VII. Transportation

Baytown Township is served by a combination of State, County and local roads. The Existing Transportation System and Functional Classification System Map (Exhibit 15A) indicates the road system of Baytown Township and the functional classification of each existing road as determined by the Metropolitan Council. Classification of streets and highways is the first step in preparing a coordinated transportation plan. Functional classification involves the determination of what function each street or highway should perform before determining street widths, speed limits, intersection control or other design features. The attractiveness of functional classification assures that non-transportation factors such as land use and development are taken into account.

A. ROADS

The Functional Classification System consists of four (4) classes of roadways within the seven-county metropolitan area; principal arterials (which include interstate freeways), minor arterials, collector streets and local streets. Definitions of each of the four (4) classes are as follows:

*Principal Arterials* - A street or highway which provides for high speed travel and no direct land accesses. Highways should be designated as a fully controlled access facility. They are used to connect all of the subregions to the metropolitan center. They also connect the metropolitan area to outstate centers.

*Minor Arterials* - A street or highway which connects adjacent subregions. Minor arterials are primarily oriented toward the provision of sub-metropolitan mobility and any land access should be oriented to public streets and major generators rather than closely spaced driveways onto the street.
**Collector** - A street which functions to collect traffic from local streets and move it to minor arterials and other collectors. Collector systems provide access to commercial, industrial and high density residential development.

**Local** - A street which functions to provide access to land with neighborhoods rather than to car traffic though.

There are no principal arterials within Baytown Township’s limits. State Highway 36 is classified as a principal arterial. State Highway 36 is a four lane divided highway with partially controlled access. This highway runs east-west and terminates at the St. Croix River. This highway is located along the northern border of Oak Park Heights.

State Highway 5 (Stillwater Boulevard North) from the intersection of Highway 36 runs southwest though the northwestern portion of the Township. This stretch of road functions as a minor arterial.

Highway 95 (St. Croix Trail North), on the eastern edge of the Township, functions as a minor arterial and provides access north and south. County State Aid Highway (CSAH) 14 and the small stretch of CSAH 15 (Manning Avenue) both function as minor arterials. CSAH 14 provides access east and west though the Township, while CSAH 15 provides convenient access to the south and connects with State Highway 5 (Stillwater Boulevard North) at its northerly terminus.

CSAH 21 (Stagecoach Trail North) runs north and south through the Township and functions as a minor arterial. As the remaining Anderson property west of CSAH 21 and south of CSAH 14 develops for the St. Croix Preparatory Academy, turn lanes for the entrance to the school will be needed.

In 1996, County Road 67 (Osgood Avenue North) was reclassified as CSAH 24. This road runs northerly from CSAH 14 to State Highway 36. CSAH 24 functions as a minor arterial.

Northbrook Boulevard runs north-south between CSAH 14 and the northerly stretch of Oakgreen Avenue and functions as a collector. The southern stretch of Oakgreen Avenue (CSAH 65) runs from 30th Street to CSAH 14 providing north-south access within the Township and functions as a collector. 30th Street runs along the southern border between Baytown Township and West Lakeland Township providing east-west access through the communities. 30th Street functions as a collector.

All other roads not specifically mentioned above or identified in the table below are considered local roads. The Existing Transportation System and Functional Classification System Map, (Exhibit 15A) identifies these features.
Table 6:  
Road Classifications

<table>
<thead>
<tr>
<th>Name</th>
<th>Alternative Name</th>
<th>Function</th>
<th>General Direction</th>
</tr>
</thead>
<tbody>
<tr>
<td>State Highway 5</td>
<td>Stillwater Boulevard</td>
<td>Minor</td>
<td>N-S</td>
</tr>
<tr>
<td></td>
<td>North</td>
<td>Arterial</td>
<td></td>
</tr>
<tr>
<td>State Highway 95</td>
<td>St. Croix Trail North</td>
<td>Minor</td>
<td>N-S</td>
</tr>
<tr>
<td>County State Aid Highway (CSAH) 15</td>
<td>Manning Avenue North</td>
<td>Minor</td>
<td>N-S</td>
</tr>
<tr>
<td>County State Aid Highway (CSAH) 14</td>
<td>40th Street North</td>
<td>Minor</td>
<td>E-W</td>
</tr>
<tr>
<td>County State Aid Highway (CSAH) 24</td>
<td>Osgood Avenue North</td>
<td>Minor</td>
<td>N-S</td>
</tr>
<tr>
<td>County State Aid Highway (CSAH) 21</td>
<td>Stagecoach Trail North</td>
<td>Minor</td>
<td>N-S</td>
</tr>
<tr>
<td>County Road 65</td>
<td>Oakgreen Avenue North</td>
<td>Collector</td>
<td>N-S</td>
</tr>
<tr>
<td></td>
<td>North 30th Street North</td>
<td>Collector</td>
<td>E-W</td>
</tr>
<tr>
<td></td>
<td>Northbrook Boulevard North</td>
<td>Collector</td>
<td>N-S</td>
</tr>
</tbody>
</table>

The total mileage by classification is estimated as follows:

- Minor Arterial 9.1 miles
- Collector 6.3 miles

In 2004, a Road Inventory was completed for the Township. The inventory identified 19.04 miles of bituminous surfaced roads within the Township. Since this inventory was completed, one additional section was paved on Neal Avenue from 30th Street North which was approximately 0.5 miles of additional bituminous surfaced roads. The Township has few gravel roads left within the Township and requires new developments to provide bituminous surfaced roads.

- Local Roads 19.54 miles of bituminous surface
- 0.6 miles of aggregate surface

1. **Traffic Volumes**

Washington County recently updated current and future estimates of average daily traffic volumes for arterials and collectors in Washington County. These estimates are based on traffic volumes in 2007 and forecasted to 2030. Exhibit 13 shows Existing Traffic in Baytown Township in 2007. The highest volumes are on CSAH 15, with volumes ranging from 9,900 where CSAH 15 enters Baytown from the south to 10,700 where it junctions with CSAH 14. CSAH 14 has traffic ranging from 5,070 at the west end of the Township to 4,100 where it meets CSAH 24. CSAH 21 carries about 6,000 vehicles per day in
Baytown Township. STH 95 carries about 12,000 vehicles per day in Baytown.

**Exhibit 13:**
Washington County Existing Traffic Volumes

In comparing 2007 volumes with forecasted 2030 volumes, CSAH 15 will see a substantial growth in traffic, to 15,400 vehicles in 2030 as shown on Exhibit 14. CSAH 14 will increase to 8,000 vehicles per day on its west end to 6,100 vehicles. CSAH 21 will increase to 9,400 vehicles per day, while County Road 65 will have 4,200 vehicles per day. CSAH 13 will increase to 11,200 vehicles per day. Overall, all arterials and collectors will increase in traffic due to growth north and east of Baytown.
The County prepared a list of improvements for both arterials and collectors in the County. This list extends to 2030, although it is updated periodically and can change in the future. Aside from the St. Croix River Bridge Crossing, which is projected for between 2024 and 2030, there are no Mn/DOT improvements that will affect Baytown. It is expected that with those improvements, more traffic will continue west on Highway 36, although substantial traffic will continue to cut through the Township either on STH 95 or STH 5 and CSAH 15. At this point, there are no planned improvements to County Roads in Baytown during this period. Baytown Township encourages the County to address transportation safety issues on County roadways, especially as traffic volumes increase.

2. **Proposed Connections**

As a community develops, it normally tries to connect local roads in order to provide safe access and egress from subdivisions. Exhibit 15B, Proposed Connections and TAZ Boundaries Map, shows possible future local roadway connections for the Township.

3. **Transportation Analysis Zones (TAZs)**

Transportation Analysis Zones (TAZs) are a planning tool used to determine how land use relates to the transportation system. The population, household and employment forecasts are allocated to the TAZs that share the Township’s geography. These allocations are detailed in Table 7-9. The Township used Washington County’s transportation modeling data to complete this portion of the Plan.
Update and the TAZ data described below indicates estimates and forecasts derived from Washington County.

TAZ 1231 encompasses the northwestern corner of the Township from north of 40th Street, north of Olinda, north of Osgood to the Township’s borders, with the exception of the small portion of land east of Highway 5, which is included in TAZ 1129 in Lake Elmo. TAZ 1231 does include a small portion of Oak Park Heights, north of Township borders.

TAZ 1195 includes the area from Manning Avenue to Oakgreen Avenue and from 40th Street to 30th Street. TAZ 1195 also includes area directly south of this into West Lakeland Township to County Road 10.

TAZ 1196 includes everything from Oakgreen to Olinda to Osgood to 50th Street and all areas south of 50th and to the Township’s eastern border with Bayport and the St. Croix River. The exception is a very small portion of the prison farm land near Bayport which is in TAZ 1131. TAZ 1196 also includes area in West Lakeland Township directly south of this to County Road 10 then along County Road 21 then to 22nd Street.

Exhibit 15B, the Proposed Connections and TAZ Boundaries Map can be referenced for visual representation of the TAZ boundaries. The TAZ data in the table below shows only Baytown’s population, household and employment estimates.

Table 7:
2005 TAZ Data

<table>
<thead>
<tr>
<th>Washington County TAZ</th>
<th>2005 Population</th>
<th>2005 Households</th>
<th>Retail Employment</th>
<th>Non-retail Employment</th>
</tr>
</thead>
<tbody>
<tr>
<td>1231</td>
<td>1,032</td>
<td>363</td>
<td>0</td>
<td>178</td>
</tr>
<tr>
<td>1195</td>
<td>284</td>
<td>100</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>1196</td>
<td>284</td>
<td>100</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>TOTAL</td>
<td>1,600</td>
<td>563</td>
<td>0</td>
<td>178</td>
</tr>
<tr>
<td>TOTAL</td>
<td>1,600</td>
<td>563</td>
<td>0</td>
<td>178</td>
</tr>
<tr>
<td>Metropolitan Council Totals*</td>
<td>1,677</td>
<td>546</td>
<td>60</td>
<td></td>
</tr>
</tbody>
</table>

Source: Washington County, Metropolitan Council, TKDA
* 2005 totals for Metropolitan Council represent the midpoint of 2000 and 2010 forecasts.
### Table 8:
2005 to 2030 Growth Data

<table>
<thead>
<tr>
<th>Washington County TAZ</th>
<th>Population</th>
<th>Households</th>
<th>Retail Employment</th>
<th>Non-retail Employment</th>
</tr>
</thead>
<tbody>
<tr>
<td>1231</td>
<td>386</td>
<td>137</td>
<td>0</td>
<td>-58</td>
</tr>
<tr>
<td>1195</td>
<td>43</td>
<td>13</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>1196</td>
<td>131</td>
<td>47</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>560</strong></td>
<td><strong>197</strong></td>
<td>0</td>
<td><strong>-58</strong></td>
</tr>
</tbody>
</table>

**TOTAL**

| Metropolitan Council Totals | 483 | 214 | 60 |

*Source: Washington County, Metropolitan Council, TKDA*

*2005 totals for Metropolitan Council represent the midpoint of 2000 and 2010 forecasts.*

### Table 9:
2030 TAZ Data

<table>
<thead>
<tr>
<th>Washington County TAZ</th>
<th>Population</th>
<th>Households</th>
<th>Retail Employment</th>
<th>Non-retail Employment</th>
</tr>
</thead>
<tbody>
<tr>
<td>1231</td>
<td>1,418</td>
<td>500</td>
<td>0</td>
<td>120</td>
</tr>
<tr>
<td>1195</td>
<td>327</td>
<td>113</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>1196</td>
<td>415</td>
<td>147</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>2,160</strong></td>
<td><strong>760</strong></td>
<td>0</td>
<td><strong>120</strong></td>
</tr>
</tbody>
</table>

**TOTAL**

| Metropolitan Council Forecasts (2030) | 2,160 | 760 | 120 |

*Source: Washington County, Metropolitan Council, TKDA*

4. **Access Management**

The Township works with Washington County to regulate the number of access points to County roads and with Mn/DOT regarding access onto State and U.S. Highways. In order to promote a safe and efficient transportation system, spacing and access guidelines are incorporated into Baytown’s subdivision regulations. Guidelines describe access spacing on principle arterials, minor arterials, collectors and local roads. The land use associated with proposed access points also determines the appropriate spacing.

5. **Pedestrian and Bicycle Facilities**

One regional trail corridor is planned alongside the Township’s western border. The Township considers pedestrian accommodations along new local roads through the development review process. Planning for trails is discussed in the Parks and Trails section of the Plan.
BAYTOWN TOWNSHIP
Existing Transportation System and Functional Classification System
B. AIRPORTS

The Lake Elmo Airport is a general aviation airport owned by the Metropolitan Airport Commission (MAC) and operated by MAC for public use. The Lake Elmo Airport is located in Washington County, approximately 12 miles east of the downtown St. Paul business district. It lies one mile east of downtown Lake Elmo, within Baytown Township, and is bordered by West Lakeland Township and the City of Lake Elmo. The airport encompasses approximately 640 acres, approximately 560 acres of which is in Baytown Township. The remaining 80 acres are in West Lakeland Township to the south of 30th Street. The airport consists of a paved and lighted mainwind NW/SE runway and a paved NE/SW crosswind runway, including parallel taxiways. The primary runway is 2,850 feet long and 75 feet wide. The crosswind runway is 2,497 feet long and 75 feet wide.

The Lake Elmo Airport serves as a reliever to the Minneapolis-St. Paul International Airport. Service is provided to operators of single engine and light twin engine, propeller craft primarily for training, pleasure and business flying activities. Capacity of the existing facility at the Lake Elmo Airport is estimated at 230,000 annual operations. Aircraft operations for 2005 are estimated at 57,667. From an airside standpoint, the airport is at 25% capacity.
1. **The Lake Elmo Airport Long-Term Comprehensive Plan**

The long term comprehensive plan update is a 20-year planning document, extending from 2005 to 2025. The last plan update for Lake Elmo was completed in 1992. The current plan was completed in June 2008. The major recommendations of the 2008 Plan include:

- Relocating the primary runway to achieve a 3,300-foot length, with an ultimate extension to 3,900 feet
- New hangar area development
- Extension and lighting of the crosswinds runway to 3,300 feet
- Construction of a compass calibration pad

In addition, other recommendations included the realignment of the north entrance road and installation of precision approach path indicators. To date, the compass pad has been constructed and the entrance road has been realigned. The Preferred Alternative of the Crosswind Runway Extension to 3,200’ with Building Area Development from the Lake Elmo Airport 2008 Comprehensive Plan is shown in Exhibit 16.

In comparison to the other MAC-owned Reliever Airports, runway lengths for both the primary and crosswind runways are the shortest in the system. The FAA-recommended runway length needed to accommodate 95% of the aircraft for this category airport is 3,280 feet. To accommodate 100% of the aircraft, a runway length of 3,890 feet is needed.

Non-Aeronautical Operations are discussed in the 2008 Long-Term Comprehensive Plan for the Lake Elmo Airport. In the future, MAC, in conjunction with Township officials, may consider leasing areas for non-aviation uses to generate additional revenue. Sections of airport land designated as potential areas of development are shown in Exhibit 17. Uses that would be permitted here would be compatible with airport uses such as commercial or industrial businesses. The provision of sewer and water services to these areas would be required. MAC indicated that the Lake Elmo Airport would be the last airport considered for this type of development. The areas identified in Exhibit 17 are discussed only for the purpose of communicating potential development areas that the Township would consider for other uses. If and when the MAC decides to develop specific parcels for non-aviation
uses, the MAC will amend its plan and the Township will review land uses at that time.

The following elements for the 20-year planning period describe the recommendations for the airports development along with estimated timeline and estimated costs for each recommendation.

**Table 10:**
Lake Elmo Airport 20-Year Planning Recommendations

<table>
<thead>
<tr>
<th>Recommendation</th>
<th>Timeline</th>
<th>Estimated Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pursue Installation of AWOS/ ASOS through Mn/DOT</td>
<td>Immediately</td>
<td>$0</td>
</tr>
<tr>
<td>Construct new hangar area to accommodate the 2025 needs</td>
<td>0 – 5 Years first phase</td>
<td>$2,600,000</td>
</tr>
<tr>
<td></td>
<td>5 – 15 Years final phase</td>
<td></td>
</tr>
<tr>
<td>Construct a Full Parallel Taxiway in conjunction with new hangar area</td>
<td>In conjunction with new hangar area</td>
<td>$900,000</td>
</tr>
<tr>
<td>Pursue agreements with the communities to provide limited S&amp;W services to the airport</td>
<td>0 – 5 Years</td>
<td>$0</td>
</tr>
<tr>
<td>Review alternatives and feasibility of serving hangar area(s) with a public or private systems</td>
<td>0 – 5 Years</td>
<td>$900,000 - $1,700,000</td>
</tr>
<tr>
<td>Reconstruct the Existing Primary Runway 14-32 Pavement</td>
<td>0 – 5 Years</td>
<td>$1,500,000</td>
</tr>
<tr>
<td>Extend Crosswind Runway 4-22 and Taxiway to 3,200 Feet, including Runway Lighting and PAPI systems</td>
<td>0 – 5 Years</td>
<td>$1,200,000</td>
</tr>
<tr>
<td>Reconstruct the Existing Crosswind Runway 4-22 Length</td>
<td>10 – 15 Years</td>
<td>$1,300,000</td>
</tr>
<tr>
<td>Continue to show the need for a relocated Primary Runway 14-32 in plan, and include the future approach areas in the upcoming zoning effort</td>
<td>Beyond 20-year planning period</td>
<td>$0</td>
</tr>
</tbody>
</table>


Environmental Considerations that will require study as part of any implementation of the proposed concepts at the Lake Elmo Airport include noise, wetlands, and sanitary sewer and water facilities. The following summaries are taken from the Executive Summary of the Draft Lake Elmo Airport Long-Term Comprehensive Plan. Exhibit 18 attached to this Plan identifies the preferred alternative Noise Contours discussed below.

a. **Noise.** MAC has prepared a 2005 noise contour for Lake Elmo Airport, as well as 2025 noise contour for the preferred alternative. The 70, 65 and 60 decibel noise level (DNL) contours are shown for both scenarios. The noise contours also show a 55 DNL contour. The 55 DNL contour is depicted because the airport lies mostly outside of the Metropolitan Urban Services Area (MUSA), and therefore, a 55 DNL contour is required per the Metropolitan Council.
b. Sanitary Sewer and Water. The Lake Elmo Airport currently lies outside of the MUSA boundary. However, the Metropolitan Council Environmental Services (MCES) agency has requested that MAC provide sanitary sewer and water services for all of the Reliever Airports, including Lake Elmo. Therefore, any hangar area expansion proposals must review the needs and feasibility of providing these services. The plan recommends the following for installation of sanitary sewer and water facilities at Lake Elmo:

(1) Pursue an agreement with the City of Lake Elmo and Baytown Township for the provision of sanitary sewer and water to the airport from the proposed development adjacent to airport property or via other means.

(2) Continue to study the costs, benefits and feasibility of serving the airport with sanitary sewer and water versus well and septic systems.

c. Wetlands. There are wetlands in existence at the Lake Elmo Airport. Any of the concepts implemented at the airport will be studied closely to prevent wetland impacts. If wetlands are unavoidable, designs will be adjusted as much as possible to minimize impacts.

The Township will participate in review and comment on any Environmental Assessments that are undertaken as a result of the proposed airport expansion projects.
Non-Aeronautical Opportunities
Lake Elmo Airport
2. **Planning Considerations**

Because the Township is within part of the Influence Area of the Lake Elmo Airport, it is affected by several planning considerations potentially involving the following items: airport zoning, environmental mitigation, airport development and economic impacts, ground access needs, infrastructure requirements, and general land use compatibility.

As per the Metropolitan Systems Statement, one aviation planning consideration which the Township must address in its comprehensive plan is airspace protection. The protection is for potential hazards to air navigation including electronic interference. The Township’s Ordinances must also include regulations to control height of structures, especially when conditional use permits apply. 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.

Currently, there are not any structures exceeding 200 feet in height in the Township. Any new transmission or radio and television tower would be allowed only under a conditional use permit. Also, it will only be allowed if the proposed structure will not constitute an obstruction to air navigation or otherwise adversely impact the Metropolitan airport system.
3. **Airport Zoning Standards**

In 1979, the State of Minnesota adopted rules governing airport zoning standards (Minnesota Rules 8800.1200 to 8800.2400). These are minimum standards for the zoning of public airport and affect airspace, land use safety, and noise sensitivity. The county and Township have the right to be more restrictive than these standards. Baytown Township and Washington County have adopted airport zoning which is implemented through an Airport Overlay District. The Airport Overlay District establishes regulations that control the types and extent of land development adjacent to and near the airfields so as not to impede present and future air operations of public benefit and to protect the public from hazards, air traffic noise, and other disturbances. The District limits the development and future construction to a reasonable height and use so as not to constitute a hazard for planes operating from the airfields.

4. **Airspace Zones**

Airspace zones are shown in Exhibit 19. There are five airspace zones that are relevant at the Lake Elmo Airport: 1) primary zone, 2) horizontal zone, 3) conical zone, 4) approach zone, and 5) transitional zone. Essentially, the floor of each block of zoned airspace represents the maximum allowable height of an obstruction in that area. No structure or tree can be allowed to penetrate into those zones.

5. **Land Use Safety Zones**

There are three zones on the surface surrounding an airport that have use restrictions that would compromise safety: Safety Zones A, B and C. Safety Zone A extends outward from the Primary Surface two-thirds the length of the runway (existing or planned). Safety Zone B extends beyond Zone A by one-third of the runway length (existing or planned) and Safety Zone C extends beyond A and B and is enclosed with the perimeter of the horizontal zone (Exhibit 20). The intent of these zones is to restrict uses that would be hazardous to the operational safety of aircraft operating to or from an airport. Limiting population and building densities in these areas is the method used to protect life and property.

In Zone A, no structures or powerlines are permitted. Permitted uses in Zone A include agriculture, raising of livestock, cemeteries, etc. In Zone B, development density must have at least a three acre minimum. Specifically prohibited in Zone B are schools, churches, hospitals, theaters, stadiums, camp grounds, etc. The intent is to prohibit places of public or semi-public assembly in this zone. Zone C has only general restrictions: no uses can be permitted that interfere with ground and
aircraft navigation and communication or that make it difficult for the pilot to distinguish between runway lights and other lights, or that otherwise endanger maneuvering of the aircraft. (See MR 8800.1200 to 8800.2400 for a detailed description of these limitations.) The intent of safety zoning is to balance the public interest in safety for people on the ground and in the air, while considering the public interest of maintaining existing land uses.

State Statute provides for the removal of land uses and structures which present a most severe hazard to persons in the air or on the ground.

Land uses in these zones must be consistent with Federal Aviation Administration and Minnesota Department of Aeronautics’ rules and regulations.


In September 2006, the Minnesota Department of Transportation/Office of Aeronautics adopted the Airport Compatibility Manual. The Metropolitan Council supports implementation of the Best Management Practices (BMPs) identified in this manual as a means of meeting regional policy. The BMPs identified include the following:

- Incorporate Airport Zoning Ordinances into Local Development Controls
- Allow Mn/DOT to Review Major Development Applications and Variance Requests
- Modernize and Expand the List of Compatible Land Uses in Local Airport Zoning Ordinances
- Consider Regulating Incompatible Land Uses in Safety Zone C

The Township will consider these BMPs when reviewing land uses in areas impacted by the Lake Elmo Airport.

7. **Joint Zoning Board**

A Joint Zoning Board is intended to be formed, initiated by MAC, intended to address planning, density and use restrictions in the extended airway zone of the Lake Elmo Airport. Members of the Board will consist of representatives from Lake Elmo, West Lakeland Township, Baytown Township, Washington County, and MAC. Mn/DOT indicates that the purpose of the Board is to develop and adopt an airport zoning ordinance which will meet Mn/DOT airport zoning standards. The Board will establish land use safety zones, address height requirements in these areas, and assist with compliance with FAA notification processes associated with proposals within the these zones. It is anticipated that this Board will be formed in 2008.
8. **Obstruction to Public Airport**

The Minnesota Rules 8800.1200 to 8800.2400 establishes the criteria for determining obstructions to air navigation. The most relevant issue is the maximum obstruction height of 200 feet with three miles of a runway. There are however, a number of variables that have a profound effect on the various height possibilities. It is imperative that any planned structure in the airport vicinity be reviewed with the requirements of Minnesota Rules 8800.1200 to 8800.2400.

9. **Seaplane Operations**

Under Mn/DOT Office of Aeronautics, MR 8800.2800, seaplane operations are permitted on the surface waters of the St. Croix River.
C. RAILROADS

Two railroads pass through the Township. Both lines are owned by the Union Pacific Railroad. The first line passes along the southeastern corner of the Township in a north-south direction and serves Anderson Windows and the Allen S. King Plant in the City of Bayport. This line splits south of the Township and branches off to form the second line passing through the center of the Township going north to intersect at CSAH 14 and CSAH 24 then running in a southwesterly direction past CSAH 15 out of the Township. There are approximately 5.3 miles of track within the Township.

D. PUBLIC TRANSPORTATION

According to the System Statement issued in September 2005 by the Metropolitan Council, Baytown Township is within Market Area IV. Market IV areas have land use patterns that tend to have the lowest concentration of housing and jobs. Regional transit service options for these areas include dial-a-ride, volunteer driver programs, and ridesharing. Dial-a-ride services are provided by Human Services Inc.

Baytown Township is within the Metropolitan Council’s Transit Taxing District. The transit taxing district is the area in which all taxable property was assessed a tax to be used for payment of transit and paratransit services per Minn. Stat. 473.446. Transit services include regular route bus services and paratransit services include dial-a-ride bus service such as Metro Mobility. The figure below depicts the extent of the transit taxing district surrounding Baytown.
Transit options can assist in minimizing vehicular impact to local roads and provide a transportation alternative for Township residents. There are two park and ride facilities in proximity to the Township. The first is located in the City of Lake Elmo near the intersection of Laverne Avenue North and Highway 5. A second facility is located in the City of Stillwater at the St. Croix Valley Recreation Center. In 2030, this facility is planned for expansion to accommodate another 200 parking spaces. These regional facilities serve residents of the Township. The Township is also served by bus (Route 294) which provides service from Stillwater to downtown St. Paul via Lake Elmo and Oakdale. There are transit stops in the Township for Route 294 along Highway 5.

To provide local service options, the Township is receptive to the location of a carpool/vanpool or park and ride lot within the Township. This facility would be encouraged to be located next to state or county roads, particularly along State Highway 5 (Manning Avenue), to encourage local transit service near the existing regional transportation network.

E. RIVER USAGE

Surface waters of the St. Croix River are used primarily for pleasure boating. Occasional barge traffic takes place on the St. Croix River, primarily for the purpose of providing coal to the Northern States Power plant in Bayport. Under Metropolitan Division of Aeronautics, Aero 13, seaplane operations are permitted on the surface waters of the St. Croix River.
VIII. Housing

The Township’s Goals and Policies Section states the Township’s intent to retain low-density, single family residential development along with maintaining the rural character of the Township. In addition, the Township will promote and maintain suitable and moderate cost housing in the Township. In order to meet these goals, the Township must assess current housing within the Township and address housing needs for the community through 2030. The Metropolitan Council requires communities to include in the comprehensive plan, a housing element and implementation program that address existing and projected housing needs.

Baytown Township’s housing stock consists largely of single family residential homes. According to the Census data for the year 2000, 99.2% of homes were classified as one-unit detached homes. Below are tables outlining the age and value of housing in the Township. This information indicates that 58.5% of housing in the Township was built after 1980, illustrating that the Township’s housing stock consists of newer single family residences. Also, 65.4% of the Township’s housing is above $200,000.

Table 11:
Age of Housing

<table>
<thead>
<tr>
<th>YEAR STRUCTURE BUILT</th>
<th>Number</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>1999 to March 2000</td>
<td>15</td>
<td>3.0</td>
</tr>
<tr>
<td>1995 to 1998</td>
<td>102</td>
<td>20.2</td>
</tr>
<tr>
<td>1990 to 1994</td>
<td>113</td>
<td>22.3</td>
</tr>
<tr>
<td>1980 to 1989</td>
<td>66</td>
<td>13.0</td>
</tr>
<tr>
<td>1970 to 1979</td>
<td>87</td>
<td>17.2</td>
</tr>
<tr>
<td>1960 to 1969</td>
<td>50</td>
<td>9.9</td>
</tr>
<tr>
<td>1940 to 1959</td>
<td>26</td>
<td>5.1</td>
</tr>
<tr>
<td>1939 or earlier</td>
<td>47</td>
<td>9.3</td>
</tr>
<tr>
<td><strong>Total Housing Units</strong></td>
<td><strong>506</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>

Source: U.S. Census Bureau, Year 2000 data
Table 12: Value of Housing

<table>
<thead>
<tr>
<th>VALUE</th>
<th>Number</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than $50,000</td>
<td>0</td>
<td>0.0</td>
</tr>
<tr>
<td>$50,000 to $99,999</td>
<td>3</td>
<td>0.7</td>
</tr>
<tr>
<td>$100,000 to $149,999</td>
<td>57</td>
<td>13.3</td>
</tr>
<tr>
<td>$150,000 to $199,999</td>
<td>88</td>
<td>20.6</td>
</tr>
<tr>
<td>$200,000 to $299,999</td>
<td>86</td>
<td>20.1</td>
</tr>
<tr>
<td>$300,000 to $499,999</td>
<td>116</td>
<td>27.1</td>
</tr>
<tr>
<td>$500,000 to $999,999</td>
<td>72</td>
<td>16.8</td>
</tr>
<tr>
<td>$1,000,000 or more</td>
<td>6</td>
<td>1.4</td>
</tr>
<tr>
<td><strong>Median (dollars)</strong></td>
<td></td>
<td><strong>$275,000</strong></td>
</tr>
</tbody>
</table>

Source: U.S. Census Bureau, Year 2000 data

A. WASHINGTON COUNTY HOUSING STUDY

The Comprehensive Housing Needs Assessment for Washington County was recently updated by Maxfield Research, Inc. This study examines current housing within the County and addresses housing needs for the County through 2030. The study discusses Baytown Township as a part of the Stillwater Area assessment along with the communities of Stillwater Township, Stillwater, Oak Park Heights, and Bayport.

1. Trends in Housing

Baytown will be subject to housing trends similar to those of all of Washington County and the Metropolitan Area. These trends are likely to influence Washington County and Baytown Township:

a. Demand for new housing in Washington County will remain strong, and be driven almost exclusively by household growth.

b. About 85 percent of housing demand will be for single family dwelling units, about 15 percent for multi-family housing units, including senior housing.

c. Senior demand for housing will increase after 2020 when baby boomers reach their mid-70’s. Between 2020 and 2030, 68 percent of the overall rental demand will be for senior units (2,800 units).

d. Few new single family homes priced under $325,000 are projected to be built to satisfy demand from moderate income buyers.

e. Because of high costs of new construction (land, labor and materials), very few of the buyers for new single family homes are likely to be first time buyers.
f. With the aging of the baby boomers, the greatest growth in Washington County from 2007 to 2020 will be among people ages 55 to 74.

g. In 2000, 77 percent of Washington County’s households were families, compared to 67 percent of the Metro Area’s. This difference is caused by the high number of new families moving to the County compared to younger singles.


B. BACKGROUND

1. Housing as a Major Land Use

Prior to 1960, farms were the dominant land use in the Township while farming is still important, rural residential housing has become the dominant land use. As agriculture declines, the Township expects that rural residential housing will be more important as a land use in the Township.

2. Housing and Community Character

Housing type related to lot size determines the character of the community. Housing types include single family detached, single family attached (townhomes), rental apartments, and seasonal homes. The Township’s Goals and Policies Section states that single family detached homes will be the preferred type of housing in Baytown Township.

The Township recognizes that as the population of the Township ages, additional opportunities for the elderly should be provided. The Boutwell’s Landing development (Presbyterian Homes) is expected to expand its development into the Township within the next 10 years. This expansion will be the Township’s first experience with multi-family, attached housing.

3. Housing is an important element of the Township tax base

As housing has increased in the Township, it has become the major source of taxable property in the Township. Without extensive commercial or industrial land uses planned, residential uses will continue to be the predominant source of revenue in the Township.

4. Housing Condition

Considerations of housing condition include more than the primary structure, but also accessory buildings, outdoor storage, and
maintenance efforts. These factors contribute to community character. The Township’s Goals and Policies Section states that individual property owners will be encouraged to rehabilitate existing homes where needed.

C. HOUSING SUPPLY

1. Number of Housing Units

In 2000, there were 506 housing units in Baytown Township. Of these, the majority are single family detached homes. Before 1960, there were only 73 housing units in the Township. The majority of the growth in the Township has occurred between 1990 and 2000, when 230 of the units, or 45.5 percent of the housing units were constructed in the Township. Almost half of the Township’s housing stock is less than fifty years old.

The median value of housing in Baytown in 2000 was $275,000 with 78 units worth more than $500,000. The median monthly mortgage payment in 2000 was $1,702, which compares to $1,263 for Washington County and $1,165 for the Metropolitan Area. Just as housing values are much higher in Baytown than other Metro Area communities, the mortgage costs are much higher as well.

2. Housing Location

The housing supply consists mostly of large, single family lots. Locations around lakes and other water features are prevalent in areas within the Township such as McDonald Lake and Cloverdale Lake. Preferences for home locations within Open Space Developments have increased.

Since most of the northwest part of the Township was built out in the 1990’s, most recent development has occurred in the east central part of the Township, near Stagecoach Trail. Most of this development has been open space or clustered housing. Most areas in the northwest and central parts of the Township are already developed with only small pockets of undeveloped land remaining. The two remaining large parcels are in the southwest corner of the Township next to the Airport and in the Northeast part of the Township next to the DNR Wildlife Management Area.

3. Regional Housing Needs

The Township plans to contribute to the regional housing need for higher density housing through a planned development near Boutwell’s Landing in Oak Park Heights, within the Township’s borders. This potential development approximates 110 housing units for seniors.
Other areas of planned higher density housing have been designated within the Township near other developed areas such as Bayport and Lake Elmo in order to accommodate regional housing needs after 2030.

D. HOUSING ISSUES

The major housing issues facing Baytown Township over the next 25 years relate to meeting the regional housing forecasts. If the Boutwell’s Landing project moves forward, the Township will meet the forecast. If not, and housing development slows, it may be difficult to meet regional forecasts.

A second Township concern related to housing is maintaining the community character. The type of housing developed in the Township can affect the overall character of the community. With the 2030 Comprehensive Plan, the Township will allow multi-family housing on public sewers, which will provide life cycle housing opportunities for Township residents as they age. The location and design of this new housing type should be sensitive to the character and vision of the Township while addressing the safety, transit, and service needs of an aging population.

A third metro-wide issue related to housing, will be the demand for new unit types to meet lifecycle needs, such as auxiliary housing or “granny flats”. The Township’s Zoning Ordinance currently allows for accessory apartments, but with the aging of the baby boomers, there could be more demand for separate “granny flats”.

E. AFFORDABLE HOUSING - REGIONAL POLICIES

The Metropolitan Council defines affordable housing as a unit priced at or below 30% of gross income of a household earning 60% of the Twin Cities’ median family income (or $46,200 in 2005). In the year 2000, affordable housing prices were near $100,000. According to the 2011 - 2020 Allocation of Affordable Housing Need by City/Township published by the Metropolitan Council, as a rural area, Baytown Township is not required to provide affordable housing to meet regional needs. However, Baytown is required to address the forecasted housing needs and provide a share of the regional household growth.

A very small portion of Baytown’s existing housing falls within the range considered affordable. The Township will continue to enforce its codes and ordinances to maintain the quality of this housing (including the maintenance of viable septic systems and wells), and supports the County’s programs to provide affordable housing in locations that provide transportation and services that meet the needs of seniors and others living in affordable housing.
IX. Surface Water Management Plan

A. PURPOSE OF THE PLAN AND EXECUTIVE SUMMARY

This Local Surface Water Management Plan will guide Baytown Township in conserving, protecting and managing its surface water resources. This plan has been created to meet the requirements detailed in Minnesota Statutes 103B and Minnesota Rules 8410, administered by the Minnesota Board of Water and Soil Resources. This plan is also consistent with the goals and policies of the Metropolitan Council’s Water Resources Management Policy Plan, and the plans of the watershed management organizations having jurisdiction within the Township.

Baytown Township is located within the geographic area of two watershed management organizations (WMO’s) - the Valley Branch Watershed District and the Middle St. Croix Watershed Management Organization (Exhibit 7). The eastern area of Baytown Township drains to the St. Croix River through the Middle St. Croix WMO. The western portion of the community drains to the Valley Branch Watershed, and from there to the St. Croix River.

The plans for these WMO’s were approved by the Minnesota Board of Water and Soil Resources (BWSR) between 2005 and 2007. Based on the completion of the watershed plans for the watershed organizations within Baytown Township, the Township is required to complete this local surface water management plan by 2008. The Middle St. Croix WMO Watershed Management Plan will expire in 2014. The Township will need to update this LSWMP within two years of the expiration date of its local watershed plans.

The Middle St. Croix WMO has completed a wetland inventory and management plan in 2005, including a functions and values assessment of wetlands within Baytown Township and other communities in the WMO. The Valley Branch Watershed District is currently completing the functions and values assessments and management plans for wetlands within that District, and is estimating completion of the wetland assessment and management plan during 2008-09.

B. WATER RESOURCE MANAGEMENT AGREEMENTS

The watershed organizations within Baytown Township have each adopted rules for the management of surface waters within their jurisdictions. While no formal agreements have been adopted regarding permitting and surface water management, the Township works cooperatively with the WMO’s in communicating on development activities, and alerts landowners and developers about potential district permits or other enforcement.
The Subdivision Application Process for development applications within Baytown Township describes the responsibilities of each organization included in the process. This document is included in the Appendix.

Baytown Township is a member of the Middle St. Croix Water Management Organization, and has signed the Joint Powers Agreement that created and maintains the WMO.

The Township will continue to cooperate with the Middle St. Croix Watershed Management Organization and Valley Branch Watershed District to enforce surface water management regulations within the community under this Local Surface Water Management Plan.

C. LAND AND WATER RESOURCES INVENTORY

1. Surface Water Resources

   a. Valley Branch Watershed District

      The Valley Branch Watershed District (VBWD) drains Valley Creek, and from the creek to the St. Croix River, an Outstanding Resource Value Water. The Watershed District includes a number of subwatersheds that drain to landlocked basins (lakes or wetlands), as well as subwatersheds that drain to Valley Creek. The major subwatersheds within the VBWD that are located within Baytown Township include the Cloverdale Lake, McDonald Lake, Bay Lake and Downs Lake Subwatersheds.

      The Watershed also includes numerous wetlands, mainly within the watersheds of Cloverdale and McDonald Lakes. These are included in the Environmental Features Map, Exhibit 6. The major lakes and wetlands, and their protected waters numbers are listed in the table below.

      The Watershed District has classified lakes in the District for management. The classifications of lakes within Baytown Township include the following;

      (1) Cloverdale Lake - Medium Priority

      (2) McDonald Lake - Low Priority

      (3) Bay Lake - Low Priority

   b. Middle St. Croix WMO

      The Middle St. Croix Watershed Management Plan notes that the hydrologic system of the Middle St. Croix watershed is unique
among watersheds in Washington County in that it is not one contiguous watershed draining to one outlet. The Middle St. Croix watershed drainage system includes two general areas: 1) an area of small ponds and lakes, most of which are landlocked, and 2) and area with many perennial and ephemeral streams that flow parallel to each other and into the St. Croix River. The western portion of Baytown Township is included in the first area of landlocked basins, and the eastern portion of the Township is located in the second area, including the St. Croix River bluffs.

The table below provides the list of Protected Waters and Wetlands within Baytown Township.

Table 13:
Department Of Natural Resources, Division Of Waters
List Of Protected Waters And Wetlands Within Baytown Township

<table>
<thead>
<tr>
<th>Number</th>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>82-1</td>
<td>St. Croix Lake</td>
</tr>
<tr>
<td>82-310</td>
<td>Unnamed Lake</td>
</tr>
<tr>
<td>Section 30 - Township 29 - Range 20</td>
<td>Unnamed Tributary</td>
</tr>
<tr>
<td>82-9</td>
<td>Coverdale Lake</td>
</tr>
<tr>
<td>82-10</td>
<td>McDonald Lake</td>
</tr>
<tr>
<td>82-11</td>
<td>Unnamed Lake</td>
</tr>
<tr>
<td>82-311</td>
<td>Unnamed Wetland</td>
</tr>
<tr>
<td>82-312</td>
<td>Unnamed Wetland</td>
</tr>
</tbody>
</table>

2. **Priority or Outstanding Water Resources**

There are no priority lakes or trout streams within Baytown Township, though the community is part of the watershed area for Valley Branch, a designated Trout Stream.

The Township drains to the St. Croix River which is classified as Outstanding Resource Value Water by the State of Minnesota.

3. **Upland Resources**

The presettlement vegetation in Baytown Township was dominated by oak savanna and oak openings, with smaller areas of hardwood forest (called the “Big Woods”) and prairies. Much of this original vegetation has been replaced as a result of agricultural or residential land use.

A few areas of relatively natural vegetation remain today within Baytown Township. These areas were identified by the Minnesota DNR’s Natural Heritage Program. The areas include a woodland area
on the east side of McDonald Lake, and a dry savanna prairie in the southeast corner of Baytown Township, noted on the Environmental Features Map (Exhibit 6)

Other natural and scenic resources of Baytown Township include the steep topography near the lakes and St. Croix River, and the aggregate resources in the eastern portion of the community near the St. Croix River bluffs.

4. **Groundwater Resources and Issues**

Due to local soils and geology, the aquifers in and near Baytown Township are highly sensitive to contamination. Most soils in the area are classified as moderate to highly permeable, and bedrock is close to the surface in the eastern portion of the Township, including the bluff areas near the St. Croix River.

Past land use practices have polluted groundwater aquifers in the area. A well advisory area has been established in the Baytown - West Lakeland area. The Baytown/West Lakeland Special Well Construction Area (SWCA) has been identified from just west of the Lake Elmo Airport through Baytown Township and Bayport to the St. Croix River. The area of contamination is approximately six square miles in size. The main source of volatile organic compounds (VOCs) causing groundwater contamination in the Baytown/West Lakeland SWCA has been identified as a former metal working shop in Lake Elmo. The Baytown Township SWCA is currently being monitored by the Minnesota Pollution Control Agency.

Lakes levels in the area are tied to groundwater aquifers. Management of the SWCA may affect some lakes, including McDonald Lake and Bay Lake.

D. **SURFACE WATER RESOURCE ISSUES**

1. **St. Croix River**

The St. Croix River is a National Wild and Scenic River, and a resource of national, state, and local concern. Efforts to manage the water quality in the river may impact future land use and land development activities within Baytown Township as well as other communities within the St. Croix River Basin.

a. The St. Croix River Basin Planning Team identified water quality degradation of the St. Croix River as a significant issue. Increased urbanization and agricultural activities in the St. Croix River Watershed are predicted to lead to continued decline in the river’s water quality. To prevent this degradation, the St. Croix River
Basin Planning Team established a goal to reduce nutrient loading to the St. Croix River Basin by 20%.

b. Baytown Township will adopt and enforce the rules and performance standards of the MSCWMO to protect the water quality of the St. Croix River. The standards include management of surface water quality and quantity, volume control standards, and standards for erosion control, wetland management, and bluff protection. The Township will cooperate with VBWD in the enforcement of its rules that help to protect the quality of the St. Croix River. The Township will also manage land use to remain rural in character, which will help to protect the St. Croix River and its associated bluffs and natural resources.

2. Valley Branch Watershed District

The Valley Branch Watershed District Plan identifies the following significant issues that affect surface waters within Baytown Township:

- water quality degradation due to agricultural and residential land uses and management
- potential erosion and sedimentation, and resulting pollution due to development
- current and potential flooding issues, particularly among the landlocked basins in the District.

The Goals and Policy section of this plan identifies the specific areas in which Baytown Township will contribute to the efforts to protect and improve surface and ground water management within the Watershed District.

The District has completed lake management plans for four lakes whose subwatersheds are included within the Township. The issues identified for each of these water bodies are summarized as follows:

a. Cloverdale Lake - Medium Priority Lake - the lake is ranked “excellent” for water quality. It is a landlocked lake, and water levels have risen dramatically since the 1990’s. The lake has no public access, and the shoreland area is managed through covenants applied to surrounding residential areas. The lake is monitored by a VBWD volunteer.

b. McDonald Lake - Low Priority - McDonald Lake is a landlocked lake within a watershed that is 80% developed. The water clarity is excellent. The VBWD regularly monitors the lake, but will not actively manage the level of the lake. A portion of the lake lies
within the Baytown Township Special Well Construction Area (SWCA).

c. **Bay Lake - Low Priority** - Bay Lake is a shallow lake with poor water quality. It is a landlocked lake. The management of the Baytown Township SWCA may impact the water levels of the lake.

d. **Downs Lake** - Downs Lake is located within Lake Elmo, but a portion of its drainage area is located in Baytown Township. A portion of the lake is within the Baytown Township SWCA. The lake is shallow, and has a water poor water quality ranking. The VBWD monitors the lake, and will conduct an assessment of wetland functions in the subwatershed area.

3. **Middle St. Croix Watershed**

No priority lakes have been identified within the Middle St. Croix Watershed area. The watershed drains through several creeks to the St. Croix River. Managing runoff, erosion, and sediment control to minimize impacts to the St. Croix is a concern within this watershed area.

The Watershed includes numerous land-locked basins. Managing the volume and rate of runoff to avoid flooding and impacts to these basins are an issue of concern within the watershed.

The MSCWMO Plan identifies the following key issues for surface and ground water management within the WMO:

- Stormwater runoff impacts surface waters, particularly nutrients and other pollutants.
- Development and urbanization may result in increased opportunities for erosion and sedimentation. This is particularly identified in gully areas along the St. Croix River.
- Local decision makers, land managers and the general public need education on storm water and groundwater issues and the best ways to manage land to protect water resources.
- Proper management of wetland resources.
- Protection of the St. Croix River.

E. **GOALS AND POLICIES**

Baytown Township will protect and manage its valuable water and natural resources. The Township recognizes the need to work with others, including the Valley Branch Watershed District (VBWD), Middle St. Croix Watershed Management Organization (MSCWMO), Washington County, and the State
of Minnesota to achieve its goals for the protection of surface waters, ground water and related natural resources within the community.

The VBWD has adopted its Watershed Management Plan and rules, and has the primary role for enforcing surface water regulations within portions of Baytown Township included in the VBWD. The Township will continue this relationship, and will support the VBWD efforts by updating and enforcing its Zoning and Subdivision Ordinance, as described in the goals and policies that follow. The goals and policies of this Local Surface Water Plan listed below are also included in the Goals and Policies Chapter of this Comprehensive Plan.

The MSCWMO has adopted its Watershed Management Plan and rules, and is requesting that the communities within the WMO adopt their own ordinances for surface water management, and enforce these ordinances. The MSCWMO staff and Board will review projects that require watershed permits, and provide comments to the Township to incorporate in Township review and permitting for projects. The Township will adopt and enforce the MSCWMO rules and standards for surface water management within the Township areas that are part of the MSCWMO.

**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.

**Policy:** 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.

**Policy:** 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.

**Policy:** The VBWD will continue to enforce surface water regulations within the Township area that is within the District’s boundaries.

**Policy:** The Township will update its Ordinance to include the MSCWDMO 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 Township Ordinance updates, 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.

Policy: 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.

Policy: 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.

Policy: The Township will cooperate with the County in managing land use to protect ground water resources.

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

Policy: The Township supports the Valley Branch Watershed District’s goals for managing lakes in the Township.

Policy: 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.

Policy: 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.**

Policy: 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.

Policy: The Township will continue to contract with the Washington Conservation District to provide wetland management services to the Township.

Policy: 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.

Policy: 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 throughout the Township.

Policy: 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.

**Policy:** 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.

**Policy:**  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.

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

**F. ASSESSMENT OF PROBLEMS AND CORRECTIVE ACTIONS**

**1. Valley Branch Watershed District**

The District has completed lake management plans that indicate the following corrective actions for water bodies within Baytown Township. If the District identifies management actions that involve the Township’s plans and policies, the Township will discuss potential actions with the Watershed District.

a.  **Cloverdale Lake - Medium Priority** - The lake has high water quality. The VBWD will continue to monitor the water quality of Cloverdale Lake, and perform management actions identified in its watershed plan for Medium Priority waterbodies.

b.  **McDonald Lake - Low Priority** - VBWD will continue to monitor the water quality of McDonald Lake, and base future management actions on results of the monitoring. The District will perform management actions identified in its watershed plan for Low Priority waterbodies.
c. **Bay Lake - Low Priority** - The VBWD will continue to monitor the quality of Bay Lake, and perform actions identified in its watershed plan for Low Priority waterbodies.

d. **Down’s Lake - Low Priority** - Down’s Lake is located in Lake Elmo, but a portion of its drainage area is located in Baytown Township within the Baytown-West Lakeland SWCA. The lake is shallow and has a poor water quality ranking. The VBWD monitors the lake and will conduct an assessment of wetland functions in the subwatershed area.

The Township’s Land Use Plan calls for minimal development within Township areas that are tributary to the lakes within VBWD. As development occurs, the Valley Branch Watershed District will complete review and permit activity for any proposed development, and will enforce the District’s rules related to management of water quality and quantity within these subwatersheds.

2. **Middle St. Croix WMO**

The MSCWMO Water Management Plan notes that active gully erosion along tributaries that outlet directly into the St. Croix River can be large non-point sources to the St. Croix River. No specific areas of concern are identified in the WMO plan within Baytown Township. As noted in the Goals and Policies section above, the Township will update and enforce its erosion and sediment control ordinance, consistent with the NPDES Construction Stormwater permit and MSR permit requirements.

G. **FINANCIAL CONSIDERATIONS**

Baytown Township does not own or operate any storm water management facilities, and does not plan to develop any facilities through 2030. The Township does own, inspect, and manage culverts, ditches, and drainage within the Township road rights-of-way. Town Board members inspect these facilities, identify needs for maintenance, and ensure that it is completed.

The Township does not have a Capital Improvements Program (CIP). Improvements needed to culverts or other Township facilities will be funded through the Township’s annual budget. Any storm water facilities outside Township property will be developed by the Watershed Management Organizations under their CIP plans, or by private developers. The Township may be requested to contribute to improvements made within the MSCWMO, under the Organization’s Joint Powers Agreement.
H. IMPLEMENTATION PRIORITIES AND PROGRAM

1. The Township supports the Valley Branch Watershed District regulation of surface water management within the area of the Township that is included within the District Boundaries. The Township supports the Middle St. Croix WMO regulation of surface water management within the area of the Township that is included within the WMO Boundaries. The Township will update and enforce its Zoning and Subdivision Ordinances to cooperate in those efforts.

2. The Township will continue to coordinate with the Washington Conservation District for review of wetland issues and permits within the Township.

3. The Township will continue its ongoing inspection and maintenance activities for culverts and drainage systems along Township roads and on Township properties. The Township will include needed maintenance of these facilities and street sweeping in its annual budget, and implement maintenance and improvements as needed to ensure that these facilities function adequately.

I. UPDATE OF THIS LOCAL SURFACE WATER MANAGEMENT PLAN

The Township will update this plan within two years after the latest watershed management organization plan update. The Middle St. Croix WMO Management Plan will expire in 2014 and the VBWD Plan will expire in 2015. The Local Surface Water Management Plan will need to be updated by then. Based on that schedule, the Township’s LSWMP will need to be updated by 2017.
X. Parks, Trails, and Open Space

A. PARKS, TRAILS AND OPEN SPACE

1. Parks

Baytown Township has a small park adjacent to the Community Center located at McDonald Drive and 40th Street developed by a neighbor association, Baytown Neighbors. The park is a passive park with no active play areas. Further, there are no county park facilities with the Township.

Recognizing that many of its residents use the parks in the City of Bayport, Baytown shares some of its park dedication fees with the City. The Township will continue to provide a portion of park dedication fees to those communities in which the Township’s residents utilize the park system. This practice will continue at the Town’s discretion and as deemed appropriate by the Township.

2. Trails

There are several trails that traverse the Township. Washington County has designated bike routes along the shoulders of County Road 67 and County Road 21. The Township has also constructed a shoulder along Northbrook Avenue for use as a bike trail. Cloverdale Farm also has dedicated tracts that connect to trails in other subdivisions in the area.

A portion of the Proposed Washington County Greenway Regional Trail crosses the western border of the Township. This is a proposed regional trail that runs north-south in the central part of the County. It is proposed to connect the city of Hastings to Cottage Grove Regional Park, Lake Elmo Park Reserve, and Big Marine Park Reserve. The corridor shown is a general location for the trail alignment and no master plan has been approved for the trail yet. The Parks, Trails, Open Space and Historic and Cultural Resources Map (Exhibit 22) outlines this area.

At this time, there are no proposals for parkland acquisition or additional trails. However, the Township will encourage trail development and trail connections through the subdivision process. Additionally, the Township will consider connections to other local, county, or state trail systems that may be proposed. Further, the Township will support and participate in County or State planning efforts to create trail connections within the Township. The Township supports funding through grants, land or cash donations, or other
funding opportunities which will assist in the development of regional, county, and local trail systems.

3. **Open Space and Recreational Open Space**

With the growing popularity of open space subdivisions, there are several areas of preserved open space for use of residents of the subdivisions. For the most part, this open space is unimproved and is in its natural state.

The Township also has two state park and open space areas that provide outdoor recreation opportunities and natural resource conservation for the public and are considered part of the regional recreation open space system.

a. **Bayport Wildlife Management Area (WMA) - Minnesota DNR**

Bayport WMA is approximately 452 acres in size consisting of two main parcels. One parcel is located in Baytown Township (198 acres) and the other parcel is located adjacent to the Township’s southern border within West Lakeland Township (south of 30th Street, adjacent to Stagecoach Trail). The major emphasis of this WMA is to manage for a variety of woodland and grassland wildlife. The area consists of 72% grassland/agricultural land, 27% woodland, and a small amount of wetland.

Much of the grassland on this area is planted prairie on previously agricultural land. The area was managed as a farm by the State Department of Corrections and was transferred to the Department of Natural Resources to be managed as a WMA in 1973.

Because Bayport WMA has fine shot restrictions, it offers archery deer hunting opportunities during the firearms deer hunting season. This is a good area to go hiking and observe purple cone flowers and black-eyed susans in the planted prairie. Recreation opportunities include hunting, hiking, and wildlife viewing. Hunting options include: deer, small game, forest game birds, pheasant, waterfowl, and doves. Additionally, wildlife viewing options include: wetland wildlife, prairie wildlife, and forest wildlife.

b. **St. Croix Savanna Scientific and Natural Area - Minnesota DNR**

The St. Croix Savanna Scientific and Natural Area is 148 acres of land owned by the Minnesota Department of Natural Resources and located approximately 0.5 mile south of Bayport on Highway
95. The Minnesota Department of Natural Resources describes the area as the following:

“The St. Croix Savanna occurs along the top and side of a south-facing bluff, with views of the St. Croix River. Its slopes of loamy sand have eroded extensively, their soils now supporting an alluvial forest along the bottom. Scattered bur oak and pin oak on the open gravel prairie become increasingly dense toward the northeast and northwest, forming first an oak woodland and then an oak forest. Prescribed burning and removal of the exotic black locust has greatly enhanced the savanna. The dry savanna exhibits a significant diversity of grasses: hairy and side oats grama, needle and thread, prairie dropseed, and many others. Several species of goldenrod, sunflower, aster, and blazing star join the pasque flower, prairie gentian, coreopsis, flowering spurge, potentilla, fleabane, coneflowers, and hoary vervain in an ever-changing palette of prairie color. Rare kitten tails grow in the partial shade of bur oaks; other rare species found here include James' polanisia, Illinois tick-trefoil, and a species of pinweed. The St. Croix Savanna is the best hill prairie and oak savanna along the Lower St. Croix National Scenic Riverway. Portions of the site are gifts of Ann McMannus and the estate of Hattie Miller.”
Baytown Municipal Boundaries
- Parcels
- Lakes
- Regional Parks/Scientific & Natural Areas
- Permanent Open Space
- Existing Local Parks
- Proposed Regional Trail
- Historic and Cultural Sites
  - Baytown Town Hall
  - Hannah House
  - Old Oak Park Station - Waiting Platform
  - Old Stillwater Junction
  - Pioneer Cemetery

BAYTOWN TOWNSHIP
Parks, Trails, Open Space and Historic and Cultural Resources

Sources: Metropolitan Council, Washington County, TKDA
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DATE: MAY 2009

TKDA
ENGINEERS • ARCHITECTS • PLANNERS
XI. Special Resources

A. SOLAR ACCESS PROTECTION

A 1978 amendment to the Metropolitan Land Planning Act requires all local governments in the Metropolitan Area to include "an element for protection and development of access to direct sunlight for solar energy systems" in their comprehensive plans.

Solar access is a serious issue which communities need to plan for. Even with mandatory conservation measures, energy demand will likely outstrip fossil fuel supplies. The Energy Agency found that among several alternatives considered, solar energy has the greatest potential for replacing traditional fossil fuels. The biggest obstacle to solar energy use in Minnesota, is the lack of protected access to direct sunlight for solar energy systems. Such access can be protected though local planning and ordinances.

There are two basic kinds of solar energy systems: passive and active. In a passive energy system, the building structure itself collects and stores solar energy at the point of use. In an active solar energy system, solar energy is collected at one location (for example a roof) and then transferred to the point of use or storage by mechanical power.

All solar energy systems, both passive and active, need to have direct sunlight fall on their collectors to function properly. Structures, trees or other objects that come between the sun and the solar collector will shade the collector and reduce its efficiency. Protecting solar access means the adjacent structures or vegetation are prevented from shading solar collectors (or the probable location of future collectors).

In Baytown Township, solar access protection should not be a major problem because most existing homes are situated on large lots and most new development will also take place on large lots.

B. AGGREGATE RESOURCES

The Metropolitan Council requires that communities identify aggregate resources within local boundaries and plan for the extraction of aggregate prior to urbanization. Baytown Township does have areas of aggregate-rich land and there are two current extraction areas operating within the Township.

The Township currently has two active mining operations, Bryon Rock Products, Inc. and Miller Excavating. Most aggregate resources are located on the east side of the Township and operate under Conditional Use Permits. Both mining areas will be planned for future residential development.
The Aggregate Resources Map shows sand, gravel and limestone and dolomite resources for 1997, 2020, and 2040. The areas of aggregate resources were modified to reflect depletion by mining and areas that were occupied by urban and rural development in 1997, or are forecasted to urbanize by 2020 and 2040. Further modifications were made by removing aggregate deposits that cannot be mined because of such environmental constraints as wetlands, streams, scientific and natural resources areas, open water bodies, and roadways.

These resources located within the Township are identified on the Aggregate Resources Map (Exhibit 23). The map illustrates that there is very little change in the Aggregate Resources from these time periods.

C. HISTORIC RESOURCES

Baytown has a long history of Township government and prides itself on maintaining the rural quality of life on which it was founded. One of the oldest townships in the State of Minnesota, the Township was organized in May 1858. Baytown will celebrate its 150 year anniversary in 2008, along with the State of Minnesota’s 150th anniversary.

The Washington County Planning Department conducted a county-wide historic sites survey in 1976. Baytown Township has two historic sites identified in this survey as follows:

* Residence (40th Street) Important architecturally (current Hannah House)

* Stillwater Junction Important transportation junction (Osgood Avenue/North of 40th Street)

Other areas of note to the Township include the following:

* Baytown Town Hall, built by the Baytown Neighbors neighborhood association in 2002, is located at the corner of McDonald and 40th Street.

* According to the Washington County Historical Society, a waiting platform known as the Oak Park Station was located where Stagecoach Trail crosses the railroad.

* Pioneer Cemetery, located in Baytown Township is a small family cemetery located on private property where members of the Fiske and Mitchell families were buried. Dates of burials range from 1852 to 1882. Additional information is located in the Appendix.

Unfortunately, Washington County, including Baytown Township, has lost important buildings over the years. However, the citizens of the county are
becoming much more aware of the need to preserve those few links to their past and heritage. Therefore, now is the time for government and private citizens to do all they can to protect and preserve these historic sites.

Governmental agencies cannot afford to purchase and maintain all of these buildings in order to preserve them. Private citizens, however, can afford to carry out this preservation by adapting the use of these structures. The exterior of historic buildings should be restored as much as possible to their original design, but interiors can be modernized or modified in order to become useful structures. Examples of historic structures protected while re-utilized by private parties are: 1) the Old Post Office Shops in Stillwater; 2) the Copas School in Scandia; 3) the Little Red House in Afton, etc.

Government, however, can help preserve historic structures by creating historic zoning districts with the accompanying ordinances that place controls over exterior remodeling and new construction next to historic structures. This process is being employed by the City of Afton in order to preserve the charm and history of the Old Village of Afton and should be explored by other communities as an effective means of preservation.
XII. Implementation Plan

Implementation of the Comprehensive Plan is an ongoing process and occurs as the Township reviews development proposals and other projects. The Township may also need to review and amend the plan as conditions change during the next 20 years.

The Plan represents a commitment to a set of goals and policies that will guide the future of the Township. It is the result of careful study of the Township’s physical, economic and social elements, discussion with the community and other organizations, and integration of Baytown’s plans for the future into a unified vision, goals, and policies. The Township is committed to implementing the Plan and achieving the goals and policies identified in this Comprehensive Plan.

Knowledge of the Plan and understanding of its importance and benefits, and a commitment to fulfilling the Plan are the key components in successful implementation. The major stakeholders in this activity include the Town Board and Planning Commission, other local, regional, and state agencies, citizens, developers, and businesses.

A. OFFICIAL CONTROLS

The Township has a number of Ordinances that implement the Comprehensive Plan including the Zoning Ordinance and Subdivision Ordinance. In addition to these, the Township has other regulating tools through Washington County. The Township’s Ordinances are tools for Baytown to use to maintain the community character, manage growth, restrain competitive land uses, and protect natural resources.

As part of the comprehensive planning process, the Township will review the land use control ordinances, including zoning and subdivision ordinances, to ensure consistency with the Comprehensive Plan and to assist in implementation of the goals and policies contained in this Plan. The official controls are required to be updated and submitted to the Metropolitan Council within nine months of the plan’s adoption. This process will include adoption and implementation of a Flexible Development Ordinance developed in conjunction with Metropolitan Council staff as it pertains to areas within the Township’s designated Flexible Development Overlay District.

1. Zoning Map

The Township has a Zoning Map which shows existing land uses and zoning districts (Exhibit 9). In areas where the Township has reguided land uses, 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. Uses shown on the 2030 Land Use Map will guide development prior to development of the Post-2030 land uses within the LTSSA. Development within the LTSSA may require ghost platting. The 2030 and the Post-2030 Land Use Maps will be considered by the Township in reviewing any proposed development plans to ensure that development is consistent with future land uses within the Township.

B. CAPITAL IMPROVEMENTS PLAN

The Capital Improvements Plan (CIP) is the financial planning mechanism used by communities to plan for long-term major expenditures. As part of the planning process, it is normal to develop a 5 year capital improvement program. A capital improvement is any major non-recurring expenditure or any expenditure for physical facilities of government, such as costs for acquisition of land, construction of buildings or other structures, including additions or major alterations, construction of highways, utility lines, fixed equipment and similar expenses.

Baytown Township does not have any public projects pending or proposed in the next 5 years.

1. Transportation Implementation Plan

In 2004, a comprehensive road inventory was completed for the Township. On an annual basis, the Township reviews and evaluates all local Township roads for maintenance and improvement needs and implements an improvement plan based on this review and feedback from residents.

All state and county roads that operate through the Township are evaluated by other governing agencies and implemented through the appropriate governmental level. The Township cooperates with improvement efforts by these other governmental agencies as improvements occur within the Township.

All new roads will meet right-of-way and pavement width standards as required in the Subdivision Ordinance. All new roads must be blacktopped. In order to have an efficient and cost effective transportation network, long cul-de-sacs will be discouraged, and right-of-way will be required to be dedicated to the property line of adjacent undeveloped property unless clearly impractical.

In order to prevent safety hazards, individual driveways onto arterial and collector roadways shall be minimized as much as possible.
2. **Surface Water Management Plan Implementation**

The Township is required to implement a Local Surface Water Management Plan (LSWMP). The priorities and program discussed below are required in order to implement the LSWMP as part of this Comprehensive Plan.

a. **Priorities and Program**

   (1) The Township supports the Valley Branch Watershed District regulation of surface water management within the area of the Township that is included within the District Boundaries. The Township supports the Middle St. Croix WMO regulation of surface water management within the area of the Township that is included within the WMO Boundaries. The Township will update and enforce its Zoning and Subdivision Ordinances to cooperate in those efforts.

   (2) The Township will continue to coordinate with the Washington Conservation District for review of wetland issues and permits within the Township.

   (3) The Township will continue its ongoing inspection and maintenance activities for culverts and drainage systems along Township roads and on Township properties. The Township will include needed maintenance of these facilities and street sweeping in its annual budget, and implement maintenance and improvements as needed to ensure that these facilities function adequately.

C. **COMPREHENSIVE PLAN AMENDMENTS**

As a policy and planning document, changes to the plan in either text or maps will likely occur. Amendments to the Comprehensive Plan can be initiated by citizens, developers, the Township, or others.

Changes to the Plan are made through an amendment process. If justified and if positive results benefiting the area and total community are identified, an amendment can result. Amendments do require a thorough review and a proper hearing prior to approval by the Township. Amendments must also be approved by the Metropolitan Council and may then result in concurrent amendments to the Township’s Zoning Ordinance and Map.