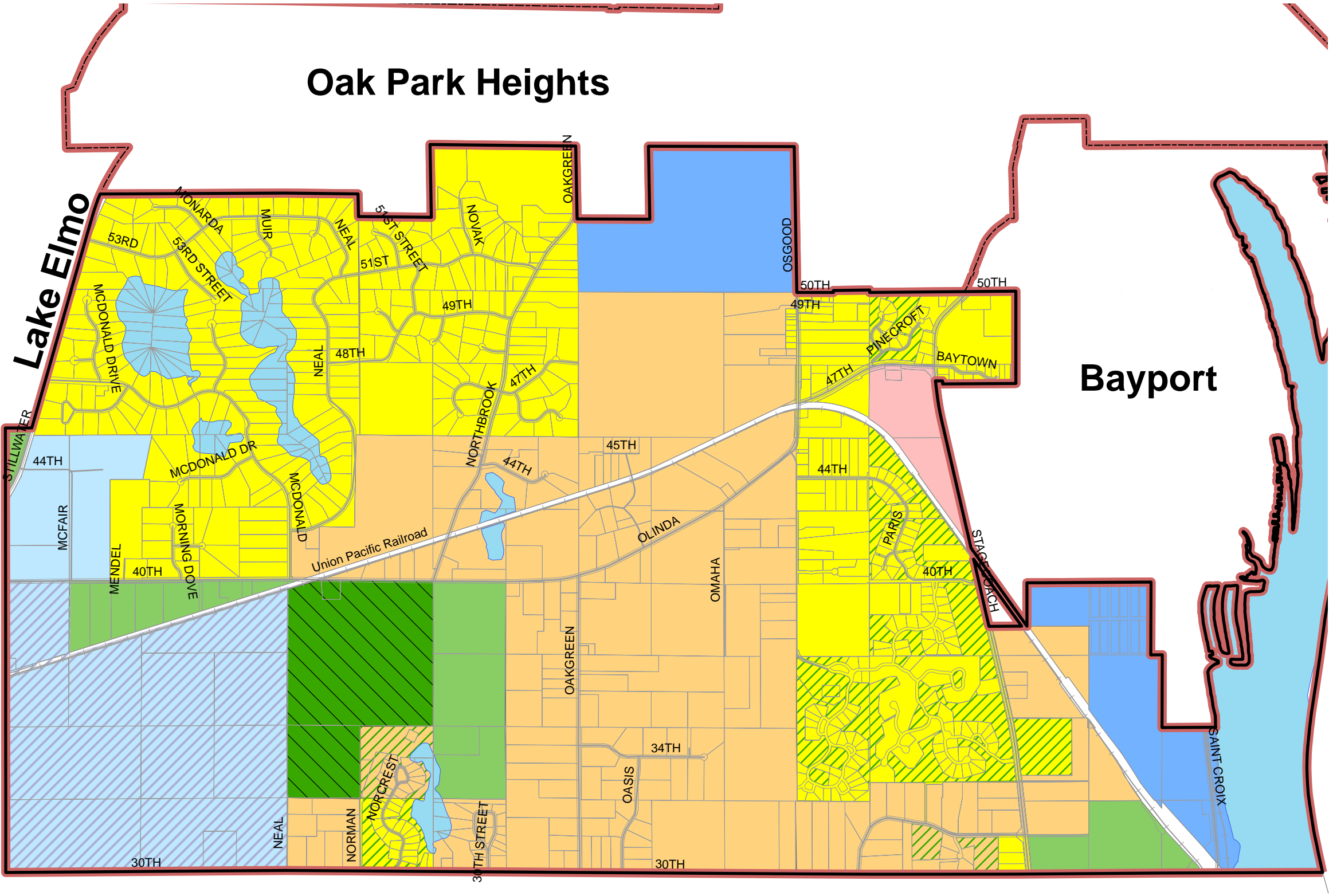
Legend

-  Baytown
-  Municipal Boundaries
-  Parcels
- 2005 Land Use**
-  Farmstead
-  Single Family Detached
-  Industrial and Utility
-  Extractive
-  Institutional
-  Park, Recreational, or Preserve
-  Airport
-  Agricultural
-  Undeveloped
-  Water

**BAYTOWN TOWNSHIP  
Existing Land Use**



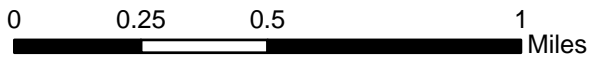
Sources: Metropolitan Council, Washington County, TKDA  
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**Legend**

- Baytown
- Municipal Boundaries
- Parcels
- Lakes
- Existing Land Use and Zoning District**
- CFP** Commercial Food Product (1 du/40 ac)
- A-1** Agriculture (4 du/40 ac)
- RR** Rural Residential (8 du/40 ac)
- SFE** Single Family Estates (16 du/40 ac)
- SP** Semi Public
- P** Public
- TZ** Transition Area
- COM** Commercial
- OS** Permanent Open Space - Private
- AIR** Airport
- AP** Agricultural Preserves

**BAYTOWN TOWNSHIP  
Existing Land Use Plan  
and Zoning Map**



**West Lakeland Township**



**TKDA**  
ENGINEERS • ARCHITECTS • PLANNERS

DATE: MAY 2009

Sources: Metropolitan Council, Washington County, TKDA  
K:\gis\BAYTOWN\Exhibit9-ExistingLandUsePlanandZoningMap.mxd

**B. FUTURE LAND USE**

Baytown Township has made changes to its future land use plan in this Comprehensive Plan Update. The Township was required to provide a Long-Term Sewer Service Area (LTSSA) which would allow for the future provision of sewer services. It is understood that sewer services will not be available or provided to the Township prior to 2030, except for specifically designated areas.

The Township is a rural community and wishes to preserve its character, sense of community, and existing Township borders. In order to preserve the Township’s goals and policies which reinforce these values, the Township has made some changes in the land uses outside of the designated LTSSA.

The table below indicates the Existing, 2030, and Post-2030 land use and acres per land use for the Township.

**Table 4:  
Future Land Use**

Land Use Designation	Existing Land Use Acres	2030 Land Use Acres	Post-2030 Land Use Acres
Commercial Food Product	200	200	200
Agriculture	254	254	191
Rural Residential	1,735	107	62
Single Family Estates	1,933	3,532	3,428
High Density Sewered	0	17	349
Semi Public	667	667	426
Public	376	376	376
Institutional	0	71	71
Commercial	0	0	121
Transition	59	0	0
	5,224	5,224	5,224

Source: Metropolitan Council, TKDA

\* Total acres previously discussed equal 5,865 acres. These acres include water (St. Croix River, lakes, and wetlands), which are not included in the calculations above.

Several planning districts or future land use categories are planned for the Township. The intent and purpose of each is as follows:

**1. Commercial Food Production (CFP) (1 density unit/40 acres)**

The purpose of this designation is to preserve agriculture as a viable permanent land use and significant economic activity within the Township. A very low population density (1 home per 40 acres) would be allowed so as to keep farming as the predominant land use.

Individual property owners must request this designation. Designation as CFP would allow property owners to be eligible for the Agricultural Preserves Program.

**2. *Agricultural (A-1) (4 density units/40 acres)***

The purpose of this area is to preserve land which can be utilized for interim agriculture on lots smaller than those required in the CFP designation. This category would allow for rural low density housing and will be developed at a density of 4 density units per 40 acres (1 home per 10 acres). This low density type development will also help preserve the rural character of the Township and keep service costs low. Clustering of homes would be encouraged in these areas.



**3. *Rural Residential (RR) (8 density units/40 acres)***

The purpose of the rural residential land use designation is to provide rural housing on lands not capable of supporting long term agricultural production. Rural residential lot sizes will provide for marginal agriculture and hobby farming and will be developed at a density of 8 density units per 40 acres (1 home per 5 acres). Clustering will be allowed. Areas within this designation have either generally been developed in this manner and/or environmental constraints limit development options and densities. The housing densities allowed in this district will also help to retain the rural character of the Township.

**4. *Single Family Estate (SFE) (16 density units/40 acres)***

Single Family Estate land uses will be developed at a density of 16 density units per 40 acres (1 home per 2.5 acres). Some of the lots with this designation located to the south of Oak Park Heights and in the Cloverdale Lake/Lake McDonald area, have already been developed at this density.

The central portion of the Township is reguided to Single Family Estate from Rural Residential. The Township will update its zoning map either through amendments initiated by private property owners in the area or through an amendment initiated by the Township. Methods of subdivision such as lot averaging and cluster developments are permitted in this District.



**5. *High Density Sewered (8 - 15 density units/1 acre)***

This is a new land use designation for the Township. The Metropolitan Council has directed Baytown Township to designate areas within the Township to be reserved for future sewer services. In order to maintain the Township's rural character, the Township has placed higher density land uses in areas adjacent to developing communities where services in other communities will complement higher density development. The Township has also considered the transportation networks and directed higher densities towards existing infrastructure. As a result of this requirement by the Metropolitan Council, the Township has created this land use designation to guide development of areas provided with sewer after 2030.

High density sewerred land uses will be developed at a density of 8 to 15 density units per acre. Areas guided for High Density Sewered land uses are within the Post-2030 Long Term Sewer Service Area shown on Exhibit 11. With the exception of one development (Boutwell's Landing Expansion), this land use will not be developed until after 2030. All areas within this designation will be required to have public services. If landowners propose to develop lands prior to 2030 and thus prior to service availability, the Township may require that lands are ghost-platted for eventual high density development when public services become available.



**6. *Semi-Public (SP)***

Areas owned either privately or publicly owned and operated for specific public purposes. The Lake Elmo Airport and the Washington County Fairgrounds are included in this designation.



**7. *Public (P)***

This land use designation consists of property owned by public agencies and used for public purposes. Underlying zoning will be consistent with the adjoining areas.

There are two areas within the Township that are in this category, both are owned by the State of Minnesota. The first is located in the north central portion of the Township adjacent to the City of Oak Park Heights. This area is the Bayport Wildlife Management Area. The other area is located between Stagecoach Drive and the St. Croix River, south of Bayport. This area is the St. Croix Savanna Scientific and Natural area and is managed by the Minnesota Department of Natural Resources. Both areas are wildlife refuges.

**8. *Institutional (I)***

There is one area within the Township designated as an Institutional land use. The St. Croix Preparatory Academy in 2007/2008 purchased property west of CSAH 21 and north of the Union Pacific Railroad Tracks. This property is directly across the highway from the City of Bayport. It is currently zoned Transition and Single Family Estate. The Township and the City of Bayport have cooperatively planned for the provision of city sewer and water services to this property through a Joint Powers Agreement, executed in March 2008.

This is a new land use designation within the Township to be used for the St. Croix Preparatory Academy. This designation indicates a public use such as a church, school, community facility, etc. The St. Croix Preparatory Academy location is the only facility that is designated Institutional within the Township.

**9. *Commercial (C)***

Areas of potential commercial activity have been identified within the Township. These uses will be closely reviewed prior to permitting to assure a particular use is appropriate to the location and adjacent land uses. Protection of groundwater supplies is of paramount importance when considering appropriate uses in commercial zones. Architectural standards, signage and landscaping will be carefully evaluated during the conditional use permit process.

In addressing the Lake Elmo Airport Comprehensive Plan, the Township recognizes that the Airport has considered utilizing some of the available land within the airport for non-airport uses. Compatible land uses surrounding airports have to consider safety and compatibility with existing airport functions. These uses tend to include commercial or industrial land uses. Baytown Township has acknowledged the Airport's Plan and included designated areas within the existing airport that the Township may consider as having potential for commercial land uses Post-2030. These commercial uses will have to be evaluated carefully to ensure that the surrounding residential land uses are not adversely impacted.

**10. *Permanent Open Space (POS)***

Areas within the Township identified as open space and held by permanent conservation easements through a land trust entity. All areas in the Township identified as Permanent Open Space are currently located within private subdivisions.

**11. *Long Term Sewer Service Area (LTSSA)***

The Metropolitan Council has directed Baytown Township to designate areas within the Township to be reserved for future sewer services after 2030. This is a Long-Term Sewer Service Area (LTSSA). In determining the best locations of the future services, the Township considered the Goals of the Township to maintain its existing boundaries, rural character, and quality of life. In addition, the Township considered regional planning goals, development practices, and demand for complimentary services and systems, among other things.

In order to maintain the Township's rural character, the Township has placed higher density land uses in areas adjacent to developing communities where services in other communities will compliment higher density development. The Township has also considered the transportation networks and directed higher densities towards existing infrastructure. The LTSSA defined by the Township is consistent with regional planning goals and yet also addresses Township goals and policies.

Shown on Exhibit 11, the LTSSA designates approximately 1,565 acres of land within the Township's boundaries for the provision of sewer service. The Township anticipates that the extension of services will be after the year 2030, with the exception of the St. Croix Preparatory Academy and the proposed Boutwell's Landing expansion.

The LTSSA designates areas near existing developing communities and areas of higher density development to be preserved for the potential expansion of sewer services into the Township. These areas include the St. Croix Preparatory School, areas to the east of Stagecoach both north and south of the school site, the proposed location of the Boutwell's Landing expansion adjacent to Oak Park Heights and its adjacent parcel, the Washington County Fairgrounds, the Lake Elmo Airport, and agricultural areas to the east of the airport - south of 40th Street.

Areas that are identified as Pre-2030 Sewered Areas on Exhibit 11 include two areas; the St. Croix Preparatory Academy site and the proposed location of the Boutwell's Landing expansion. All other areas within the LTSSA are identified as Post-2030 Sewered Areas.

Within the Post-2030 LTSSA, the Township has designated future land uses of commercial, high density residential, semi public, agricultural and rural residential. These are identified on the Post-2030 Land Use Map (Exhibit 11).

The Post-2030 Sewered Area includes land guided for rural residential and agricultural uses - land uses that do not utilize sewer. This guidance is consistent with the existing zoning. These areas illustrate where sewer may be appropriate in the long-term future, but the Township did not plan for the ultimate, sewered land use within this Comprehensive Plan update. The Township intends for these areas to be the last portions of the Township to receive sewer service. Therefore, the Comprehensive Plan does not guide the land use here for a higher intensity, sewered land use. The Township expects to consider in greater detail the long-term land use for these areas in a future comprehensive plan update.

The semi-public area within the LTSSA is the Lake Elmo Airport. The MAC plans for all airports to receive public services. The semi-public area is not planned to undergo a change in land use with the arrival of sewer service.

The land use designations for land within the LTSSA are shown in the table below. Within the LTSSA, 78 acres are designated as Pre-2030 Sewered Areas. This includes the St. Croix Preparatory Academy and the proposed Boutwell’s Landing Expansion within Baytown Township. The remaining nearly 1,500 acres designated within the LTSSA is designated as Post-2030 Sewered Areas. These areas will be developed only after 2030 and as sewer services are made available to the Township.

**Table 5:  
LTSSA Acres**

Land Use	LTSSA Gross Acres	LTSSA Net Acres	LTSSA Lots 10 acres or greater, Acres
Agriculture	213	213	150
Agricultural Preserves	200	200	197
Commercial	120	120	119
High Density Sewered	294	294	267
Institutional	61	61	52
Public	139	-*	-
Rural Residential	61	61	49
Single Family Estates	51	28*	36
Semi Public	426	-*	-
	1,565	977	870

*\* less Public land (DNR/MnDOT), Permanent Open Space, and Airport (Non-Commercial parcels) = (588 acres subtracted)*

There is a total of 1,565 acres of land within the LTSSA designated by the Township. Subtracting land that is not likely to be developed, including the non-commercial areas of the Lake Elmo Airport (426 acres), a small area of permanent open space held by conservation easement (23 acres), and public land areas (139 acres), provides a more accurate total acreage that may develop at urban densities. This net acreage totals approximately 977 acres.

It is the Township’s understanding that for land being reserved for future sewer services, lots of 10-acres or greater are preferred for reasons of efficiency and cost-effectiveness. Within the 977 net acres within the LTSSA, 28 parcels are 10 acres or greater. These 28 lots total 870 acres. These 870 acres have various land use designations. The High Density Sewered areas could potentially add 2,136 residential households if developed at 8 units per acre. These areas are allowed to develop at a density of 8 to 15 units per acre once sewer services are provided.

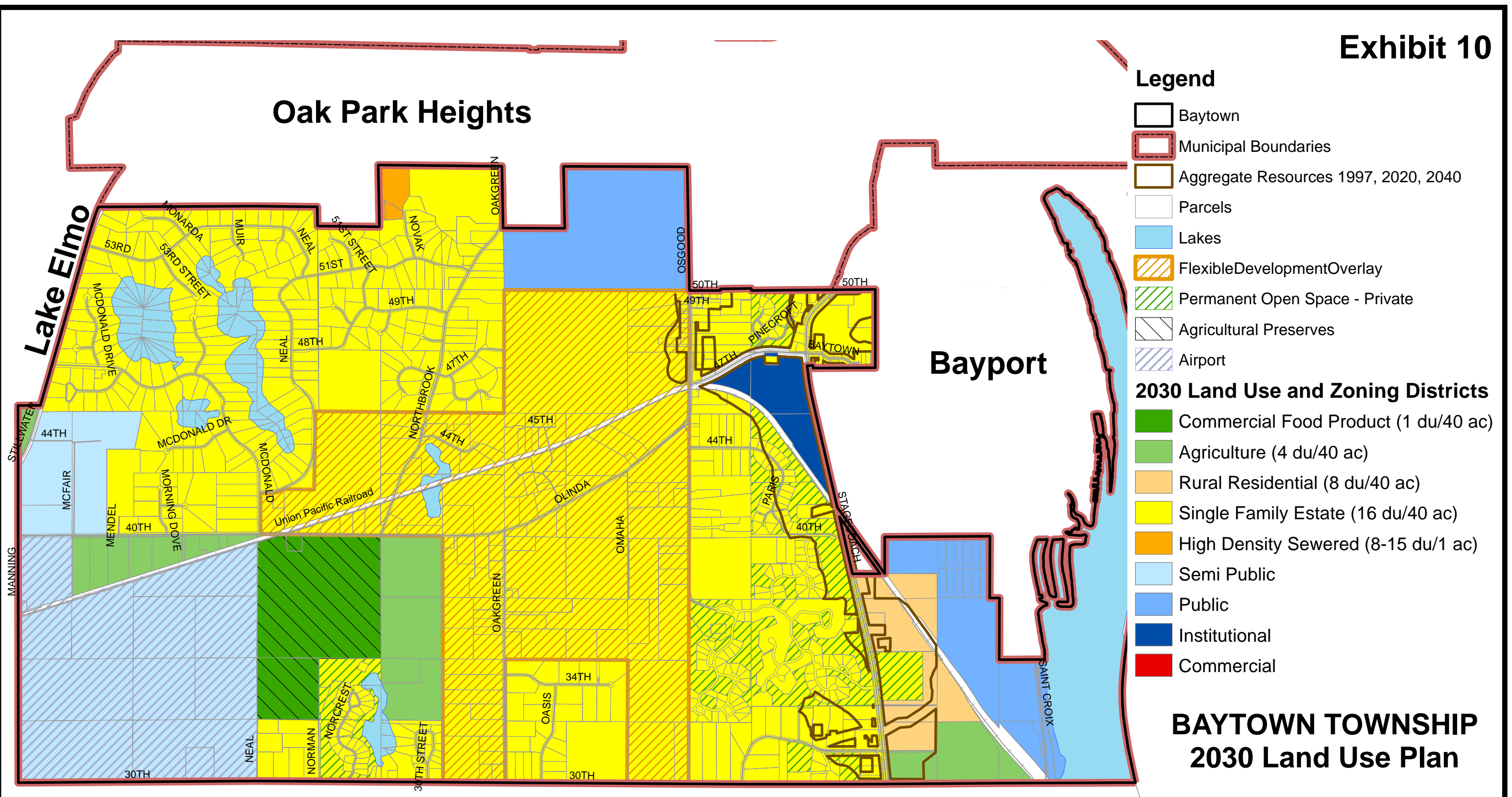
## ***12. Flexible Development Overlay District***

The Township has agreed to participate in a study of the St. Croix Valley Wastewater Treatment Plant, located in the City of Stillwater. This study is projected to be initiated by the Metropolitan Council in 2011 and be completed by 2012. The study will review unsewered areas in communities proximal to the treatment plant to determine if and where sewer services will be extended to meet regional capacity needs after 2030. Communities included in the study are the City of Grant, Stillwater Township, and Baytown Township.

Baytown Township Board members met with Metropolitan Council staff members in April 2009 to discuss this study and the land use designations proposed as part of this Comprehensive Plan Update. The Township proposes to redesignate areas of the community from Rural Residential (RR) to Single Family Estates (SFE) prior to completion of the sewer study. The Township is committed to its vision that the central part of Baytown will remain rural and without urban services. The Township also recognizes that the Metropolitan Council staff is seeking information from the wastewater treatment capacity study before it allows the Township to implement standard SFE zoning for this area. The Township is willing to compromise by using flexible development standards in the redesignated SFE area until the study is completed. This will be implemented through a Flexible Development Overlay District which will be in effect until completion of the study but no later than December 31, 2012. This overlay district is shown on Exhibit 10, 2030 Land Use Plan.

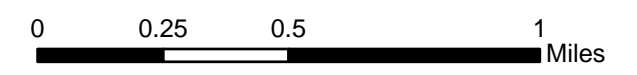
The Overlay District is subject to a Flexible Development Ordinance to be completed as part of the Implementation Plan. This Ordinance will be written in cooperation with the Metropolitan Council staff. The Township's commitment to development of this Ordinance meets the requirements of the Metropolitan Council and permits the Township to put the 2030 Comprehensive Plan into effect. This Ordinance shall regulate development within the Overlay District such that it complies with the flexible development guidelines adopted by the Metropolitan Council in August 2008. A copy of the Flexible Development Guidelines is included in the Appendix of this Plan.

The Township anticipates that a Comprehensive Plan Amendment will be necessary to remove the overlay district upon completion of the study.



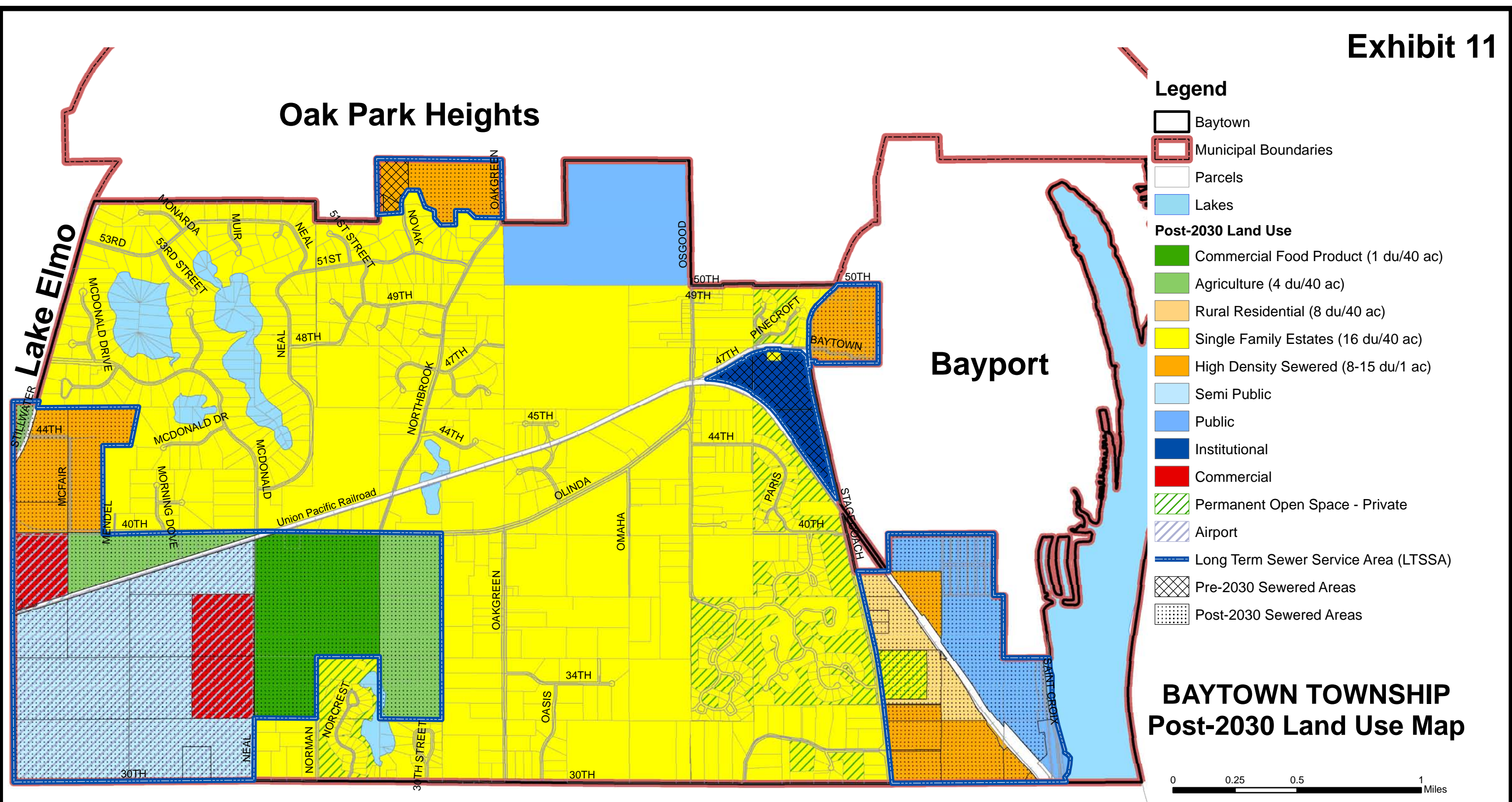
- Legend**
- Baytown
  - Municipal Boundaries
  - Aggregate Resources 1997, 2020, 2040
  - Parcels
  - Lakes
  - FlexibleDevelopmentOverlay
  - Permanent Open Space - Private
  - Agricultural Preserves
  - Airport
- 2030 Land Use and Zoning Districts**
- Commercial Food Product (1 du/40 ac)
  - Agriculture (4 du/40 ac)
  - Rural Residential (8 du/40 ac)
  - Single Family Estate (16 du/40 ac)
  - High Density Sewered (8-15 du/1 ac)
  - Semi Public
  - Public
  - Institutional
  - Commercial

**BAYTOWN TOWNSHIP  
2030 Land Use Plan**



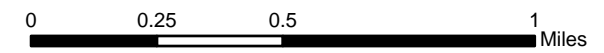
**TKDA**  
ENGINEERS • ARCHITECTS • PLANNERS  
DATE: MAY 2009

Sources: Metropolitan Council, Washington County, TKDA  
K:\gis\BAYTOWN\Exhibit10-2030LandUsePlan.mxd



- Legend**
- Baytown
  - Municipal Boundaries
  - Parcels
  - Lakes
  - Post-2030 Land Use**
  - Commercial Food Product (1 du/40 ac)
  - Agriculture (4 du/40 ac)
  - Rural Residential (8 du/40 ac)
  - Single Family Estates (16 du/40 ac)
  - High Density Sewered (8-15 du/1 ac)
  - Semi Public
  - Public
  - Institutional
  - Commercial
  - Permanent Open Space - Private
  - Airport
  - Long Term Sewer Service Area (LTSSA)
  - Pre-2030 Sewered Areas
  - Post-2030 Sewered Areas

**BAYTOWN TOWNSHIP  
Post-2030 Land Use Map**



West Lakeland Township



**TKDA**  
ENGINEERS • ARCHITECTS • PLANNERS  
DATE: MAY 2009

Sources: Metropolitan Council, Washington County, TKDA  
K:\gis\BAYTOWN\Exhibit11-Post-2030LandUseMap.mxd

## VI. Facilities

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### A. COMMUNITY FACILITIES

Baytown Township does not own any town facilities at this time. The town holds all public meetings at its new Town Hall leased from Baytown Neighbors, a local neighborhood association. As the lease payments are complete, the Township will own the Town Hall in fee.



The Washington County Sheriffs Office is currently providing police protection to Baytown Township. As long as the Township is satisfied with the degree of protection provided, there will be no need to consider hiring of a constable by the Township.

### B. WASTE MANAGEMENT

#### 1. *Subsurface Septic Treatment Systems (SSTS)*

The complex nature of soils with the Township requires careful consideration of all proposed development. Soils with limitations for installation of subsurface sewage treatment systems are identified in Exhibits 3C - 3E. However, since the data is not site specific, individual site reviews and detailed soil testing information is essential. On-site verification of soil conditions is required for each proposed parcel in a subdivision, as well as for each permit application for installation or repair of subsurface systems.

In 1972, Washington County adopted and implemented an ordinance regulating the location, design, installation, use, and maintenance of subsurface sewage systems with all of the unincorporated areas of the



county. This ordinance was revised in 1992 and again in 1997 and provides for minimum requirements which meet or exceed Minnesota Pollution Control Agency standards, and further provides for the certification and licensing of soil testers and subsurface sewage system designers, installers, pumpers and haulers. The 1997 ordinance is in effect in Baytown Township and enforced by Washington County.

The County is currently revising this ordinance to meet the revisions in MR 7080-7083. The County anticipates implementing this revised SSTS Ordinance in 2009.

The key requirement of the County's SSTS Ordinance is that all new lots must have adequate area for both a primary and back-up drainfield. Without soil borings confirming suitable areas for both drainfields, the Township will not approve a lot. In some cases, lots will need to be enlarged beyond the minimum lot size in order to meet these requirements.

The Township also contracts with Washington County to provide inspection services of subsurface septic systems. This service meets MR 7080-7083 requirements for periodic inspections of subsurface systems. Homeowners are required by County Ordinance 128 to have these systems pumped no less than once every three years. Washington County estimates that there are 537 SSTS in Baytown Township as of December 31, 2008. The County permits, inspects, and enforces maintenance of these systems as part of the SSTS Ordinance.

## **2. *Private Wastewater Treatment Plants (Cluster Systems)***

As development is proposed, the Township considers the potential for community wastewater and water systems to meet environment/water resources goals. Community systems are potential options for Open Space Design subdivisions which are permitted under the Zoning Ordinance. Local standards for cluster systems are in addition to County and State requirements.

Washington County is currently updating its subsurface sewage treatment system ordinance to meet MPCA regulations (Minn. Rules Chapter 7080-7083). The rules will include options for private wastewater treatment systems, and require that they meet MPCA regulations. Washington County's ordinance update will require operating permits for systems more complex than standard residential subsurface sewage treatment systems. Existing and future community systems, systems with holding tanks, and systems requiring pretreatment will need an operating permit from the County. Permits will address ongoing maintenance and service.

The use of private wastewater treatment plants must be consistent and compatible with the long-term regional wastewater system plan.

### **3. *Pre-2030 Sewer Services***

Public sewer is not available to most of Baytown Township during this planning period (2008 - 2030) and the Township understands that sewer services will not be extended by the Metropolitan Council to the Township earlier than 2030, with the exception of two designated areas.

The Township has signed a Joint Powers Agreement with the City of Bayport for the provision of sewer services to the St. Croix Preparatory School. The St. Croix Preparatory School (SCPS) is a K-12 charter school anticipated to be located at the intersection of Stagecoach Trail North and 47th Street by 2009. SCPS projects a total future enrollment of 975 students by the year 2015, with an estimated faculty of 55. SCPS will be served with public sewer and water facilities provided by the City of Bayport through a Joint Powers Agreement executed in March 2008. This project represents the Township's first acceptance of public sewer service in the Township.

Additionally, sewer service may be requested prior to 2030 as a part of the Boutwell's Landing senior living facility expansion near Oak Park Heights. Both of these areas are included in the Long Term Sewer Service Area designated on the Post-2030 Land Use Map (Exhibit 11).

### **4. *Post-2030 Long Term Sewer Service Area***

Per the requirements of the Metropolitan Council, the Township has designated areas within the Township for the provision of sewer services after the year 2030. This is the Long Term Sewer Service Area (LTSSA), outlined on the Post-2030 Land Use Map.

The LTSSA designates areas near existing developing communities and areas of higher density development to be preserved for the potential expansion of sewer services into the Township. These areas identified as Post-2030 Sewered Areas include areas to the east of Stagecoach both north and south of the school site, the land east of the proposed location of the Boutwell's Landing expansion adjacent to Oak Park Heights, the Washington County Fairgrounds, the Lake Elmo Airport, and agricultural areas to the east of the airport - south of 40th Street.

The LTSSA designates approximately 1,565 acres of land within the Township's boundaries for the provision of sewer service. The Township anticipates that the extension of services will be after the year 2030, with the exception of the previously named projects.

The Township has allocated land for future services at the direction of the Metropolitan Council. In determining the best locations of the future services, the Township considered the Goals of the Township to maintain its existing boundaries, rural character, and quality of life. In addition, the Township considered regional planning goals, development practices, and demand for complimentary services and systems, among other things. In order to maintain the Township's rural character, the Township has placed higher density land uses in areas adjacent to developing communities where services in other communities will compliment higher density development. The Township has also considered the transportation networks and directed higher densities towards existing infrastructure. The LTSSA defined by the Township is consistent with regional planning goals and yet also addresses Township goals and policies.

Within the LTSSA, the Township has designated land uses consistent with service areas. These land uses include commercial, high density residential, agricultural and rural residential. These are identified on the Post-2030 Land Use Map (Exhibit 11).

### **C. WATER SUPPLY**

Most homes and businesses in Baytown Township are served by individual wells. Thus, it is of utmost importance to protect groundwater supplies from contamination or further contamination. This can best be done by carefully controlling and regulating land use. Proper maintenance of septic systems is of importance, as is controlling commercial type uses which may use hazardous chemicals which could accidentally or deliberately be introduced into the soil and subsequently contaminate the groundwater.

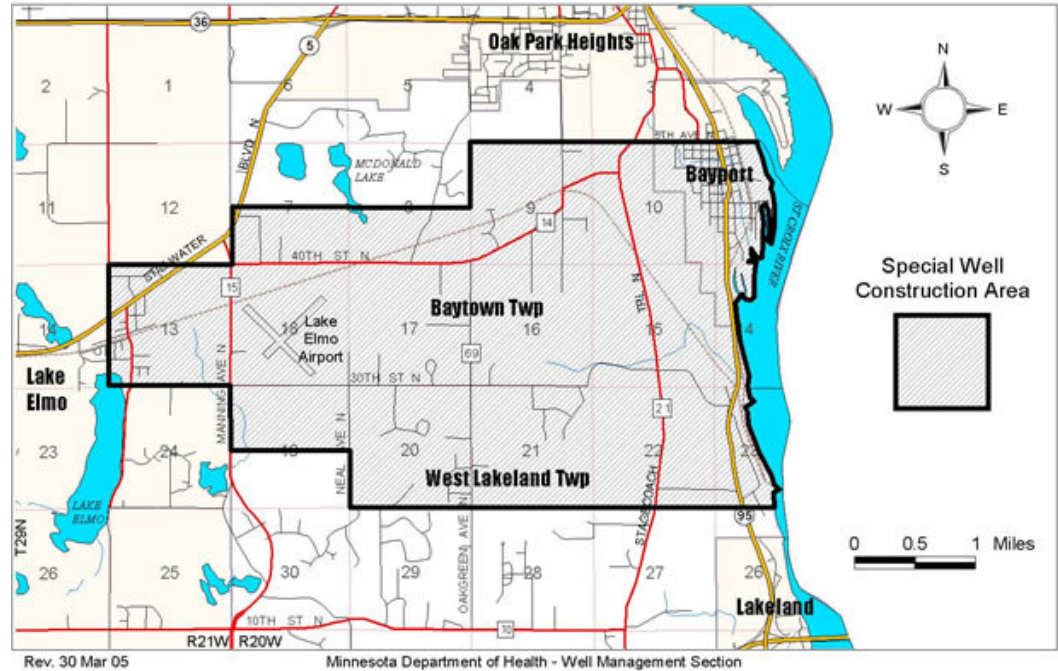
A Well Advisory Area has been designated by the Minnesota Department of Health in Baytown Township. This Well Advisory Area encompasses areas of Baytown Township, West Lakeland Township and the City of Bayport. In Baytown Township, it generally encompasses the central and southern half of the Township.

The Well Advisory Area indicates the groundwater in this area has been contaminated by volatile organic chemicals (VOC's). Several suspected sources of the contaminants have been identified.

New individual wells can continue to be drilled in the Well Advisory Area in accordance with special guidelines set up by the Minnesota Department of Health and in accordance with the Township's Ordinance No. 38. A letter from the Minnesota Department of Health dated March 30, 2005, discusses the Special Well Construction Area (SWCA) requirements of the well advisory area in detail and can be found in the Appendix of this Plan. In addition, a fact sheet updated in April of 2006 further discusses the Well

Advisory Area. A site update report and remediation for the site are discussed in MPCA publications dated July 2007 and December 2007, respectively. These documents are included in the Appendix of this Plan and are discussed further below. Exhibit 12 identifies the area of the SWCA as it relates to Baytown Township.

**Exhibit 12:  
Special Well Construction Area (SWCA)  
Portions of Baytown, West Lakeland, Bayport and Lake Elmo**



**1. Joint Powers Agreements**

Baytown Township, in 2003, entered into a Joint Powers Agreement with the City of Bayport to provide public water service to several subdivisions in the Township. These subdivisions receive water service from the City and pay water bills to the City. A storage tank that serves these subdivisions and part of the Inspiration Development in the City is located on a hill in the Township. The addition of the water services for the St. Croix Preparatory Academy amended the existing Joint Powers Agreement in March 2008. The Township encourages new development proposals to amend existing Joint Powers Agreements or to evaluate new agreements to extend water services from community water supplies where it is feasible. The City of Bayport and Baytown Township have had a successful and cooperative relationship to extend water services to Township residents.

Baytown Township has discussed a community water supply system as a method of addressing the groundwater issues within the Township.

The discussions concluded that the rural character of the Township with large lot residential development does not provide a fiscally feasible rationale for the development of a community water supply system by the Township. Given the proximity of Bayport and the existing relationship with that municipality, the Township encourages the evaluation of extending municipal water supply services to new developments through a joint powers agreement. The Township also encourages the evaluation of joint powers agreements with other municipalities with a community water supply.

## **2. *Ordinance No. 38***

The Township has worked closely with the Minnesota Department of Health (MDH) to manage the SWCA within Baytown Township. The Township, in cooperation with the MDH, has written and adopted Ordinance No. 38 establishing regulations for the maintenance of well water treatment in the SWCA.

Ordinance 38 provides specifications, standards for maintenance and change-out, and installation requirements of the GAC Filter Systems. A GAC filter system is a granular activated carbon (GAC) system suitable to recover trichloroethylene (TCE) and CCL<sub>4</sub> from well water sufficient to meet MDH interim exposure limit or MDH Health Risk Limit. The GAC filters are required on all new individual wells within the SWCA.

The Ordinance also outlines requirements for new well construction. New well construction is regulated by MDH and may only be constructed with the written approval of MDH. The Ordinance also outlines well sampling requirements and maintenance requirements for individual wells within the SWCA.

The administration of these requirements is identified in the Ordinance and is the responsibility of the Township. The Township maintains a tracking system and sends letters to residents with GAC filters on a tri-annual basis, follows up with residents until responses are provided, and ensures compliance with the Ordinance. Since the Ordinance was adopted, the Township's efforts have been successful in ensuring the provision of safe drinking water to residents with individual wells. The Township currently has approximately 17 wells that are tracked through this process. All other individual wells with GAC filters are tracked by the MPCA. A copy of Ordinance No. 38 is included in the Appendix of this Plan.

## **3. *MDH Publications and Recommendations***

Baytown Township has provided copies of the most recent communications from the MDH regarding the SWCA in Baytown

Township in the Appendix of this Plan. This includes several memos identifying recent activity within the SWCA in Baytown, recommendations for the area and remediation actions planned through 2007.

A memo dated March 2005 provides an update on the Baytown SWCA and outlines the general construction requirements for installation of new wells within the SWCA. This memo states that the MDH supports and will consider requests for public water supply wells (wells that serve 15 or more homes on service connections) on any property within the SWCA, regardless of the property development date.

In September 2004, the MDH completed a Public Health Assessment for the Baytown Township Groundwater Contamination Site. This report concluded that “there is no apparent public health hazard at this time because exposure to TCE above health-based criteria is currently being prevented by use of whole-house GAC filtration units on private wells.” The recommendations of the report include action items for the MDH, the MPCA, and on items related to areas in Bayport and Lake Elmo. The Township supports MDH/MPCA study efforts and planning for monitoring and other activities related to the SWCA in Baytown Township. Recommendations from the 2004 report include several items which require active cooperation and assistance from Baytown Township.

- Any GAC filter systems installed on private wells should be supervised by a governmental entity to ensure regular monitoring and maintenance.
- The feasibility of connecting homes within the city of Bayport that are currently served by private wells to the city's municipal water supply should be explored. When a connection is made, the existing wells should be properly sealed.

The Township monitors the GAC filter systems through Ordinance No. 38, described previously. The Township has entered into Joint Powers Agreements for the provision of municipal water supply to Township residents and encourages new development to evaluate community wells and connections to a municipal water supply as part of the development process. The Township supports the MDH/MPCA in efforts to control and prevent the expansion of contaminated groundwater within the Township.

In an update published by the MPCA and included in the Appendix, dated December 2007, the MPCA outlines remedial action objectives related to the Baytown-West Lakeland SWCA. These remedial action objectives include: minimize future migration of groundwater

contamination; restore the aquifer to drinking water standards within a reasonable timeframe; and minimize the time private well owners need to remain on GAC filter systems. These objectives and the actions taken by the MPCA show that with time, the groundwater contamination issues in Baytown Township will be resolved.

**4. *Washington County Groundwater Plan***

The Washington County Groundwater Plan provides a county-wide framework for the protection and conservation of groundwater resources. The Township supports the County Groundwater Plan as a means to protect and conserve the County's groundwater resources.