Natural Features

The natural environment is a critical element of the physical basis upon which the community develops. The various components to the natural environment function, change, and interact as part of the ecosystem. These natural functions need to be maintained in a balanced state, while still allowing the community to grow in a controlled manner. Development within the township should be directed to areas that can best sustain the physical changes to the landscape without offsetting the community's natural balance. Those areas which are not well adapted to development, or if developed may have major impacts to other parts of the community should be protected. Key natural features have been indicated on Map 6.

Existing Conditions

Soils, Geology and Topography: The geology of Grosse Ile consists of glacial drift overlying dolomite bedrock. The glacial drift is a very thick layer of soil material that has been deposited by the advancement and retreat of the Wisconsin glacier during the last ice age. Since the last ice age, the soils on Grosse Ile have formed as a result of a number of soil forming factors. These include water drainage, wind, slopes, climate, biological activity, and human activity.

Water drainage has created distinct categories of soils on Grosse Ile. Well drained soils (Morley soil series) are found in steep slope areas. Somewhat poorly drained level soils (Blount soil series) occupy the majority of the township, which is predominantly flat. Very poorly drained soils (Pewamo soil series) are found in the low areas and natural drainageways. A goal of this plan is to maintain the ecological functions of natural waterways and drainage networks of Grosse Ile. Because the soil series which occupies the largest percentage of the Island, the Blount soil series, is relatively flat with drainage limitations, preserving and enhancing the natural drainageways of the township is vital.

Human activity has also altered the natural soil conditions through agriculture and the cutting and filling of soil associated with major construction activities. In some instances, extensive cut and fill operations have altered and disrupted the natural drainage pattern of the island.

Drains: Prior to its development, Grosse Ile contained a series of natural creeks and drainageways which drained to the Thorofare Canal, Frenchman's Creek and the Detroit River. At least 50 percent of these natural drainageways have been lost due to development.

Disruption of these natural drainageways has cause drainage problems such as flooding. As Grosse Ile has become developed, the amount of water infiltrating the surface has decreased and the surface runoff has increased. This has been caused by the clearing of natural vegetation and the addition of impervious material to the land (buildings and pavement). Artificial drains have been developed to overcome these problems. The installation of storm drains from developments has had the cumulative effect of increasing the peak discharge into the remaining natural drains while further reducing the amount of water infiltrating to ground water.

Floodplains: Floodplains associated with both the Detroit River and the drainage courses which cross Grosse Ile are vital to the ecosystem of these low lying areas. Periodic flooding of these drainageways is critical to the types of vegetation and animal species that live here. Floodplains also contain water during periods of high stream levels. Any alteration to the physical size of the floodplain will disrupt the drainage flow during high water periods and potentially cause increased flooding elsewhere.

Natural floodplains perform several important hydrological, geological, ecological, and environmental functions. Important hydrologic functions include stormwater conveyance, storage of stormwater, reduction of peak flow and groundwater recharge. Important geologic functions include storage of sediment from erosion and slowing the velocity of stormwater thereby reducing erosion of the channel and floodplain. Important ecologic functions include support of riparian vegetation, wildlife habitat and environmental corridors. Important environmental functions performed by the floodplain include filtration of storm water, absorption of excess nutrients and biological treatment of other pollutants in floodwaters. And finally, the open space maintained in floodplain areas provides attractive views that contribute to the waterfront community character.

Wetlands: Major wetland complexes associated with the natural drainageways are found throughout Grosse Ile. These wetlands are transitional areas between the aquatic ecosystems and the surrounding upland areas. They are low areas that are intermittently covered with shallow water and underlined by saturated soils. Vegetation that is adapted to wet soil conditions, fluctuation in water levels and the periodic flooding can be found in wetlands. Wetlands are interlinked with the hydrologic system and because of this, these wetland systems are vital to the environmental quality of Grosse Ile.

The Grosse Ile master plan identifies three types of wetlands predominate within the boundaries of Grosse Ile Township: (1) emergent wetlands with rooted cattails, bulrushes, and sedge grasses; (2) forested wetlands with an overstory of trees and an understory of shrubs; and (3) submersed aquatic plants (macrophyte beds) with wild celery and other species. As water levels rise and fall from year to year, some ecological succession may be occurring as the wetlands shift from emergent marsh to forested wetlands or submersed aquatic beds. All types of wetlands are interrelated with each other, providing numerous benefits to the community as a whole. The functions and benefits from each type of wetland are outlined below.

Scrub/shrub wetlands are a separate category of wetlands which has been mapped for the National Wetlands Inventory. Scrub/shrub wetlands are closely interconnected with emergent wetlands on Grosse Ile, and are considered as a single type of wetland for purposes of the master plan.

Emergent wetlands are located along the shoreline of Grosse Ile, along the sheltered waterways of the Thorofare Canal and Frenchman's Creek, and on several small out islands within the boundaries of the township. The largest emergent wetland areas are located north of Gibraltar Bay, west of Gibraltar Bay on Round Island, on Celeron Island, Stony Island, and the northwest shore of Grosse Ile near the toll bridge.

Emergent wetlands on Grosse Ile are essential as habitat and as a food source for the abundant fishery of the Detroit River. As the wetland vegetation dies back each season, it breaks down into particles called detritus, which is eaten by insects as well as birds and small mammals. Insects, in turn, are eaten by the fish.

The shallow, sheltered wetlands connected with the Detroit River also provide protected spawning and nursery areas for fish. For example, northern pike, yellow perch, and carp spawn in the standing vegetation of wetlands.

Grosse Ile Township wetlands are habitat areas for the thousands of Canadian geese, diving ducks and dabbling ducks which frequent the Detroit River flyway during migration. Several flyways and corridors cross the Detroit River.

Emergent wetlands play a role in buffering the shoreline from high winds and waves. Wetlands have been termed "nature's sponges" because they help absorb stormwater and storm surges. The wetland grasses help stabilize the shoreline and minimize soil erosion.

Forested wetlands (sometimes called floodplain forests) are dominated by swamp oak, red ash, eastern cottonwood, hackberry, silver maple, black willow, and red maple trees.

In several cases, forested wetlands are located adjacent to emergent wetlands and open water; in other cases, they are located inland from the shore. The hydrologic connection of inland forested wetlands with the Detroit River ecosystem is not well known. Inland forested wetlands may have been created by road construction and development that blocked natural drainageways.

Forested wetlands near emergent wetlands and open waters are clearly linked to the biological productivity and wildlife support functions of the Detroit River. Because of the trees, they provide a different type of shelter and habitat for various bird species. Inland forested wetlands also provide habitat for birds and small animals, and help to prevent local flooding by absorbing stormwater.

The submersed aquatic beds found near shorelines and in the sheltered bays of Grosse Ile Township support fish and waterfowl. The aquatic plant beds are accessible to fish and produce quantities of food for fish and invertebrates.

Submersed aquatic plant bed species include wild celery (a favorite food of ducks), as well as pond weed, water weed, musk grass, water milfoil, and many others. Each bed is somewhat different, with varied mixtures of species of plants. The plants are rooted to the bottom of the Detroit River, often on a sand bar in shallow water. Invertebrates, including snails, live on their leaves. Fish enjoy the food and shelter provided by the aquatic plants, a fact well-known to area fishermen.

The extensive submersed aquatic beds and shoreline wetlands help to maintain the fish spawning areas located near Grosse Ile in the Detroit River.

In general, wetlands serve a variety of important functions which not only benefit the natural environment, but also the community. Some of the primary values which wetlands contribute are as follows:

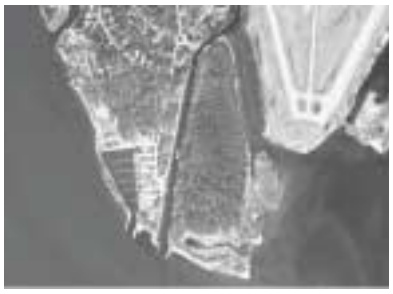
- Wetlands serve to mitigate flooding by detaining surface runoff.
- Wetlands control soil erosion and sedimentation loading in the river.
- Wetlands are often interlinked with groundwater.

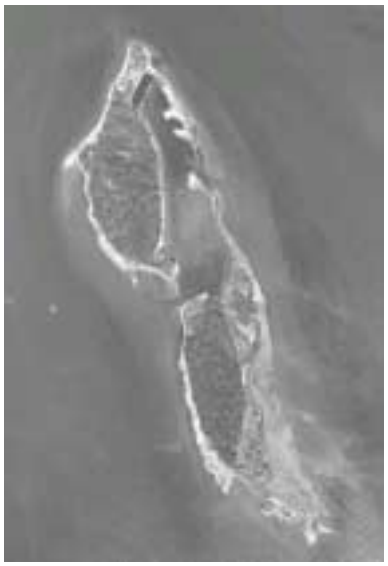
- Wetlands improve water quality which is degradated by such things as: nutrients and chemicals from fertilizers and pesticides used in landscaping/lawn care, polluted urban run off from automobile/transportation/parking facilities, and commercial activities and erosion and sedimentation resulting from construction activities.

- Wetlands are highly productive ecosystems in terms of wildlife habitat and vegetation.

- Wetlands also serve a variety of aesthetic and recreational functions.

Wetlands of Special Importance: All of Grosse Ile Township's wetlands function as fish and wildlife areas, water quality filters, and storm surge barriers. Several wetland areas; however, due to their size and location, dominate as very important high value areas for conservation:





- **Gibraltar Bay, Round Island and Nearby Wetlands:** Gibraltar Bay is a natural area of great value to the Detroit River fishery. The bay is sheltered but interconnected with the Detroit River. The bay has variable depths and abundant submersed aquatic plants that provide food and shelter for spawning fish. Water flow from under the East River Road Bridge transports relatively unpolluted water from the east side of the island westward into Gibraltar Bay. Field surveys by fish and wildlife biologists have emphasized the plant diversity and impressive primary productivity for nutrients.

- **Thorofare Canal:** The shoreline wetlands and submersed aquatic beds which are found in various locations along the Thorofare Canal are very important as fish and wildlife habitat. The waters are more sheltered than the main channels of the Detroit River and have a good flow-through of water. Shallow, protected backwater areas are abundant along the main canal, providing spawning, nursery and feeding areas for fish. Ducks and other waterfowl also depend on the sheltered waterway with its abundant food sources.

- **Shoreline Wetlands near the Toll Bridge:** This area is important to the Detroit River fishery because of its size and location. In the past, high water levels of the Detroit River have turned some of these shoreline wetlands into submersed aquatic beds, and has extended the wetland system farther inland. However, the low lake levels in recent years has had the effect of reducing the area influenced by the Detroit River's hydrology.

- **Celeron Island:** Celeron Island, owned by the Michigan Department of Natural Resources, is now almost entirely a wetland island. The island has very high value for fish and wildlife habitat, and is used extensively by sportsmen. In addition, the sand bar area extending between Celeron Island and Calf Island, the submersed aquatic beds northeast of Celeron Island, and the waters south of Celeron Island serve as important waterfowl feeding and nesting areas.

- **Stony Island:** Approximately 50 percent of Stony Island is now wetlands and submersed aquatic beds, according to the Michigan National Wetland Inventory and 1985 aerial photographs. It is possible that some of the interior wetlands on Stony Island were originally created by quarrying. Rising water levels have created wetlands in recent years. The north part of Stony Island has been reported as a nesting area for egrets, white swans, and other waterfowl. At least eight different types of threatened or endangered species of plants and animals are found on or near Stony Island.

- **Sugar Island:** Sugar Island is an upland Island with very little wetlands area. However, the sand bar off of Sugar Island supports wild celery, sago pond weed, and other submersed aquatic plants. These plants are a source of food for diving ducks. Threatened fish and animals found in the waters near Sugar Island and other small islands near Grosse Ile include the Lake Sturgeon (last seen in 1973) and the Common Tern (last seen in 1982). Sugar Island is privately owned and used primarily for recreational fishing and hunting.

- **Inland Wetlands:** There are a number of wetlands within the interior of the main island that play an important role. These are generally located along natural drainageways that traverse the island following the Pewamo soils conveying surface waters to the Thorofare Canal and Frenchman's Creek. While many of these natural drainageways have been severed by road construction and development, pockets of wetlands remain. Pre-settlement vegetation has been identified in some of these wetland areas indicating high quality natural areas that should be preserved. In addition to rare plants, these areas have also been identified as being important wildlife habitat.

Slopes: Above some of the drains and wetlands there are steep banks or bluffs, which separate the lowland and the upland. These will generally have steep slopes and be heavily vegetated. Disruption of the vegetative cover on these bluff areas may cause significant erosion problems and effect wetland and drain ecology.

Rivers: The Thorofare Canal and Detroit River provide a number of recreational opportunities such as boating, fishing, and swimming. The quality of these water features enhance the value of adjacent property for residential opportunities. This river provides vital functions to the region for drainage and water supply, fish and wildlife habitat, industry, and recreation.

Groundwater: Aquifers are water contained within the porous areas of soils and rock. Those higher level aquifers associated with the drainageways of Grosse Ile are capable of absorbing and storing water from precipitation, overland flow, flooding, and stream flow. Aquifers may either absorb water or release water to adjacent drainageways depending on relative water levels. Aquifers supply water for wetlands and riparian vegetation. They tend to be vulnerable to contamination. Important functions performed by riparian aquifers include:

- water quality

- sub-irrigation for riparian vegetation
- water storage
- maintaining a regulated level of stream flow

Woodlands: Grosse Ile Township trees and woodlands contribute substantially to the economic and psychological well being of township residents. The abundant woodlands and trees help create the peaceful, rural atmosphere that makes Grosse Ile a very special place to live. Trees provide a visual barrier between individual properties and neighboring properties, an essential factor for preserving the rural atmosphere and property values.

Woodlands provide the following community benefits:

- **Influence on micro-climate:** Woodlands play an important role in moderating ground-level temperatures. The tree canopy buffers the ground surface from the sun's heat and wind. Trees also help to moderate temperature extremes during winter months.
- **Reduction in air pollution:** Woodlands absorb carbon dioxide and return oxygen to the air. Tree leaves filter pollutants from the air, removing ozone, chlorine, hydrogen fluoride, sulfur dioxide, and other pollutants. Trees serve as a noise buffer as well.
- **Reduction in soil erosion:** Woodlands and other vegetation stabilize soils and help prevent soil erosion. The vegetation absorbs the energy of falling rain, and the web of roots help hold soil particles in place. Tree leaves reduce the impact of raindrops on the soil surface and give soil a chance to absorb water. Fallen leaves minimize the loss of soil moisture, help prevent erosion, and enrich the soil to support later plant growth. Wooded wetlands provide the additional benefit of trapping and holding stormwater runoff. Dense vegetation can help slow flood surges and flows.
- **Wildlife habitat:** Woodlands provide essential shelter and food for raccoon, rabbits, pheasants, and other birds and animals. The opportunity to observe wildlife in a natural setting has educational benefits for island residents.

Woodlands of Special Significance:

- **Climax Hardwood Forests:** Grosse Ile Township woodlands can be classified into two categories: (1) climax forest hardwoods which can reproduce themselves, and (2) early second growth vegetation, including hawthorn thickets. Climax hardwood forests are dominated by white oak, shagbark hickory, sugar maple, and green ash. Major climax hardwood forest areas have been identified by township resident Bruce Jones with advice and assistance from several forestry experts. Because many woodlands have already been destroyed, the proper management of the remaining stands is of great importance for the island.
- **Heritage and Champion Trees:** A heritage tree is a tree with high value because of its species, size, age, vigor, location, or historical significance. Although a number of

large heritage trees are present on Grosse Ile, the location of these important trees, for the most part, has not been mapped.

- **Round Island and Vicinity:** The most unique and important woodland site on Grosse Ile is Round Island, a forested wetland. The forest on Round Island is old growth, making it much more unique than many other woodlands on the Island. Red oak, burr oak, and white oak are the dominant species. The mature mesic (wet) oak forest is one of five uncut stands remaining in Michigan. The site is believed to be the last old growth oak forest remaining on the Lake Erie plain and the big trees are the largest in any tract in Monroe and Wayne Counties south of Dearborn. Because of the trees' great height, they may act as a beneficial buffer from storm winds off Lake Erie (June 1983 letter from K. Hosford, Michigan Department of Natural Resources).

  This tract probably represents the last example of presettlement forest on the Lake Erie Plain as described by French explorers. Its value as an historic natural area is comparable to that of Hartwick Pines. (Additional Information is provided by the Site Ecological Summary prepared by K. Chapman, Michigan Department of Natural Resources, June 1983).

  Round Island is approximately 13 acres in size. Because of its small size and location, it is vulnerable to the effects of high winds and storms. Protection of the entire tract and adjacent woodlands to the west will be essential in the future for protecting the 7-8 acre oak forest located in the heart of Round Island.

  Round Island is owned by the Ford Yacht Club, which has held the tract for many years without proposing development or alterations. The Yacht Club has placed Round Island on the Natural Features Registry of the Michigan Nature Conservancy. This is a voluntary registry without any agreements or legal obligations.

Drainageway Vegetation: Vegetation located along drainageways and wetlands is organized into corridors of varying lengths and widths. These corridors are valuable because they provide irrigation routes for animals and plants (as seeds carried by animals, wind, or water). Significant portions of the land surrounding Grosse Ile's drainageways have been developed and only a fraction of the natural vegetation and wildlife habitat remain. Those pieces of drainageway corridor which remain between development are isolated patches rather than parts of a larger landscape.

Wooded Rights-of-Way: Woodlands along roadways contribute to a natural/rural atmosphere in a number of ways. The impact of vegetation on the person within the public right-of-way will be greater because of the close proximity. A greater mass of vegetation will be within the forward view of the person within the public right-of-way. Other features outside of the public right-of-way, such as buildings, will have a less dominant impact on the streetscape because they fall behind the vegetative foreground. Taller trees provide a sense of enclosure, providing a very defined public space bounded by vegetation.

Habitat: Fish and wildlife habitat are areas that provide food, cover, and corridors for movement. For example, the wetlands on Grosse Ile are essential as habitat and as a food source for the abundant fishery of the Detroit River. As the wetland vegetation dies back each season, it breaks down into particles called detritus, which is eaten by insects as well

as birds and small mammals. Insects, in turn, are eaten by the fish. The shallow, sheltered wetlands connected with the Detroit River also provide protected spawning and nursery areas for fish.

It is important to provide areas of sufficient size to be useful to wildlife through either protection of existing habitat or creating new habitat. Reasonably continuous corridors must be provided for adequate movement of wildlife and plant seeds between isolated areas. Open space and greenway projects should preserve or enhance fish and wildlife habitat.

Wildlife Sanctuary: The Grosse Ile Township Garden Club is responsible for the management of the woodlands tract located just to the northeast of Horsemill and Thorofare Roads. The site is owned by Grosse Ile Township. Because of its location near the Thorofare Canal, the sanctuary is particularly important as wildlife habitat.

Natural Features: The Michigan Natural Features Inventory is maintained by the Michigan Department of Natural Resources as a service to citizens and local officials. Plants and animals which are (or are potentially) threatened or endangered are listed on the inventories. To avoid curiosity seekers, only the general locations of the features is mapped. The inventory is not a definitive statement about the presence, absence or condition of environmental features, since many of the sites listed have not been completely surveyed. Unfortunately, some features presented in the past may have already been destroyed by human factors and development. If developments are proposed on or near these areas the presence and importance of the plant or animal should be reviewed. For extremely rare or endangered species, a permit may be needed from the Michigan Department of Natural Resources.

Threatened and endangered species may have special value when located in a protected area or woodland. It may be the presence of woodlands which has protected the species and provided habitat.

Natural Features Management

This plan consistently emphasizes the importance of the natural resource base. The correlation of land use density in the future land use plan to natural resource capability will help promote preservation of natural amenities.

The master plan must address both the quality and the quantity of land use within the township. Protection of township resources requires the adoption of policies directed toward the specific resource issue including drainage, and groundwater quality, natural topography, and vegetation. Resource protection regulations can be incorporated in subdivision, zoning, and other special purpose regulations.

R-1-E Overlay Zoning District: The interrelation of the environmental component of the master plan with the land use component is most visible with the establishment of land use categories. Within areas identified as having significant and fragile natural resources, lower impact/density development is recommended.

Certain portions of the township are characterized by significant natural features such as woodlands, critical stream corridors, large wetland complexes, and extensive animal life

habitat. These, in combination with other factors such as existing land use patterns and transportation, dictate areas of lower development density and population.

The impact to these areas can be minimized through the R-1-E Overlay Zoning District, which limits the intensity of development and population, minimizing the disruption to these critical natural areas.

Natural Feature Setback: The township has enacted general zoning standards for setbacks from rivers, streams, canals, drains, and wetlands, which apply to all zoning districts. There is a strong basis for this type of requirement. Development surrounding water features, particularly streams and wetlands, affects the function of the water feature. Development immediately adjacent to a water feature may have the effect of increasing the disturbance to this natural ecosystem and reducing the water feature's ability to perform its natural function.

For example, wetlands are dependent on an interaction between the wetland and the surrounding upland. In terms of hydrology, water enters a wetland from the surrounding upland area in a number of ways - overland flow, through the upper layers of the soil and through groundwater. The upland soil and vegetation surrounding the wetland affect the amount, the means and the rate at which water enters the wetland following a storm or snow melt. Development of the surrounding upland will alter the relative balance between the overland (surface) flow and infiltration, resulting in a greater peak discharge to the wetland. In other instances, physical improvements such as structures, roads and storm sewer systems can intercept surface flow to the wetlands. These alterations to hydrology can result in much greater fluctuations in water levels between wet and dry seasons. The undisturbed soil between the site improvements and the wetlands acts as a buffer to maintain the natural upland/wetland interaction that existed prior to development.

In addition to the hydrologic function, waterways are natural open space corridors that serve as animal life habitat. Animals move along remaining undeveloped natural corridors, such as the drainage ways that cross the township. Development immediately adjacent to these natural features has a detrimental impact on animal life habitat by moving structures and disturbance further into natural corridors and increasing constriction of development on these habitats. Protection of areas that line natural features is important to animal life because this is the interface between the aquatic and terrestrial (upland) ecosystems. This interface is important to animals such as land mammals that need water or birds which perch on trees to hunt for fish.

Storm Water Management: Increased development activity places additional burden on existing natural drainage systems. The overtaxing of drainage systems leads to localized flooding, environmental damage and costly storm drainage improvements to be borne by taxpayers. Traditionally, drainage problems on Grosse Ile have been managed by installation and improvements to stormwater drainage systems. Another way to manage storm water is through preservation of natural drainage ways and providing onsite storm water detention with controlled discharge. Through these approaches, the impact of development on drainage systems can be minimized.

A comprehensive approach to storm water management should encourage the preservation of existing natural features that perform storm water management functions, minimization of impervious surface, direction of storm water discharge to open grassed

areas and careful design of erosion control mechanisms. Deep detention ponds with steep side slopes that require security fencing should not be permitted. These ponds have an unnatural appearance, do not blend into the landscape and are not consistent with the desired character of the township. Instead, wet ponds and storm water marsh systems should be used for detention. These should be landscaped with plantings adapted to hydric conditions to create a system that emulates the functions of natural wetlands and drainage ways both in terms of hydrology and natural habitat. These types of measures will be much more effective in pre-treatment of stormwater before it is discharged to the Detroit River.

Restoration of Wetlands: Prior to current wetland legislation and Grosse Ile Township's Wetland and Drainageways Protection Ordinance, many wetlands were filled, drained and/or otherwise altered for development or agricultural activity. Drains and agricultural tiles may have been installed to drain surface water from wetlands so the land could be farmed.

The location of these altered wetlands can be identified through analysis of soil conditions. Although the hydrology of the site has been altered, the native soils will still exhibit coloration and textures associated with hydric conditions. Also, the Michigan Department of Natural Resources has mapped pre-settlement land cover (vegetation) based on historic survey records. Maps are available for Grosse Ile Township that show the historic natural land cover.

Where development is proposed, wetlands can be restored as part of the drainage and open space design of the development. Hydrologic restoration may involve the removal of fill material and slowing discharge to man-made drainage ways. Restoration may also involve covering the soil surface with peat and re-establishing hydrophytes (wetland vegetation). Where damaged or filled wetlands exist within a proposed subdivision, a condition of approval may be the restoration of the natural system as part of the stormwater system for the development.

Boat Docking Regulations: Waterfront development in Grosse Ile Township places demands on the township waterways for boating and boat docking. Increased boat usage on the various channels can contribute to a number of problems, particularly from powerboats. The township currently regulates boat usage to help prevent problems associated with:

- Shore erosion
- Damage to river bottom and stirring-up sediment
- Oil and gas spills
- Noise
- Conflicts and safety problems between users (power boats, sail boats, personal water crafts, canoes and swimmers)

As the township continues to grow, problems associated with waterway overcrowding could worsen. Impacts to the safety and quality of the township's waterways are intensified by recreational use. Policies on water access and usage need to balance the rights of riparian owners with the right of the general public to have access to public

waters and with the need to protect the quality of the state's natural resources. The township should continue to carefully regulate development and usage of the waterfront through the waterfront regulations of the zoning ordinance.

Preservation of Natural Topography and Vegetation: The land use densities proposed by the land use plan will promote the preservation of existing vegetation and topography. Specific standards can be applied to subdivision plat regulations and site plan review to require preservation of tree cover, the provision of landscaping and buffer strips and the minimization of site grading.

Woodland Protection: The preservation of woodlands as part of any development is vital to maintaining the natural community character. Continued development threatens the existence of significant patches of woodland in the township. Woodlands are protected through the Woodlands Protection Ordinance. This ordinance requires that existing woodlands be inventoried during the site plan review process. Developers should be required to make every effort to preserve significant wooded areas, and these areas should be protected during construction. Site inspections and other methods of enforcement from the township are necessary to ensure compliance with regulations and appropriate implementation. Significant woodlands need to continue to be protected including:

- Forested areas that create significant woodlands.
- Linkage strips where rows of trees create linear corridors and buffers between uses.
- Trees along roads, which help preserve the community character.
- Significant individual landmark trees.

Purchase of Open Space: The township has been aggressive in its attempts to preserve open space primarily through efforts to purchase the land under the open space program. This has been possible through a millage passed for the last several years by township residents. This program has been very successful and is used as a model elsewhere in the state. Grosse Ile Township should continue this program, which is one of the most effective means of preserving the natural features of the island.