

# Dundee Township Master Plan

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ADOPTED July 18, 2012



This Plan was prepared by the Dundee Township Planning Commission. The Commission wishes to acknowledge the community leaders that contributed to this effort:

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***Planning Commission Secretary Certification:***

I hereby certify that the Dundee Township Planning Commission adopted this Master Plan, in accordance with Section 43 of Michigan Public Act 33 of 2008, as amended. After holding a public hearing on July 18, 2012, the Master Plan was adopted by the Planning Commission.

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**Dave Sedlar, Planning Commission Secretary**

Date: \_\_\_\_\_

*Prepared with assistance from:*



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# INTRODUCTION

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## What is a Master Plan?

The Dundee Township Master Plan is a vision for how the Township will grow and develop over the next fifteen to twenty years. Its underlying purpose is to guide the intensity and the arrangement of development and allocation of public funds in ways that will benefit the overall community.

The Master Plan is a resource for residents, business owners and developers who seek information when making investment decisions. The Plan provides them with a reasonable expectation of what will happen in the future. In essence, it represents a balance between the sometimes competing interests of the environment, individual land owners, businesses and the community overall.

This Master Plan is largely based on past planning efforts. The Planning Commission conducted a comprehensive review of the current Plan. This document represents the entire previous Master Plan, updated as needed. It considers several elements, including:

- ▶ **Public Input.** It is important to understand community opinion and concerns. This Plan considers public participation efforts conducted during earlier Plan updates and representation from local officials. The process included a public hearing where residents were given a chance to comment on the final draft.
- ▶ **Existing Conditions.** Demographic information and physical conditions were updated and evaluated to ensure prior goals and objectives were still valid.
- ▶ **Planning Commission Vision.** A visioning session with the Planning Commission provided direction regarding the key concerns that will be addressed by the Master Plan. Goals, objectives and strategies have been updated to remove strategies that have been accomplished, and to add new ones which may not have been relevant during the last plan review.

### Using the Plan

To ensure the plan remains relevant:

**Refer To It When Making Zoning Decisions.** The Master Plan provides a basis for sound zoning decisions, and is the legal foundation of the Township's zoning ordinance. Zoning decisions that are compatible with the Plan will be better protected from potential challenges.

**Keep It Current.** An outdated Plan that is not referred to on a continual basis can weaken Township decisions. The Plan may be amended at any time, so when conditions or community needs change, so should the Master Plan.

## Public Participation

This Plan was developed by the Dundee Township Planning Commission, who believes that community attitudes have remained generally consistent throughout the community's history. Therefore, this Plan represents a review and update to the previous Master Plan, developed in 2001, and not a complete comprehensive planning process

that might include more extensive public involvement techniques. While this review and update process did include its own public hearing, the majority of this Plan is based on public input solicited during the 2001 Master Plan development, through a compilation of techniques, including a brief written survey, numerous meetings with Township officials, a public workshop discussed in more detail below, and a public hearing.

The overall results of this visioning session form the basis for the community-wide vision, goals and action strategies presented in this Plan. In general, they result in a need to balance future growth with the desire to maintain rural character. While residents desire improved services and high-quality roads, they recognize that providing these things may threaten the very character they wish to protect. Therefore, it is important that the Master Plan set forth a clear direction that will provide a sound basis for future zoning decisions. It strives to focus on the key elements the community wishes to protect – its rural character and small-town atmosphere – and less on providing costly public improvements or making great physical changes in the community.

### **Public Workshop (2001 Master Plan)**

On August 9, 2000, a public workshop was held jointly with the Township and Village of Dundee Planning Commissioners, elected officials, staff, citizens and business owners. The workshop was one of two joint meetings held with the Village in updating both the Township's and Village's Master Plans, and it served three functions:

- ▶ To educate participants of the Master Plan process and discuss coordinated planning efforts. The open house format allowed participants to view information and ask questions.
- ▶ To hear comments from both Village and Township residents and identify the issues each community faces.
- ▶ To discuss a future vision for the Dundee community in small group settings. Participants voted within their groups to prioritize the 'visions' and were asked to brainstorm strategies or specific actions to achieve these visions

The predominant themes heard from this session were:

- ▶ **Rural Preservation.** Qualities that contribute to Dundee Township's rural character include woodlands, wetlands, the River Raisin and, of course, farmland. Nearly every workshop participant indicated that the serene rural setting, large tracts of open space and bountiful fields of cultivated land were important factors in determining to remain in or move to Dundee Township. Maintaining the integrity of these resources received overwhelming support from the participants and long-time residents of the community.

- ▶ **Future Development.** While residents place great interest in preserving rural character, they recognize there will likely be a demand for new development in the future, most of which is likely to be residential in nature. Rather than opposing new development, residents expressed a need to regulate and manage growth in a way that is environmentally sensitive, and does not adversely affect the Township's rural character. Those in attendance at the public meetings also agreed and further elaborated that natural features and development along the River Raisin should be monitored and protected.

The input at the public meetings revealed that limits on the extent of new commercial/office development in the Township should be established, and that such development should not be allowed to locate haphazardly. The most suitable locations for new development must be carefully considered to avoid or minimize any potential negative affects upon natural features and farmland.

- ▶ **Transportation/Road Improvements.** Input revealed there is strong support for improving the overall quality of the road system in Dundee Township. The challenge, acknowledged by participants, however, will be providing quality roads for residents while ensuring it does not stimulate additional residential growth that is not consistent with the goals of the Township.

An influx of new residential development will likely affect resident's perception of traffic when they begin to notice more cars and other vehicles along the major roadways. Residents are already exploring the possibility of paving some gravel roads. The Township will have to balance the desires of residents for rural character (unpaved roads) with the need to provide a safe, high quality roadway system. Discussions with the public further reveal that road improvements should also address expansion and provision of multi-modal transportation within the community such as buses and bike paths.

- ▶ **Community Facilities and Services.** As a rural township, a large variety of facilities and services, such as educational and recreation programming, will not likely be available in the near future. Residents were generally satisfied with the services currently provided which primarily include fire and police protection, but were concerned about potential overcrowding of existing schools. As a result, a millage was passed for the construction of a new school adjacent to the existing campus in the Village.

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# GOALS, OBJECTIVES AND STRATEGIES

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This community vision was formulated by the Township and summarizes the overall mission and aspirations of its residents. The remainder of this section breaks this statement down into categories and provides more detailed descriptions on how to accomplish this vision. For each category, a goal statement is provided, followed by specific objectives. For each objective there is a list of action strategies that will assist in accomplishing the objectives, and ultimately the goal. The following set of goals, objectives and strategies give the Master Plan the philosophical guidance it needs to address the present issues and advance the Plan and community into the future.

## Community Vision:

Dundee Township is firmly committed to the preservation of its agricultural lands and natural environment, and will strive to protect those qualities by managing new growth in a manner that is consistent with the rural character, is environmentally sensitive, economically sound and supports a diverse human community.

## Section 1: Community Character

Dundee Township residents desire to keep the Township a rural, residential community. Qualities that contribute to Dundee Township's rural character include the River Raisin, woodlands, wetlands, recreational opportunities, and of course, agricultural land. Maintaining the integrity of any one of these resources can be a challenge for the Township, however, without measures to ensure their protection, these features could be easily lost and/or degraded.

Although residents acknowledge the need to have a balance of other uses, the preservation of natural features, rural character, open space and agricultural lands dominated the opinions expressed in the public participation forums. A majority of residents expressed that the Township should make every effort to keep agricultural land in production.

New development in the Township is generally not opposed by residents, so long as the growth is planned, environmentally sensitive, and does not adversely affect the Township's rural character.

### **Community Character Goal:**

*Maintain the predominantly agricultural and low-density residential character of the community. Rural character and environmental quality shall be protected to maintain the traditional small-town, agricultural environment of the Dundee area.*

**Objective 1.1:** *Promote design guidelines that encourage open space within existing and future development.*

- 1.1.1. Protect agricultural and like uses from the impact of residential subdivisions by encouraging open space buffers around residential development.
- 1.1.2. Provide incentives for clustering of lots or home sites to allow for protection of remaining land for the purposes of agricultural production, the protection of views, and the preservation of wildlife habitat.
- 1.1.3. Prioritize the needs of farmers and agricultural uses when residential/agricultural land use conflicts arise.

**Objective 1.2:** *Preserve rural character through institutional and regulatory techniques.*

- 1.2.1. Continue to support programs such as purchase or donation of development rights, conservation easements, scenic easements, P.A. 116, and participation in the Monroe County Land Conservancy.
- 1.2.2. Consider open space or agricultural overlay districts that would apply in the most valuable and/or threatened areas of the Township.
- 1.2.3. Ensure zoning standards for site plan and special land use reviews that consider protection of natural features, soils, topography, steep slopes, hydrology, and natural vegetation.
- 1.2.4. Prohibit or significantly limit development or disturbance to floodplain and wetland areas.
- 1.2.5. Maintain a low density residential land use pattern within areas east of U.S 23 around the Village, and agriculture elsewhere in the Township.
- 1.2.6. Require large lot sizes that promote agricultural and associated activities.
- 1.2.7. Discourage frontage splits along roadways to preserve rural roadway character.

## Section 2: Land Use

While Township residents appear to place great interest in the preservation of rural character, they also recognize that there will be a demand for new development, most of which is likely to be residential in nature. Residents also realize that development other than residential, such as commercial/office, is a possibility in the Township and should be planned for.

### **Land Use Goal:**

*Protect the Township's unique scenic quality and sense of place that is derived from the interrelationship between rural farmland, areas of undeveloped open space, residential nodes and small commercial centers.*

The public workshop revealed that limits on the extent of new commercial/office development in the Township should be established, and that such development should not be allowed to locate just anywhere. The most suitable locations for new development are along M-50, where infrastructure is, or is more likely to become available.

**Objective 2.1:** *Encourage land uses and development that respects the existing community identity.*

- 2.1.1. Permit intensive development in the Township only where rural character and environmental quality will not be compromised.
- 2.1.2. Limit expansion of commercial and industrial land uses within the Township and focus this type of development within the Village.
- 2.1.3. Develop design guidelines so new commercial and office buildings include quality design and architecture and parking locations that do not detract from the rural quality of the Township.

**Objective 2.2:** *Minimize conflicting land uses in order to maintain a peaceful environment for all property owners.*

- 2.2.1. Enforce current buffer standards to separate conflicting land uses, such as commercial and residential uses. Expand the required buffer zones in the zoning ordinance to also require buffers between farm and non-farm uses.
- 2.2.2. Maintain low density or very low density residential uses in agricultural areas to prevent land use conflicts.
- 2.2.3. Ensure commercial/office uses are well separated/buffered from residential uses.

**Objective 2.3:** *Ensure land policies are crafted to protect natural resources wherever possible.*

- 2.3.1. Require sufficient open space to serve each dwelling unit either by large lot sizes or large common open spaces.
- 2.3.2. Support the Downriver Linked Greenways Initiative by considering and requiring greenway connections during plan review.

**Objective 2.4:** *Continue to work with the Village of Dundee on utility planning, sharing of facilities and associated land use policies that will result in orderly growth that benefits the regional economy.*

- 2.4.1. Maintain lot sizes adequate to meet County Health Department requirements for onsite well and septic systems.
- 2.4.2. Plan higher density residential, commercial and light industrial uses only in areas that are adequately served by public utilities and roadways.
- 2.4.3. Direct light industrial uses to areas where the natural environment, roadways and infrastructure can properly support them, or where transfer agreements may be made with the Village to provide future public utilities.

**Objective 2.5:** *Limit commercial/office expansion to existing areas and future designated areas/nodes.*

- 2.5.1. Focus commercial/office uses along M-50 near the existing business areas east and west of the Village.
- 2.5.2. Allow for the development of remaining smaller parcels within existing commercial areas to maximize development potential in developed areas and minimize the need to expand outward.
- 2.5.3. Allow office and commercial uses that serve the daily needs of Township residents, as opposed to regional commercial uses that have the potential to impact local character.
- 2.5.4. Limit the size and location of buildings and parking areas by allowing shared parking and enforcing maximum parking requirements.
- 2.5.5. Discourage new commercial/office areas which by their location and method of development may encourage the creation of “strip” commercial areas.
- 2.5.6. Promote safer access to businesses along M-50 by requiring cross-access and shared service drives to adjacent commercial/office sites.
- 2.5.7. Explore ways to cluster and/or stack commercial/office uses.

## Section 3: Community Services

The low density development pattern of homes and businesses in the Township make it difficult to provide public services in a cost effective manner. As a result, it is unlikely that widespread services will be available anytime soon. In fact, providing slow, steady improvements rather than large facility construction is consistent with the slow, rural growth patterns that the community desires.

**Objective 3.1:** *Provide recreation programs, facilities, and services to meet the present and future needs for all Township residents*

### **Community Services Goal:**

*Provide community facilities and services that are relative to the intensity of development desired in the community. Recognizing the Township is a small, rural area, this includes using restraint when it comes to providing those services which typically attract the size and character of development that is not desired in the community.*

*including pre-school and elementary school children, teenagers, adults, senior citizens and the disabled.*

- 3.1.1. Plan recreation facilities in accordance with the multi-use concept where facilities provide a variety of recreational amenities.
- 3.1.2. Investigate the creation of a recreation gift catalog, Adopt-a-Park, Friends of the Park, trust funds, fund raising committees and tax deduction brochures.
- 3.1.3. Coordinate a network of inter-connected greenways and recreation areas throughout the Township with similar regional efforts.

**Objective 3.2:** *Provide quality and efficient governmental services and facilities for Township residents.*

- 3.2.1. Provide convenient access and one stop service for all residents.
- 3.2.2. Continue to use the Township website as a portal for information.
- 3.2.3. Provide adequate facilities and equipment for Fire Protection.

## Section 4: Transportation

The Visioning Workshop revealed support for improving the road system in Dundee Township. In particular, residents expressed concern about the condition of unpaved roads. Additionally, participants expressed the desire for non-motorized pathways throughout the Township. However, as with community facilities, the more improvements that are made to the transportation system, and the more roads that are paved or widened, will result in more development interest and faster-paced growth.

### ***Transportation Goal:***

*Foster a safe and efficient transportation network appropriate for a rural and agricultural community.*

**Objective 4.1:** *Promote the development of a safe and efficient road system and circulation network.*

- 4.1.1. Continue to work with Monroe County to prioritize road improvements and maintenance. Ensure dollars generated from special millages are channeled toward projects that consider resident desires, traffic volumes, roadway function, land use, and other appropriate elements.
- 4.1.2. Discourage the development of new private roads and require that all new development provide public roads.

- 4.1.3. Craft access management regulations that limit the number of individual driveways and encourage shared access, driveway spacing, and evaluation of traffic impacts during plan reviews.
- 4.1.4. Work with the County Road Commission and MDOT towards studying the feasibility of a new U.S.-23 interchange to relieve truck traffic on M-50.
- 4.1.5. Pursue funding for the development of bike paths and greenways through Federal Transportation funds, the Michigan Natural Resources Trust Fund, and Safe Routes to School programs.

## Section 5: Intergovernmental Cooperation

The Township recognizes that development in adjacent communities has a great effect on the future of Dundee. Increased development in communities sharing boundaries with the Township (especially the Village of Dundee) can affect growth pressures within the Township. The working relationship between Dundee Township, the Village, and Monroe County is pivotal in maintaining compatible land uses along the community boundaries.

**Objective 5.1:** *Emphasize cooperation and coordination between adjacent governmental jurisdictions and provide for a more complete approach to land use planning and efficient delivery of services.*

- 5.1.1. Provide opportunities for Township, Village, adjacent Township and County planning commissioners and respective support staff to meet on a periodic basis to review respective long range plans and related land use planning issues.
- 5.1.2. Share long range growth and development strategies and plans with adjacent communities to achieve improved coordination and communication on land use issues.
- 5.1.3. Explore a joint Township/Village venture for senior housing.
- 5.1.4. Leverage community collaboration into innovative funding and resource allocation approaches.
- 5.1.5. Recognize the limited budgets of area communities and consider a regional Recreation Commission to assess the needs of area residents and develop recommendations to efficiently provide future park development and recreation programming.

### ***Intergovernmental Cooperation Goal:***

*The Township will maintain constant communication with regional agencies and surrounding communities for more effective community leadership in achieving the prescribed visions and goals of the Master Plan.*

# FUTURE LAND USE PLAN

Land use patterns develop according to geographic location; land use and zoning policies, and environmental, economic, social and cultural influences. The location of a building, the routing of a street or state highway, and many other factors affect the shape of existing and future land use patterns.

The residents of Dundee Township are blessed with a tranquil lifestyle that only a rural community like this can offer. Not surprisingly, protecting and enhancing the rural character of the Township is among the chief concerns of its residents.

The community consists primarily of farm fields equipped with modern farming technology. Single family homes are scattered throughout and situated primarily along local roads. These residential areas are served by a few commercial nodes along M-50. An extraction pit exists in the northeast section of the Township along Day Road. Although farmland is the predominant land use in the Township, serene woodlands and wetlands have maintained their existence safely nestled between farm fields and along stream courses. Significant parts of the Township are still under agricultural use, and are only occasionally disturbed by the existence of large lot, single-family residences.

## Existing Land Use

An inventory of existing land use was conducted using 2008 SEMCOG land use cover maps, and verified by field observation and discussion with the Township. The breakdown of existing land uses is shown in the table below, followed by a description of each category.

### Agricultural

This category includes approximately 75% of the Township land area, and includes active farmland, pasture lands, open fields and vacant land. Agricultural tracts are intertwined with vacant, natural areas in most segments of the Township. In some cases, entire mile

Land Use	Acres	Percent
<b>Agricultural</b>	20,322	74.9%
<b>Single-family residential</b>	5,265	19.4%
<b>Multiple-family residential</b>	0	0.0%
<b>Commercial</b>	167	0.6%
<b>Industrial</b>	617	2.3%
<b>Governmental/Institutional</b>	36	0.1%
<b>Park, recreation, and open space</b>	144	0.5%
<b>Transportation, Communication, and Utility</b>	271	1.0%
<b>Water</b>	331	1.2%
<b>Total Acres</b>	<b>27,153</b>	<b>100.0%</b>

Source: SEMCOG, 2008

Note: SEMCOG's 2008 Land Use data set represents land use only and not land cover. Due to this difference, change analysis using this data set and previous SEMCOG land use/land cover data sets is not possible. Noticeable differences in map appearance and classification acreage totals are the result of this land use data originating from digital parcel files assigned land use codes based on their assessed property class and the lack of any land cover data.

by mile squares are almost entirely agricultural, with only the sporadic presence of single family residential uses and wetland and woodland pockets. This pattern is more prevalent west of U.S. 23. Many of the farm residences are situated closer to the roadway. Most of the land used for farming is combined in vast land tracts. Smaller farms also exist, most of them in the eastern part of the Township. Most of the agricultural lots are used for cash crops, including corn, soybeans, cabbage and potatoes. Most farm residences are two-story, medium sized homes, surrounded by barns and storage buildings. Several of the farm residences are used as home businesses.

## Single Family Residential

This category represents areas where single-family dwellings are located. It includes farm and rural non-farm dwelling units. The vast majority of non-farm residential development in Dundee Township is located east of U.S. 23 along Dixon, Dunbar, Eggert, Irish, Ida-West, Lloyd and Meanwell Roads. More suburban in nature than west of U.S. 23, residential lots in this area vary from 30,000 square foot lots to 5 acre lots. Agricultural and rural estate sites west of U.S. 23 range in size from a minimum of 5 to 10 acres. Most single-family homes in the Township are the traditional rural two-story farm house with detached garages and accessory buildings, or one-story brick ranches. Newer, traditional suburban-style homes have developed along Dixon and Kent Road.

## Multiple Family Residential

This category includes multiple-family dwellings and manufactured home parks. There are no manufactured home parks in the Township; all are located within the Village so they can connect to public water and sewer services.

All multiple family residential and manufactured housing parks have been planned for within the Village of Dundee so that these higher density uses may be served by public water and sewer. It is important to plan certain elements together between the Village and Township because there are a number of immediate impacts to consider including traffic, utilities, land use, environmental and overall quality of life.

It has been determined that the Dundee Community has adequately met the demand in the area for manufactured housing developments. Together, the number of manufactured housing units in the Village and Township comprised 8.1% of the area housing units in 2000. This is slightly less than the

Village and Township Housing Unit Types		
Housing Type	#	%
Single Family	2,441	67.4%
Multiple Family	847	23.3%
Manufactured Housing	293	8.1%
Other	45	1.2%
Source: SEMCOG, 2000		

Manufactured Housing Developments	
	% of total
Dundee Village & Twp	8.1%
Monroe County	11.79%
Washtenaw County	4.42%
Southeastern Michigan	3.72%
Source: SEMCOG, 2000	



county but is significantly higher than offered by Southeast Michigan as a whole. Also, by comparison, this is higher than Washtenaw County to the north.

## **Commercial**

The commercial category represents all areas used for commercial and office purposes including the retail sales of goods and services. While the center of the community is the Village, a small commercial node exists east of the Village along M-50. This extension of the Village provides a bank in addition to the nearby grocery store and local restaurants. West of the Village and the Cabella's outdoor center, an auto repair shop is located on the south side of M-50.

## **Industrial**

Industrial uses are those that involve manufacturing, processing or assembly uses. Also in this designation is the Aggregate Industries gravel pit located in the north central portion of the Township.

## **Governmental/Institutional**

This category includes governmental offices and facilities, as well as institutional uses like places of worship, schools and cemeteries.

## **Park/Recreation/Open Space**

Both public and private recreation facilities are in this designation, but only publicly-owned open spaces are included (i.e. open lands associated with single-family or other uses are not considered open space). The Township has four areas, all privately owned, that are used for recreation purposes:

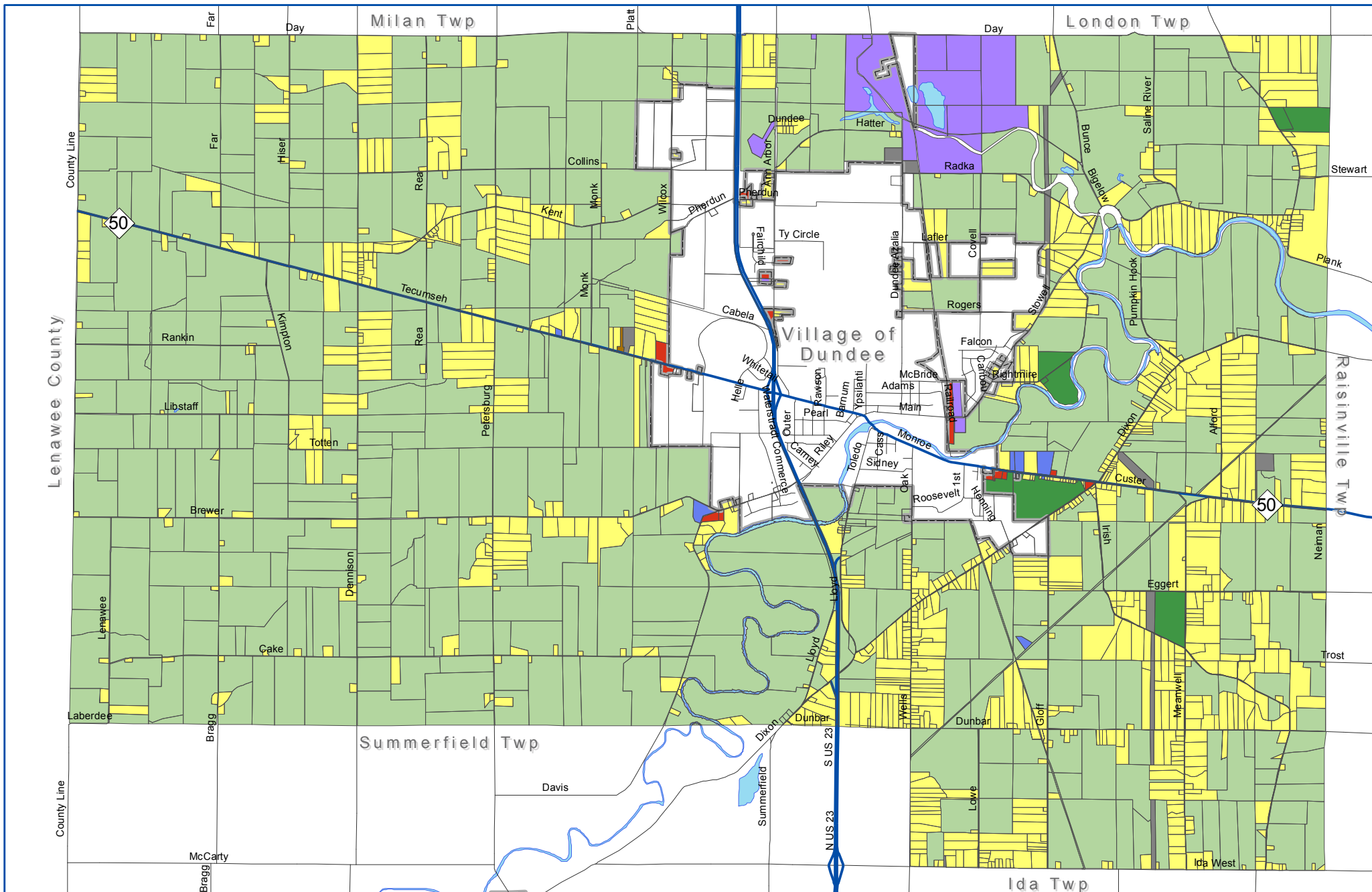
- ▶ Rod Park, equipped with ball diamonds and a natural area
- ▶ Golf course located on M-50, east of the Village
- ▶ Campground/retreat area along Meanwell Road
- ▶ Shooting range in the northeast section of the Township

## **Transportation/Communication/Utility**

U.S. 23 is the primary transportation corridor traversing north-south through the Township. Likewise, M-50, traverses east-west, splitting the Township into quarters. This category also includes wireless telecommunication towers and other public utility stations and facilities.

## **Water**

This category includes all lands that are covered by water for the predominant portion of the year.



# Existing Land Use

Dundee Township  
Monroe County, MI

Sources: MCGI, SEMCOG, Monroe County



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Miles

January 2012



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|---|--|
| <span style="display: inline-block; width: 15px; height: 15px; background-color: yellow; border: 1px solid black;"></span> Single-Family Residential  | <span style="display: inline-block; width: 15px; height: 15px; background-color: blue; border: 1px solid black;"></span> Institutional                             |
| <span style="display: inline-block; width: 15px; height: 15px; background-color: brown; border: 1px solid black;"></span> Multiple-Family Residential | <span style="display: inline-block; width: 15px; height: 15px; background-color: green; border: 1px solid black;"></span> Parks/Recreation/Open Space              |
| <span style="display: inline-block; width: 15px; height: 15px; background-color: red; border: 1px solid black;"></span> Commercial                    | <span style="display: inline-block; width: 15px; height: 15px; background-color: lightgreen; border: 1px solid black;"></span> Agriculture                         |
| <span style="display: inline-block; width: 15px; height: 15px; background-color: purple; border: 1px solid black;"></span> Industrial                 | <span style="display: inline-block; width: 15px; height: 15px; background-color: grey; border: 1px solid black;"></span> Transportation, Communications, Utilities |

## Development Considerations

Development in the Township is influenced by a variety of factors. Historically, suitability of land for farming was the driving force of development. Then, as the national highways were developed, additional lands were made available for possible development, so transportation corridors also help determine where commercial uses or larger residential developments will occur. Other factors like availability of utilities, presence of significant farmland, and community attitudes will also determine where, and to what extent, development will occur.

- ▶ **Soil Characteristics.** The location of soils which are unsuitable for septic systems due to slow permeability, high water table or excessive slope, can limit development in certain areas. In some cases, limitations may be overcome with sophisticated and costly septic systems or central sanitary sewers, but ideally, development should be avoided where poor soils are associated with flood prone and wetland areas.

Much of the land east of U.S. 23 contains more buildable soils and is linked to the Village by the commercial node on M-50. The land west of U.S. 23 contains clay soils which are less conducive to development pressures as it is unable to perk. These soils are highly productive for farming.

- ▶ **Transportation Access.** Dundee Township has a number of opportunities and limitations which will influence the future development of the Township. Among the most significant are the U.S. 23 and M-50 transportation corridors. The north-south and east-west accessibility from the two major roadways will continue to make Dundee an attractive place to live. The development of both the U.S. 23 and M-50 corridors will likely continue to be the desired location for future commercial development.
- ▶ **Rural Character.** A positive influence on growth is the existing rural and natural character of the Township. The agricultural land and open space, wetlands and woodlands provide a pleasant, low-density atmosphere, with a rural ambiance which will continue to draw new residents. Some suggested zoning techniques to preserve character are discussed after the Zoning Plan.
- ▶ **Flooding.** The designation of flood prone areas and restrictions on their development is a measure designed to protect life, health and property. In addition to protecting fish and wildlife habitat, flood prone and wetland areas also maintain and stabilize groundwater supplies, reduce dangers of flooding and contribute to the improvement of water quality. Federal and state laws regulate

encroachment, dredging and filling within flood prone and wetland areas.

- ▶ **Public Water Service Agreement.** A final constraint to development within the Township is the recently approved agreement for public water service between the Village and the Township. The agreement places restrictions on the rate and amount of water taps that are allowed to Township properties.

## Future Development Plan

In general, it was clear that the residents of the Township desired a mix of land uses, with a clear emphasis on open space, agricultural uses, residential uses, and the protection of water resources and rural character. The Future Land Use Map is intended to accompany the following narrative, and relates to the "Zoning Plan" provided below. They were developed in consideration of the factors discussed above and represent the ideal land use configurations, given existing conditions and realistic expectations.

The future land use categories listed below are described in more detail on the following pages.

- ▶ Agricultural
- ▶ Low Density Residential
- ▶ Medium Density Residential
- ▶ High Density Residential
- ▶ Commercial
- ▶ Industrial

### Agricultural

Areas designated as Agricultural should be dedicated to agricultural operations. Non-agricultural uses should be encouraged in more suitable areas of the Township.

A majority of land within the Township, especially land west of U.S. 23 and north and east of the Village, has been classified as prime soils and considered very well suited for farming. A large percentage of these areas are still in active farming operations.

Preservation techniques are discussed at length in the Rural Preservation section of this Plan. However, one element to protecting farming operations is the need to preserve large tracts of land that can operate relatively unaffected by outside land uses. This Plan suggests large lot sizes in the agricultural areas and, as a secondary measure, appropriate buffers and transitions at the periphery of agricultural areas to ensure the interface with residential and other uses will not degrade the environment for farming. It also suggests use of quarter-quarter

zoning to provide a mechanism for construction of residential homes that are associated with the farm or the farm family, which prevents the need to take land out of active farming in order to split a lot. Quarter-quarter zoning allows one residential lot split for every forty acres. The lot to be split for residential use may be relatively small, such as two acres, provided the remaining portion of the 40 acre parent parcel would not be allowed to further subdivide.

## **Low Density Residential**

The Low Density Residential classification is intended to accommodate residential development in areas not considered prime farmland, while still protecting the rural character of the Township. Low Density areas are planned to the east of the Village of Dundee to the River Raisin, which acts as a natural barrier between the more intense development around the Village and the rural areas planned to the east of the river.

These lots should have a density of one to five acres per unit. Access to paved roadways such as M-50, Dixon, East Lloyd, Wells and Ida-West Roads, as well as to the Village of Dundee makes this area more attractive to residential development than those farming areas located to the west of U.S. 23 and northwest of M-50.

Although agricultural operations are presently located within this classification, there is less continuity in their order than elsewhere in the Township. Other areas contain environmental constraints, such as wetlands and floodplain areas and are generally unbuildable.

The strong desire on the part of Township residents to preserve their privacy and the rural character for which they moved to the area, dictates a need to limit density. The Public Workshop revealed a concern about the quality of groundwater that will be available in the future. Without access to public utilities, protecting the source of well water will be very important for the long term welfare of all residents. Lower densities will help protect Dundee Township residents from ground water contamination. Another factor used to define the Low Density Residential classification was the limited ability of the Township to provide utilities, paved roads, and other services to areas where development is likely to continue. Lower development densities will permit the Township to provide an appropriate level of services to match the need.

## **Medium Density Residential**

Areas designated for Medium Density Residential include portions to the northeast of the Village and at the eastern edge of the Township. These are designated for single family residential use at a density that preserves the rural character of the area. These lots should be required to have a minimum density of one acre per unit, which may be reduced to one-half acre per unit where sewers are available.

## High Density Residential

All multiple family residential and manufactured housing parks have been planned within proximity to the Village of Dundee so they may be served by public water and sewer services. The Township is encouraged to maintain its varying intensities of single family residential to accommodate both high density and low density uses. The high density designation is recommended for areas which could eventually be served by public sewer and water. The areas planned for high density residential primarily consist of land to the southeast of the Village. They extend to and include approximately 100 feet on the south side of Dixon Road to accommodate development on both sides of Dixon Road, but are not planned to extend much farther south. New parcels created in these areas should be required to have a minimum frontage of 150 feet (without sewer) on a public road and maintain a lot area of 30,000 square feet per dwelling unit. This may be reduced to 15,000 square feet per unit where sewers are available. The use of cluster development in this area should be encouraged to reduce development costs and to keep land available for the possibility of a private wastewater treatment system, should groundwater contamination occur. Other techniques may be employed to help maintain the rural character of these areas.

## Commercial

The Public Workshop made it clear that residents do not wish commercial and office establishments to develop haphazardly in the Township. The majority of community commercial services should be concentrated in the Village where it is currently developed with ample access to necessary infrastructure. Consistent with this direction, the plan limits the amount of area for new commercial businesses and services. Two commercial future land use classifications have been developed to differentiate between commercial uses and to accommodate the desire for a limited number of businesses in the Township.

The Commercial classification is used to designate areas for general business along M-50, east and west of the Village. Businesses which serve the requirements of the community at large, including the Village and pass-by traffic along M-50, are designated by this category. The size and variety of permitted commercial uses generate significant volumes of vehicular and pedestrian traffic. These districts are intended to be clustered, rather than allowed to create an undesirable commercial strip pattern of development, and buffered from nearby residential area. Appropriate uses include gasoline service stations, auto service malls, grocery stores, restaurants and retail centers. This land use may also include various forms of office development including professional offices, medical offices and banks. General commercial can also include heavier commercial uses such as larger commercial establishments. This

could include implement dealers, auto dealerships, stone/monument sales and truck rental establishments. Special consideration needs to be given to the locations of these heavy commercial uses to minimize their impact on adjacent land uses.

## **Office**

Office land is planned on the east side of U.S. 23 to accommodate business activity associated with the nearby Holcim plant. As a result of its closure, the plant is not as likely to support or generate additional spin-off companies, and so this area is not planned to be extended. The amount of area provided is adequate to serve future business in the Township. Areas designated for office uses typically include professional, medical or corporate offices, but may also include some contractor offices, where they are not associated with large, outdoor storage needs.

## **Mixed Use**

One primary area is designated for mixed use in the Township, located west of U.S. 23 and north of the Cabella's Sporting Goods store on the north side of M-50. Originally, this area was planned for a mix of residential and recreational uses, but this Plan expands that designation to include additional uses like institutional, office and limited commercial. If developed, this area should be considered as part of a larger planned unit development that can be carefully reviewed. It is envisioned that this will become a center of activity and contain a traditional development pattern similar to that found in the Village with walkable streets and appealing storefronts. Because of the small-town nature of the Dundee area, large-scale development of this type is not immediately anticipated. Therefore, if proposals for extensive non-residential or recreational uses are presented in the meantime, the Township should only consider them if they feel they will not be detrimental to this vision.

## **Industrial**

Industrial uses will generally be limited to those areas served by adequate infrastructure, and where industrial activities will have a minimal impact on surrounding land uses. In the past, Holcim, a large extraction and concrete production plant, was located in the northern portion of the Township. However, the plant is scheduled to close in the near future. As a result, this site is likely to be used for a different purpose in the future. The historic extraction has significantly changed the character of the site, which may be suitable for office park, commercial or residential development. The Township has received inquiries about future uses here, which include agricultural. In order to qualify for certain State farmland funding and tax credit programs, farms must be zoned for agricultural use. Therefore, while other non-agricultural uses may be

considered within the disturbed areas of the former Holcim plant, the Township is reverting this area to an agricultural designation. With its location on the Macon Creek, uses in this area must be designed to preserve the natural features of the site, such as floodplains, wetlands and woodlands.

If industrial uses are proposed in the Township in the future, they should be of a light industrial nature, such as contractor's offices, research and development, warehouse and light industrial operations that manufacture, process, package, assemble and/or treat finished products from previously prepared material. Future industrial uses should be located where they will have minimal external impacts on the surrounding area.

## **Parks, Recreation and Open Space**

These are areas within the Township that are utilized for private recreational facilities such as golf courses, campgrounds and private parks. All recreation areas sited are existing recreational uses including Dundee Sportman's Park, West County Park, Wilderness Campground, Dundee Golf Club and Clarence C. Rod Park. Development pressures may lead to a demand for some public sites or private recreational property to be developed with other types of uses. Therefore, these areas have been designated on the map as a residential density classification. If there is any redevelopment of public sites or private recreational lands, proper land use relationships must be maintained to ensure design and uses are compatible with the planned character of the surrounding area. In addition, since most of those sites have significant open space or natural features, some element of those features should be preserved.

## **Zoning Plan**

According to the Michigan Planning Enabling Act (P.A. 33 of 2008), the following Zoning Plan was developed to provide a relationship between the future land use categories discussed above and the Township's zoning districts.

The Zoning Plan helps during implementation of the objectives in the Future Land Use Plan. In some cases, the Township may wish to initiate certain zoning changes as part of an overall zoning map amendment. Other changes to the zoning map will be made in response to requests by landowners or developers.

The following table provides a Zoning Plan indicating how the future land use categories in this Master Plan relate to the zoning districts in the current Zoning Ordinance. In certain instances, more than one zoning district may be applicable to a future land use category, or vice versa.



Zoning Plan					
Master Plan			Zoning Ordinance		
Future Land Use Category	Density or Intensity	Recommended Uses	General Uses Currently Allowed	Lot Size	Zoning District(s)
Agricultural	1 unit per 5 to 40 acres	<ul style="list-style-type: none"><li>▶ Farms</li><li>▶ Single family</li><li>▶ Two family</li><li>▶ Religious institutions</li><li>▶ Veterinary clinics</li></ul>	<ul style="list-style-type: none"><li>▶ Farms</li><li>▶ Single family</li><li>▶ Two family</li><li>▶ Public buildings</li><li>▶ Schools</li><li>▶ Religious institutions</li><li>▶ Veterinary clinics</li></ul>	40 acres	AG-1, Agricultural
				5 acres	AG-2, Agricultural
Low-Density Residential	0.25 to 3 units per acre	<ul style="list-style-type: none"><li>▶ Single family</li><li>▶ Two family</li><li>▶ Public buildings</li><li>▶ Schools</li><li>▶ Religious institutions</li><li>▶ Family day care uses</li></ul>	<ul style="list-style-type: none"><li>▶ Single family</li><li>▶ Two family</li><li>▶ Public buildings</li><li>▶ Schools</li><li>▶ Religious institutions</li></ul>	5 acres	RE, Rural Estates
				43,264 s.f.	R-1C, Residential
				22,500 s.f. - 40,000 s.f.	R-1A, Residential
Medium Density Residential	3 to 5 units per acre			15,000 s.f. - 30,000 s.f.	R-1B, Residential
High Density Residential	8 + units per acre	<ul style="list-style-type: none"><li>▶ Single and two family attached</li><li>▶ Multiple family</li><li>▶ Mixed use</li><li>▶ Public buildings</li><li>▶ Religious institutions</li><li>▶ Group adult and child day care uses</li></ul>	<ul style="list-style-type: none"><li>▶ Single family</li><li>▶ Two family</li><li>▶ Multiple family</li><li>▶ Public buildings</li><li>▶ Religious institutions</li><li>▶ Convalescent and nursing homes</li><li>▶ Mobile home parks</li></ul>	1 acre	RM, Multi-Family
Commercial	Minimum 1 acre lots	<ul style="list-style-type: none"><li>▶ Retail and showrooms</li><li>▶ Personal services</li><li>▶ Restaurants</li><li>▶ Public buildings</li><li>▶ Hotels</li><li>▶ Shopping centers</li><li>▶ Gas stations and</li><li>▶ Auto dealerships</li></ul>	<ul style="list-style-type: none"><li>▶ Retail and showrooms</li><li>▶ Personal services</li><li>▶ Restaurants</li><li>▶ Public buildings</li><li>▶ Hotels</li><li>▶ Shopping centers</li><li>▶ Gas stations</li><li>▶ Auto dealerships</li></ul>	1 acre	C, Commercial
Industrial	Minimum 1 acre lots	<ul style="list-style-type: none"><li>▶ Warehouse and wholesale</li><li>▶ Assembly and fabrication</li><li>▶ Public buildings</li><li>▶ Drive-in theatres</li><li>▶ Dog kennels</li></ul>	<ul style="list-style-type: none"><li>▶ Warehouse and wholesale</li><li>▶ Assembly and fabrication</li><li>▶ Public buildings</li><li>▶ Drive-in theatres</li><li>▶ Dog kennels</li></ul>	1 acre 5 acres	I, Industrial
Floodplain (as overlay)		<ul style="list-style-type: none"><li>▶ Uses as allowed by FEMA</li></ul>	<ul style="list-style-type: none"><li>▶ Reviewed on a case-by-case basis</li></ul>	N/A	FP, Floodplain



## Zoning Techniques to Preserve Rural Character

The principal objective of the Residential classifications is to maintain rural character. Although residents strongly want to guard the rural atmosphere, defining the regulations to accomplish this can be difficult. Certain regulations, discussed below, can be instituted to help define and maintain the rural atmosphere in Dundee. They are not overly burdensome, do not unreasonably restrict the use of land, and do not require excessive enforcement or administration. Nor do they require the Planning Commission to become land development experts or environmental activists. The objective is to preserve as much of the building site as possible in a natural state. Reducing the man-made elements of the landscape is the secret to maintaining a feeling of openness and nature. The following are descriptive illustrations of what can be done to achieve this important Township objective.

- ▶ **Front Setbacks/Greenbelts.** Front yard setbacks are required in all residential districts. In areas where there is significant native woodlands vegetation along the major road frontage, preservation of this landscape along the road should be encouraged. Where native woodlands do not exist, plantings along the lot frontage should be encouraged. It is important to note that maintaining an area as a native landscape requires specific maintenance. Noxious weeds and other invasive plant species need to be removed on a regular basis. Plantings should consist of a proper mixture of trees and groundcover that are native to Michigan and create an aesthetically pleasing environment.
- ▶ **Woodland Preservation.** Tree preservation ordinances are sometimes difficult to enforce, if drawn too strictly. Reasonable regulations however, could be drafted that would not necessarily regulate individual trees, but rather the building site as a whole. Building would be restricted to those areas which are most suited for development, and which preserve the most natural features. Specifically, woodland regulation would require a site plan review for individual lots; something which is generally avoided. However, if the regulations are specific enough, the review can be more of an administrative one, conducted by the building official or zoning administrator. It would require individual lot owners to provide additional information as to the resources available on their property, such as tree clusters and wetlands in order to better determine the most appropriate building site location. In fact, tree regulations should be part of an overall program to preserve all natural features on the site.
- ▶ **Clustering.** Clustering, as discussed previously, provides for a concentration of density in a limited area, with the overall, or "gross density" of the site remaining the same. Although clustering may

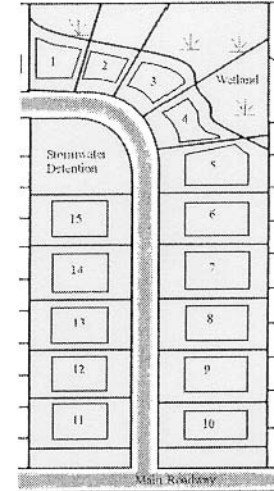
increase the net density for a smaller area of a larger parcel, the gross density should still fall into the requirements of the Land Use Plan. The object of clustering is not to increase the number of units developed, but to regulate the amount of land disturbed by structures, lawns, and drives.

- **Lots on Arterial Roads.** Subdivision and other residential development along major roads deserve careful review to ensure traffic safety. This is most important in the residential areas surrounding the Village, where residential densities are relatively high. Lots which face major section line roads often have no other access but through those roads, particularly if the interior lands are not part of the development. As such, a large number of individual driveways along major roads, often carrying high speed traffic, can create a hazard.

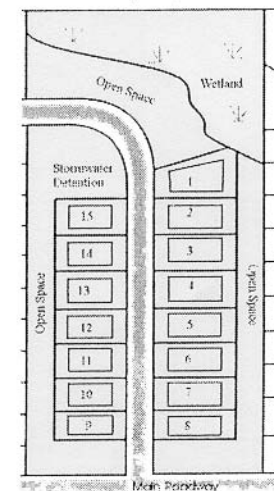
Two solutions are possible. If the interior of the property is also being developed, as many lots as possible should be required to gain access from the interior roads. The interior road should be placed one lot depth into the property and homes should back up to the section line road. Additional landscaping maybe provided for the backyard areas facing the road. The second solution can be used if interior development is not taking place. Rather than each lot having its own driveway, two or more lots can share a common driveway for the first several feet of the lot, then split into individual driveways to reach the building sites of each lot. If neither of these solutions prove useful, each lot fronting on a major road should be required to construct a turn-around area to allow vehicles to enter the road facing forward.

- **Mixed Use.** An area has been designated for mixed use development. This will be primarily single family residential in character, but due to its proximity to U.S.-23 and commercial uses in the Village, other complimentary uses may be mixed into this area. These would likely include commercial recreational uses such as a golf course. Residential densities would remain low, unless public sewer and water is made available from the Village.

Parallel Plan  
Showing Conventional Subdivision



Clustered Open Space Plan



# AGRICULTURAL PROTECTION PLAN

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## Physical Conditions Analysis

Agriculture is an important part of the local economy and is the most predominant land use within the Township. A primary goal of this Plan is to preserve the rural character of the Township.

The recommendations below are based on a study conducted in 1991 by the Monroe County Planning Department. As part of the Township's master plan update, land in the Township was evaluated based on soil capability, enrollment in state farmland preservation programs, large tracts, and current farming activity. Based on these criteria, which are discussed below, two classifications of farmland were created: Prime Farmland and Rural Reserve Farmland. Recommendations for each classification are provided later in this section.

### Soils

The suitability of land for farming is very dependent on the physical characteristics of the land, namely soil conditions. Soil is perhaps the most significant influence on whether or not a parcel of land is capable of supporting Dundee Township agriculture.

Two soil characteristics: prime agricultural soils and Class II soils were evaluated with this Plan because they could be easily measured, defended, and were not subject to change. They are described in more detail below:

**Prime Agricultural Soils.** The soil survey identifies 25 individual soil types which are considered very well suited for farming. The U.S. Department of Agriculture states the characteristics of prime agricultural soils include those in climates with proper moisture and growing seasons. They have few or no rocks and are permeable to water and air. They are not excessively erodible or saturated with water for long periods and are not frequently flooded during the growing season. The slope ranges mainly from 0 to 6 percent.

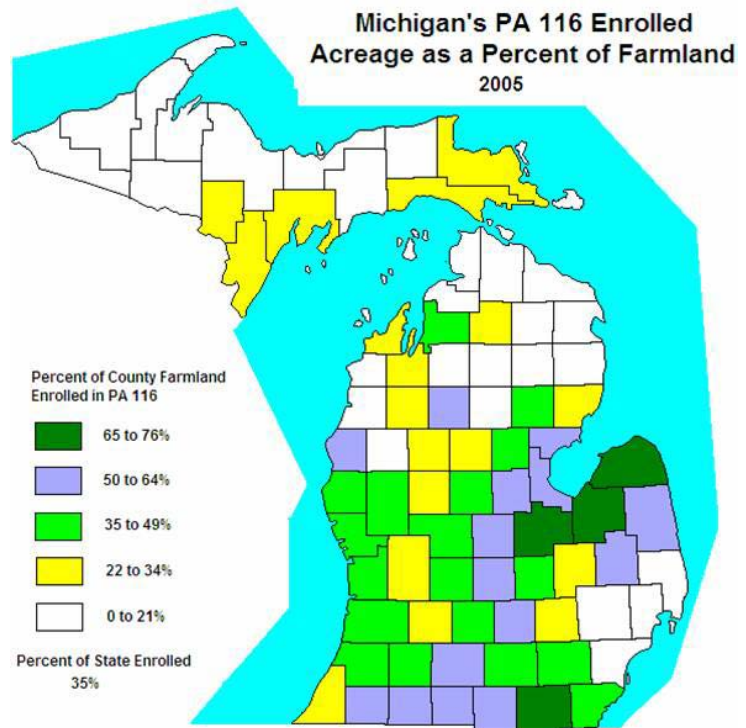
**Class II Soils:** Class II soils in Dundee Township include those capable of producing high crop yields. They have "moderate limitations that reduce the choice of plants or that require moderate conservation practices." The major limitations of these soils are erosion, wetness, shallowness or the presence of stones. Corrective measures on the part of the farmer may be necessary to mitigate these problems.

## P.A. 116 Parcels

In 1974, the governor signed into law Public Act 116, the Farmland and Open Space Preservation Act. Act 116 enables a landowner to enter into a development rights agreement with the state. The landowner receives specific tax benefits in return for agreeing to maintain his land for either agricultural or open space purposes for a specified period of time (minimum ten years). In order to qualify, the farm must be one of the following:

- ▶ 40 or more acres in size
- ▶ 5-40 acres in size and have a gross annual income of \$200 or more per tillable acre
- ▶ A designated specialty farm

Monroe County has between 35% to 49% of land in the P.A. 116 program. At the time of the County study (1991), approximately 40% of the township's total land acreage was also enrolled. Additional information on the P.A. 116 Program is provided later in this section.



## Large Tracts

Parcel size and shape have an important influence on the viability of a given area for long term agricultural production. Large parcels with regular shapes lend themselves more readily to farming than smaller parcels that have been split up for non-agricultural purposes. Larger parcels, because of their various potential uses, are also more likely to remain in active operation than smaller farms. Land located west of the Village generally contains larger tracts that, if left intact, will minimize future impacts from residential and other non-agricultural uses.

## Existing Farms

Land that is currently being farmed was the final factor selected because it demonstrates a current commitment to farming. A large percentage of the Township is actively being farmed. This information was obtained during the 1991 Master Plan update by reviewing 1990 aerial photography, and was further updated as part of the land use inventory conducted in 2000.



## Farmland Classifications

Farmland Classes were determined by mapping the criteria discussed in the Physical Conditions Analysis and as shown in the Farmland Classes Table.

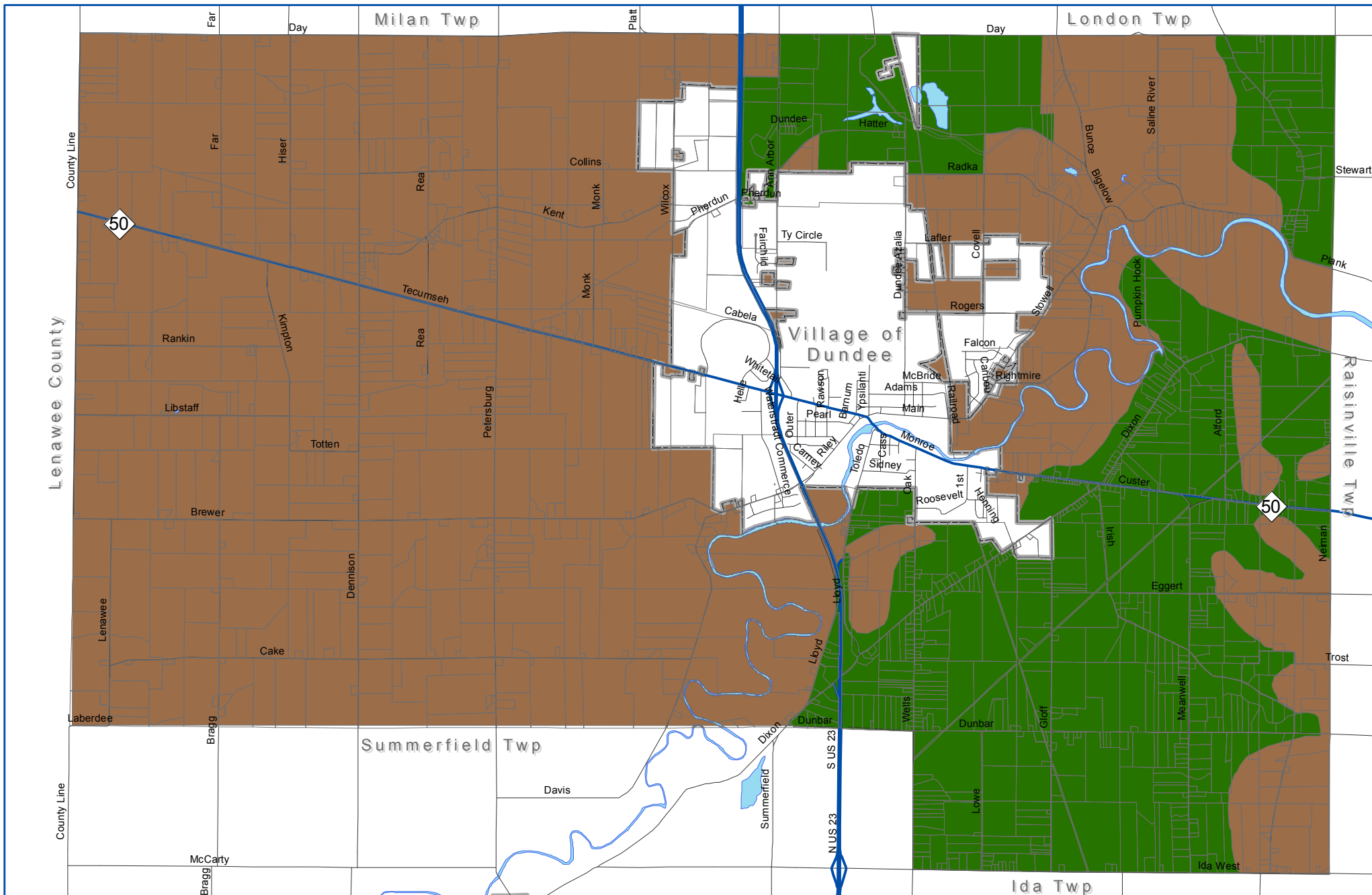
### Prime Farmland

Prime Farmland includes any Class A, B, or C, as illustrated on the Farmland Classification Map. As shown, these lands are located primarily on the west side of the Township with one large area in the northeast section. 'Prime Farmland' should be preserved for agricultural uses only.

Farmland Classes			
	Class A Farmland	Class B Farmland	Class C Farmland
<b>Physical Factors</b>			
▶ Prime Agricultural Soils	Parcels with Both types	Parcels with both types	Parcels with one type
▶ Class II Soils			
<b>Socio-Economic Factors</b>	AND		
▶ Factors -P.A. 116 Agreement	meeting at least two factors	meeting at least one factor	meeting at least two factors
▶ 36 Acre Parcel or Larger			
▶ Existing Farmland			

### Rural Reserve Farmland

This designation includes all lands not previously classified. They often consist of sandy soils, which produce abundant yields of potatoes and similar crops, or due to their small size and proximity to residential areas make ideal truck farms. Rural Reserve Farmland, although not considered a Class A, B, or C Farmland, are still valuable to the farming community and Dundee Township. However, there are instances where farmland, because of location, size or other conditions, will be better utilized for more urban uses as population or economic pressures dictate. Lands designated as 'Rural Reserve Farmland' should be retained in an agricultural state until suitable plans are prepared and adopted to permit another use. Farmland retention objectives could remain with the designated prime farmland areas, while the agricultural worth of the reserve farmland could be exercised until community growth pressures warranted change. Before any farmland is converted to other uses, a site evaluation must be undertaken to determine the agricultural value versus the proposed development value to the Dundee community.



# Farmland Classification

Dundee Township  
Monroe County, MI

Sources: MCGI, SEMCOG, Monroe County

January 2012



- Prime Farmland
- Rural Reserve Farmland



0 0.25 0.5 1  
Miles



## Agricultural Protection Policies

The Farmland Classification Map provides the general basis for Dundee Township's future land use plan. By identifying the most important farmlands, making efforts to preserve them, while directing development to the more logical and suitable areas, the Township is following the desires of the community. Protecting large tracts of active farmland while minimizing outside intrusions will help protect the environment for agriculture.

Using the Classifications above, the suggested policies to help achieve the community's vision to preserve the rural character and environment include:

- ▶ Protecting the viability of farming in the community is of the utmost concern. Farmers are encouraged to participate in preservation and protection programs at the state and federal level.
- ▶ Prime Farmland areas should be reserved for agricultural pursuits, first and foremost. Non-agricultural uses should be encouraged to locate in areas more suitable or compatible to them. Prime Farmland areas should not change use unless all other development areas have been exhausted and community opinions and development pressures demand additional development.
- ▶ Rural Reserve Farmland should also be dedicated to agricultural pursuits, however conversion to more urban uses may take place. This conversion of land use should occur in an orderly and planned manner, with only minimal development occurring at one time to reduce the unnecessary destruction of large tracts of farmland. Strong agricultural zoning will also deter the premature and costly extension of public utilities (sewer and water) and avoid urban sprawl.
- ▶ Farmers should be encouraged to employ agricultural practices which minimize soil erosion and ground and surface water pollution from sedimentation, animal wastes and chemicals.
- ▶ The Township supports efforts made by the County Cooperative Extension Service and Monroe County Soil and Water Conservation on agricultural technology and farmland preservation issues.
- ▶ Other uses, such as woodlots, wetland preservation areas, wildlife habitat and hunting preserves are appropriate within both Prime and Rural Reserve Farmland areas.

## Zoning Techniques

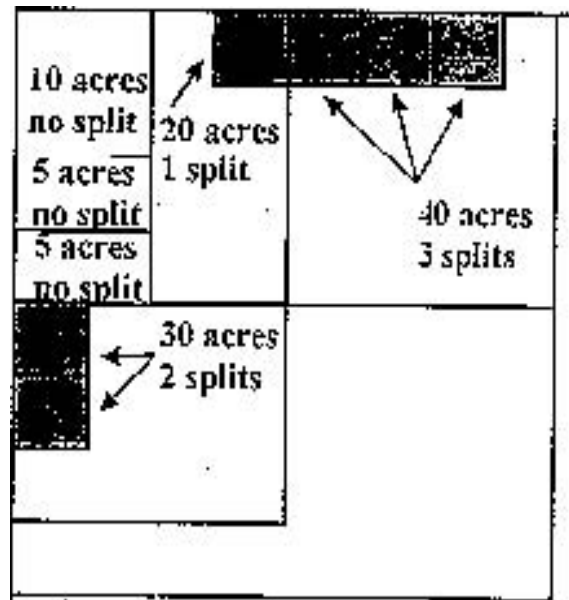
The following information summarized from various planning resources, including the Monroe County "Agricultural Component" of the *Monroe*

*County Comprehensive Plan Update*, describes regulations that may be implemented through the zoning ordinance which, in combination with other techniques, may be useful in preserving land for agricultural use. It is important to understand that these provisions do not, by themselves, preserve farming. Rather, these techniques are intended to permit larger blocks of land to be set aside for farm use.

## Exclusive Use Zoning

Exclusive use zoning, in this case agricultural, can be an effective way to protect farmland from conversion. Exclusive use zoning is most appropriate where there is limited pressure for residential development and existing large areas of prime or unique agricultural resources exist.

New non-farm residences are often regulated very strictly in an exclusive use district. Site development standards within the district would include a maximum lot area for non-farm, residential use; approval of such uses through a special land use process; and unless otherwise provided for, a large minimum lot area for a farm dwelling unit. Other provisions might include a maximum lot to depth ratio of 1:3, and large minimum lot widths and setbacks. This approach is currently applied in the Township's AG-1, Agricultural District.



## Sliding Scale Zoning

This technique limits the number of times that a parent parcel (a parcel existing on the date of ordinance adoption) can be split, based on its size, i.e., the larger the parcel the more splits that may occur, up to a maximum number established. Minimum and maximum building lot sizes can be used to encourage the location of non-farm development on less productive farmland and/or in areas where development is more concentrated to direct growth onto already fragmented land. This approach is currently applied in the Township's AG-1, Agricultural District.

## Quarter/Quarter Zoning

Quarter/quarter zoning is a density based zoning technique which is most appropriate in rural areas with large farming operations, moderate growth pressures, and where average parcel sizes generally exceed 40 acres. Quarter/quarter zoning refers to a quarter of a quarter section of land (1/16 of 640 acres, or 40 acres) where a limited number of non-farm homes are allowed for every 40 acres of land.

## Large Lot Zoning

This technique simply increases the lot size required in residential zoning districts where farming operations exist. Lot sizes are generally greater than 10 acres, depending on the objective (farmland preservation vs. rural character). In areas where farmland preservation is a focus, lot sizes of 40 to 160 acres with only one residence, is recommended. Dundee Township's AG-1 Agricultural District requires a 40 acre lot size (with sliding scale lot splits) and the AG-2 Agricultural District requires a 5 acre lot size.

## Agricultural Buffers

Balancing the need to preserve rural character, continue agricultural practices, and the desire to develop land for non-agricultural purposes can be challenging. Residential and agricultural conflicts are occurring with greater frequency in developing areas as more people are moving from urbanized to traditionally agricultural areas.

Buffers between active agricultural areas and other uses, including residential development, can help reduce the effects of land use conflicts by acting as a "no-disturb" zone between residential properties and farmland. The Township currently requires a fifty foot setback buffer between residential lots and any AG-1 or AG-2 Agricultural District. The Township could expand on the concept by restricting the use of the setback area, provided such restrictions are not overly-burdensome to the residents. For example, residents should be able to maintain the buffer as lawn area, but should not be permitted to place pools, decks, patios, etc. to further the effectiveness of the "no-disturb" zone.

Buffers are generally imposed on adjacent residential developments, rather than on farming operations because it is the residential development that is often encroaching upon the existing farming environment. Required buffers should be shown on subdivision plats, site condominium plans, planned unit development site plans, or be made a condition of land division approval. The Township may also require that buffers be described in the property deed to alert potential buyers of their requirements to maintain the buffer in perpetuity.

## Protection Techniques

### Conservation Easements

A conservation easement is the voluntary preservation of land by the property owner. Most commonly, conservation easements are placed in the care of a non-profit easement holder who is in charge of ensuring the land is not developed or mis-used in a way that will contradict the

purpose of the easement, which is to maintain land in active farm use. With conservation easements, land can remain in ownership by the original property owner, who retains their rights to use the land for farming or other activities agreed to during execution of the easement.

The easement is considered a charitable contribution for which the landowner does not receive direct income benefits from the donation of their land. The landowner benefits from the donation through federal and state income tax deduction, lower property taxes, and reduction in estate and inheritance taxes. The value of the conservation easement is the difference between the fair market value and the value of the land after restrictions have been imposed.

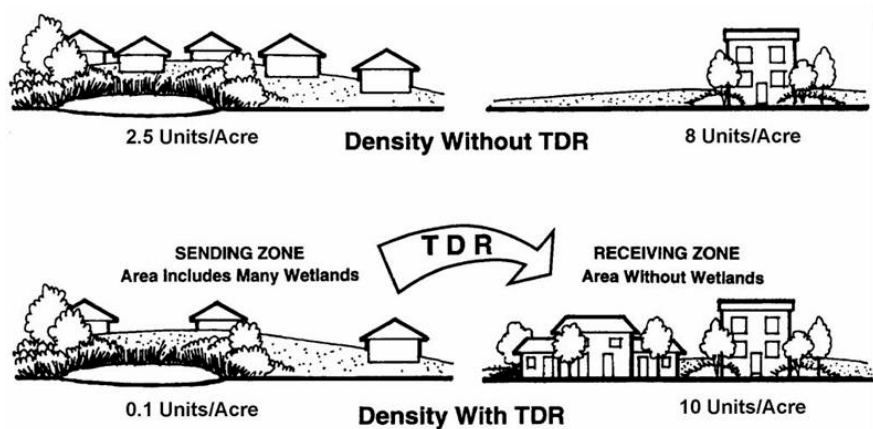
### Purchase of Development Rights (PDR)

The purchase of development rights has similar advantages as conservation easements. The landowner voluntarily sells the development rights on his property to the designated agency in exchange for not developing the property. Once a PDR is agreed upon, a conservation easement is most often placed on the property, and the landowner maintains their rights as discussed above.

A limitation to PDR programs is funding. The funds may come from private agencies like American Farmland Trust, state bond referendums, grants, donations, P.A. 116 lien fund, or an increase in other local funding sources like a special tax on building permits.

### Transfer of Development Rights (TDR)

Transfer of development rights is another voluntary preservation option that acts similarly to PDR programs, except that the development rights are not sold to a designated agency, but rather a developer seeking to increase the development yield on another site located in an area designated for growth. TDR programs therefore involve two districts: a preservation district (which in Dundee Township would most likely be the Prime Farmland areas), and a receiving district that would accommodate the development that would otherwise be built on the farmland. The receiving district usually contains provisions for increased building heights, density, or other standards to provide for the increased development yield that is created through purchase of rights elsewhere in the community. Receiving areas in Dundee Township would likely include the Medium Density Residential,



High Density Residential, or other areas with the potential to be transferred to the Village for service by public utilities.

## **P.A. 116**

The Farmland and Open Space Preservation Act, P.A. 116, was established in the 1974 farm bill, to establish a farmland and open space preservation program for the State of Michigan. It offers tax relief to farmland owners who enroll in the program for 10 years or more. In 1996, Michigan's Governor approved amendments to P.A. 116 extending the homestead tax relief to non-homestead farms in active agriculture to keep P.A. 116 a desirable program for landowners.

The program is designed to provide incentives to protect active farmland. Specialty farms and active farmland may be enrolled in the program, entitling landowners to tax credits and special assessment exemptions. However, by doing so, farmers are agreeing to maintain the farm in an undeveloped state for at least 10 years by executing an agreement with the State.

Reports show there is still a demand for P.A. 116 credits, but Legislators are still contemplating other incentives to increase use of the program, whereby farmers who have a P.A. 116 lien on their property (for those who prematurely exited the program) can pay only a portion of the lien if they sell their development rights).

There are two primary benefits for participation in a Farmland Agreement:

- ▶ **Tax Credits:** Landowners can claim a Michigan income tax credit equal to the amount the property taxes (on the land and improvements covered by the agreement) exceed 3.5 percent of the household income. For example, if the owner has an income of \$20,000 and property taxes on the farm total \$2,000, he/she would subtract \$700 (3.5 percent of \$20,000) from the \$2,000 property tax for an income tax credit of \$1,300. This tax credit is in addition to the Homestead Property Tax Credit, for which the landowner may already be qualified.
- ▶ **Special Assessments:** Land that qualifies, and is enrolled in the program, is exempt from special assessments for sanitary sewers, water, lights, or non-farm drainage, unless the assessments were imposed prior to the recording of the farmland agreement. Land exempted from special assessment will be denied use of the improvement until the portion of the special assessment directly attributable to the actual use of the improvement is paid. When the farmland agreement is terminated, the local government may require payment of the special assessment; however, the amount of the assessment cannot exceed the amount the assessment would

have been at the time of the exemption, and can not include any interest or penalty.

### **Monroe County Agricultural Land Preservation Easement Purchase Program**

It is the purpose of the Monroe County Agricultural Land Preservation Program to protect and promote the continued agricultural use of valuable agricultural lands by acquiring agricultural conservation easements which prevent the development or improvement of the land for any purpose other than agricultural production and related agricultural activities.

# NATURAL RESOURCE PLAN

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## Introduction

Dundee Township contains significant natural features that need to be considered in community planning. There is an abundance of natural features including farmland, the River Raisin, associated streams, wetlands, open fields, hedgerows, and woodlands which make an important contribution to the quality of life in the Township.

Alterations to these natural resources need to be carefully considered to minimize impact and insure mitigation. Not doing so will alter the system and possibly result in such things as increased erosion and sedimentation, decreased ground water recharge and water quality, and increased surface runoff to the River Raisin. To ensure that community development is compatible with the natural features of the Township, all new developments need to make every effort to maintain the natural systems of the environment.

The detailed description of these features is followed by an action plan that outlines strategies for the Township to implement in order to meet the overall goal of preserving natural features and the rural, natural quality of life in Dundee Township.

## Existing Conditions

### Geology

The surface geology of the Township was formed 10,000 to 12,000 years ago when glacial activity deposited rock, soil and large blocks of ice. The glacial drift is a very thick layer of soil material that has been deposited by the advance and retreat of the Wisconsin glacier during the last ice age.

Two types of bedrock are found in Dundee Township that practically divides the Township in half: the Dundee Formation in the northwest and the Detroit River Group in the southeast. The overburden of the bedrock ranges in depth from 90 feet to 20 feet.

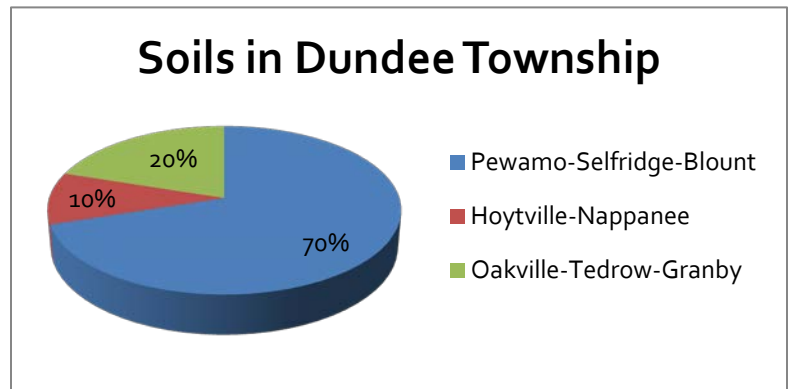
- The Dundee Formation is the most frequent type of stone found in Dundee Township. The high calcium limestone is suitable for the manufacturing of cement and lime. The thickness of this formation ranges from 0 to 117 feet.

- ▶ The Detroit River Group consists of several formations including dolomites, limestones and some chert or argillaceous. The thickness of this Detroit River group ranges from 0 to 197 feet.

## Soils

Understanding the composition of soils is important in Dundee Township for a variety of reasons. First, the location of various soil types will determine prime farmland areas, natural resources, suitable building sites and septic locations. Second, understanding soil types allows the Township to properly prevent soil erosion and plan for sedimentation control.

The soils in Dundee Township vary, but can be put into three general soil categories:



- ▶ **Pewamo-Selfridge-Blount.** 70% of the Township contains this association of soils, which are usually located in natural drainage ways and in low, flat areas. They are nearly level and poorly drained and are used for cultivated crops and pasture. These soils are usually artificially drained, otherwise ponding is likely. Wetness is the main limitation to these soils for farming. These soils have poor suitability for sanitary facilities and building site development, because wetness is a severe limitation for these purposes.
- ▶ **Oakville-Tedrow-Granby.** This association is predominant in 20% of the Township and are usually found at higher elevations, often on sandy ridges and knolls. These soil types are well drained and are usually woodlands. The rest are used mainly as farmland. The well drained and moderately well drained soils in this association have the best suitability in the County for building construction and septic tank drain fields.
- ▶ **Hoytville-Nappanee.** An estimated 10% of the Township consists of soils in the Hoytville-Nappanee association, which is used for cultivated crops and pasture. Most of the acreage has been cleared and drained. The areas that have not been drained are susceptible to ponding. Excess water is the main limitation of these soils for farming, but if drained, they are more than suitable for cultivated crops. The soils have poor suitability for sanitary facilities and buildings, with wetness as the biggest limitation.

## Topography

Slope is an important development consideration associated with topographic features. The topography of Dundee Township varies from an elevation of 680 feet above sea level to 646 feet above sea



level. While much of the Township has relatively flat topography, there are areas with rolling topography in the eastern portion of the Township along the River Raisin. Along the river's floodplain edge, there are steep banks or bluffs, often covered in vegetation. The root system of trees and vegetation helps to stabilize the soils on the hillside. Removal of natural vegetation by agricultural operations and development causes a weakening of the slope, increased surface runoff rates, eventual erosion and degradation of stream ecology.

## Groundwater

Because most of the residences in the Township rely on individual wells, water quality needs to be protected from contamination. Development can threaten groundwater quality, the severity of which depends on 1) the type of contaminants and hazardous materials used within the Township, 2) the susceptibility of groundwater to contamination due to geologic features like soil permeability, 3) the rate at which contaminants are introduced into the ecosystem, and 4) hazardous materials management practices.

Major sources of groundwater contamination are listed to the right. Leaking storage tanks, hazardous spills and landfills are currently not identified concerns in the community, so focus should be given to addressing stormwater quality, drain field locations, and agricultural management techniques.

### **Sources of Groundwater Contamination:**

- ▶ *Agricultural fertilizers and pesticides*
- ▶ *Storm water runoff*
- ▶ *Septic drainfields*
- ▶ *Landfills*
- ▶ *Spill of hazardous materials*
- ▶ *Leaking underground storage tanks*

## Wetlands

Wetlands are transitional areas between aquatic ecosystems and surrounding upland areas. They are low areas which are intermittently covered with shallow water and underlined by saturated soils. Wetlands are part of the greater hydrologic system, and as a result, are vital to the environmental quality of Dundee Township. The greatest concentrations are found along the River Raisin on the east side of the Township. Wetlands play a pivotal role in the overall health of a community, providing a variety of benefits, which are listed to the right.

## Streams and Drainageways

The River Raisin and two of its tributaries, the Saline River and Macon Creek, run through the Township. River Raisin runs east to the City of Monroe and eventually discharges into Lake Erie. The historic development of the Village of Dundee is largely based upon the presence of these waterways. The river provides drainage and water supply, fish and animal life habitat, and recreation. Associated floodplains and wetlands are also important for surface drainage, groundwater recharge and animal life habitat, so protection measures should not end at the river's edge.

### **Wetland Protection Benefits:**

- ▶ *Provides fish and animal life habitat*
- ▶ *Recharges and stabilizes groundwater supplies and reduces the dangers of flooding*
- ▶ *Improves water quality by holding water and slowly percolating it into the ground, allowing for filtration of sediments and contaminants*
- ▶ *Provides natural beauty*

Loss of upland areas to development will result in greater and faster moving stormwater runoff, thus weakening the associated wetland's or stream's ability to absorb water during heavy rains. The cumulative effect is increased peak flood stages and reduced amount of water infiltrating to ground water. Minimization of these impacts may involve protecting native vegetation, on-site storm water retention and minimizing land area impacted by development.

Development of the Township should maintain and enhance the river. Proper land management can improve the current water quality conditions of the river. Sources of pollution can be controlled through drainage and runoff controls, septic field corrections, proper treatment of sanitary wastes, land use planning, and limitation of fertilizer applications.

## Floodplains

A floodplain is land adjacent to a watercourse that is subject to flooding. The designation of floodplains and the restriction of their development is designed to protect life, health and property. They provide a variety of functions, which are listed to the right. Federal, state and local laws regulate encroachment, dredging and filling within floodplain areas.

The Township participates in the Flood Insurance Rate Program, and the Federal Emergency Management Agency (FEMA) has designated a floodplain for the River Raisin. The floodplain maps were updated in 2000 by FEMA, and show the areas within which development should be discouraged because of the adverse impact to the floodplain and stream ecology.

## Woodlands and Hedgerows

Historic settlement and farming practices have cleared most of the large woodland areas in the Township. Small stands of trees exist throughout the Township, especially in areas unsuitable for farming or development; generally in the southeast section of the Township.

Woodlands and hedgerows along property lines and roads provide the following benefits, which justify their preservation as the Township develops.

- ▶ They help moderate ground-level temperatures by providing shade in the summer and wind-breaks in the winter
- ▶ Certain tree leaves filter pollutants from the air, removing CO<sub>2</sub>, ozone, chlorine, hydrogen fluoride, sulfur dioxide and other pollutants
- ▶ They absorb nitrogen which if entered into surface water resources can acidify waters and threaten aquatic life

### ***Floodplain Functions:***

- ▶ *Storage of floodwater and reduction of peak flow through storage and friction*
- ▶ *Groundwater recharge*
- ▶ *Storage and filtration of sediment carried along the main stream and over upland areas*
- ▶ *Slows the velocity of floodwater thereby reducing erosion*
- ▶ *Supports riparian vegetation that is home to animals and birds*
- ▶ *Contributes to greenways for migration of animal and plant species*
- ▶ *Absorption of excess nutrients from water into soil and plants*

- ▶ They stabilize soils and prevent erosion
- ▶ They contribute to community character and provide visual buffers
- ▶ They provide animal habitat

## Management Strategies

This Plan consistently emphasizes the importance of the natural resource base, including agriculture. The correlation of land use types and land use densities in the Future Land Use Plan, to natural resource capability, will help promote preservation of natural amenities and minimize impact to agricultural land uses.

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.

### Low Density Residential Zoning Districts

Residential densities are primarily limited based upon the suitability of soils for on-site septic and the desire to minimize impact on significant natural features such as woodlands, stream corridors, wetlands and animal habitat. These, in combination with other factors such as existing land use patterns and transportation, determine areas of lower development density.

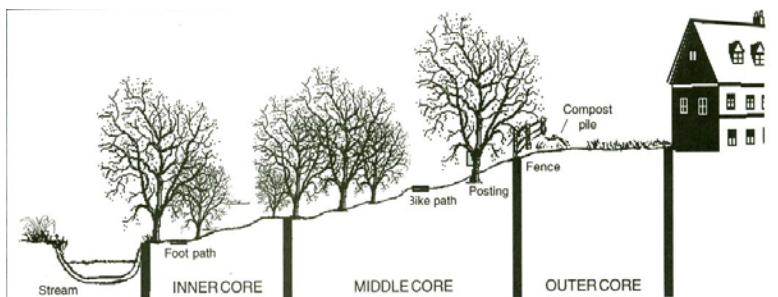
As a result, the Future Land Use Map accommodates three different residential areas of varying densities (0.5 to 5 acres per unit) and an exclusive agricultural district. The breakdown of these areas and their intent are described in more detail in the Land Use chapter.

### Natural Feature Setback

The Township may require general zoning standards for setbacks from rivers, streams and wetlands, which apply to all zoning districts. There is a strong basis for this type of requirement. Development surrounding water features, particularly rivers, 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

#### **Natural features to be preserved:**

- ▶ Floodplains
- ▶ Wetlands:
  - ▷ Regulated Wetlands
  - ▷ Non-regulated Wetlands
  - ▷ Wetland Buffers
  - ▷ Restoration of Wetlands
- ▶ Slopes Greater than 12%
- ▶ Bluffs along Waterways
- ▶ Woodlands:
  - ▷ Along Public Thoroughfares
  - ▷ Along Greenways
  - ▷ High Quality Woodlands
  - ▷ Individual Mature Trees
- ▶ Fish & Animal life Habitat
- ▶ Scenic Views and Open Space

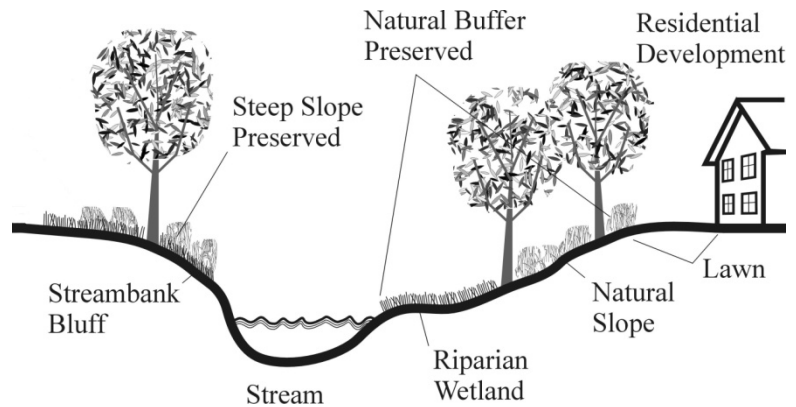


CHARACTERISTICS	INNER CORE	MIDDLE CORE	OUTER CORE
Width	25 feet, plus wetlands and critical habitats	25 to 50 feet, depending on stream order, slope, and 100 year floodplain	25 foot minimum setback to structures
Vegetative Target	Undisturbed forest. Reforest if grass	Managed forest, some clearing allowable	Forest or turf
Allowable Uses	<b>Very Restricted</b> e.g., flood control, utility right of ways, footpaths, etc.	<b>Restricted</b> e.g., some recreational uses, some stormwater practices, bike paths, tree removal by	<b>Unrestricted</b> e.g., residential uses including lawn, garden, compost, yard wastes, most stormwater practices

water feature's ability to perform its natural function.

## Streambank & Slope Protection

Steep slopes require sensitive site planning prior to development. Above the River Raisin, there are steep banks or bluffs separating the lowlands and the uplands. These generally are also heavily vegetated. Disruption of the vegetative cover on these bluff areas may cause significant erosion problems and adversely affect stream ecology. Care should be taken to insure that extensive grading is minimized and natural features such as vegetation and top soil are protected. This applies not only to bluffs that line waterways, but also other areas of the Township where there is significant topography.



Three primary means the Township can use to protect steeply sloped areas are:

- ▶ Maintain setback requirements for all waterways, or restrict activity within a distance from the stream (see also: natural feature setback)
- ▶ Cluster the development away from steep slopes
- ▶ Restrict the cutting of vegetation, or require that root systems remain to stabilize soils on steep slopes

## Floodplain Protection

The Township currently has floodplain regulations and a Flood Plain District that follows the boundaries designated by FEMA in 2000. This district limits development within the floodplain of the River Raisin. In addition to Township regulations, Federal and state laws regulate encroachment, dredging and filling within floodplain areas. Development within this area should be prohibited because of the adverse impact to the floodplain, and stream ecology and the impact that floods would have on life, and property, both at the development site and further downstream.

## Preservation of Undisturbed Wetlands

Future development in areas surrounding undisturbed wetlands can significantly impact wetland resources. Undisturbed wetlands are primarily located on the east side of the township.

During site plan review, developers and Township officials should evaluate alternative designs to minimize potential impact. This is best

done by initially considering wetland resources as constraints to development. The relative weight of these constraints must also account for other environmental and socio-economic constraints. If impact is unavoidable, then mitigation should retain or enhance the wetland values being lost.

Any wetlands greater than five acres in size or contiguous with a waterway are regulated by the Michigan Department of Environmental Quality (MDEQ) through the Goemaere-Anderson Wetland Protection Act, Public Act 203, as amended. Any activity which requires these regulated wetlands be filled or drained requires a permit from the MDEQ. Permits will generally not be granted unless the issuance is in the public interest and necessary to realize the benefits derived from the activity. If a wetland fill permit is granted, mitigation, such as creating new wetlands within the same drainage way or enhancement of existing wetlands, is required.

## Restoration of Wetlands

Prior to current wetland legislation, many wetlands were filled, drained and/or otherwise altered. This is predominant on the west side of the Township. Drains and agricultural tiles may have been installed to drain surface water from wetlands so the land could be farmed. Again, during site plan review, the Township must seek out opportunities to restore these areas and should be incorporated as part of the drainage and open space plan for the site.

Hydrologic restoration may involve closing (or slowing) man-made drainage ways. Restoration may also involve covering the soil surface with peat and re-establishing hydrophytes (wetland vegetation).

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 Dundee Township that show the historic natural land cover.

## Woodland Protection

The Township should protect woodlands through provisions in the Zoning Ordinance that restrict clearing of woodlands on a site prior to site plan approval. During site plan review, significant woodlands should be inventoried or identified and the design should attempt to minimize impact to the woodlands. As a condition of site plan



approval, trees should be protected during construction with root-zone fencing.

### **Monroe County Land Conservancy - A Local Division of SMLC**

The Monroe County Land Conservancy operates as a Local Division of Southeast Michigan Land Conservancy. The local is made up of volunteer residents dedicated to preserving the natural and rural character of Monroe County, Michigan. MCLC is neither political nor adversarial in nature. Its goal is to help land owners find positive, voluntary ways to protect their land. MCLC members care deeply about land preservation in their community and have first-hand knowledge of the local resources and opportunities. They strive to work cooperatively with all parties to ensure a balanced future for the County.

From a regional perspective, Monroe County is highly important in that it contains much of remaining significant open space in the metro Detroit region. Because of its unusual geology, Monroe County contains, literally, some of the very best farming soil in the entire world.

MCLC operates as a local committee of the Southeast Michigan Land Conservancy, a 501(c)(3) charitable organization which serves the entire seven county, Southeast Michigan region. They work with other local and regional conservation groups, such as the Land Trust Alliance and American Farmland Trust, to ensure that future generations will have access to natural resources.



# TRANSPORTATION

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## Introduction to Complete Streets

The Township's road network consists primarily of two major roads that divide the community into quadrants: U.S. 23, a statewide arterial, traverses Dundee in a north-south direction; and M-50, a regional arterial, traverses Dundee in an east-west direction.

Past transportation planning practice focused more on motorized safety, mostly in response to a need to reduce crashes and safety hazards on public roadways. Effectiveness of a roadway was based on the Level of Service (LOS) it provides to motorists, and while such an approach has helped to improve road safety and operations, it does not assess impacts to non-motorized users. Arguably, improved safety and operations within the motorized portion of the road have come at the expense of other modes, as the improvements needed to maintain adequate roadway LOS generally result in higher vehicle speeds and more continuous traffic, which is desirable for the automobile driver, but less so for the pedestrian or bicyclist. In response to this imbalance, the LOS standards of the past have been modified into multi-modal standards, or "Quality of Service" (QOS) standards that consider impacts to pedestrian, bicycle and transit users, in addition to vehicular users. These comprehensive indicators are important to ensuring comfort, safety and timely travel for all modes, without giving priority to any one mode.

This "Complete Streets" approach is catching on in Michigan, with recent legislative changes to both the Michigan Planning Enabling Act and the State Highway Trunkline Act that requires additional transportation planning for communities with road jurisdiction (which does not include Dundee Township); mandates certain action by the Michigan Department of Transportation to help plan for a multi-modal planning process; and modifies the priorities by which State funding is allocated for local road improvements. These reasons, for sake of the safety of the community's children, need of alternative travel options for elderly and those less able, and for those who desire to travel by foot or bike, all combine to suggest a modified approach to transportation may be needed so our roads and highways can be safely used by everyone who needs to get from place to place.

This section discusses transportation issues in general, considering the needs of all users, within the context of the roadway. For example, designating M-50 as a pedestrian route may not be advisable given the

high volume of traffic and potential perceptions that walking may be unsafe there.




## Transportation Impact Analysis

While much of the development within Dundee Township does not generate large volumes of traffic, commercial uses near the U.S. 23 interchange have the potential to have traffic impacts. One way to help ensure that traffic impacts are properly evaluated is to require a transportation impact study for any large scale commercial use. The study should include an evaluation of the design of the site access and expected traffic that will be generated, by travel mode (i.e. by car, by foot, by bicycle). This assessment, when compared to the standards for operations adopted by the Monroe County Road Commission, will reveal improvements needed to mitigate any potentially negative effects of the development.

Traditional studies focused on traffic impacts and what improvements are needed to retain a certain acceptable Level of Service (LOS) of traffic operations. This predominantly auto-oriented analysis has resulted in a disproportionate amount of attention paid to road systems. In response, the latest volume of the TRB *Highway Capacity Manual* expands traffic impact study requirement to require evaluation of all modes of transportation when analyzing transportation impacts of a proposed development. A transportation impact study evaluates the existing conditions for pedestrians, bicyclists and transit users in addition to vehicular users. Such studies are generally based on the following service indicators:

### Traffic Volumes

*The average daily traffic on U.S. 23 exceeds 30,000 cars a day, and between 7,400 and 7,800 cars per day traverse M-50. Other key routes in the Township include Dixon, Wells, Stowell, Bigelow, Plank and Ann Arbor Roads. The remaining roads serve more local purposes and have lower traffic counts.*

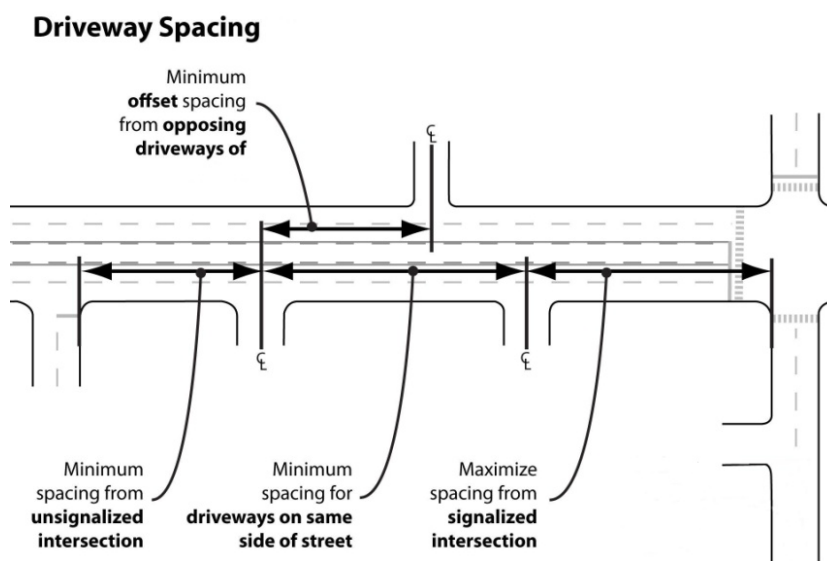
 Roadway Indicators	 Pedestrian Indicators	 Bicycle Indicators
<ul style="list-style-type: none"> <li>▶ Existing v. proposed road capacity</li> <li>▶ Financial costs to governments</li> <li>▶ Vehicle operating costs (fuel, tolls, tire wear)</li> <li>▶ Travel time (reduced congestion)</li> <li>▶ Per-mile crash risk</li> <li>▶ Project construction environmental impacts</li> </ul>	<ul style="list-style-type: none"> <li>▶ Ease of crossing the street for pedestrians (note: traffic impact mitigation should not include signal optimization that reduces pedestrian crossing time)</li> <li>▶ Presence of elements that make it inviting for pedestrians such as the presence of a sidewalk, width of sidewalk, buffers between sidewalk and motor vehicle travel lanes</li> </ul>	<ul style="list-style-type: none"> <li>▶ Ease of bicycling to/from and within a site</li> <li>▶ Presence of bike lane or paved shoulder</li> <li>▶ Motorized vehicle volume, speed and percentage of trucks</li> <li>▶ Pavement condition</li> <li>▶ Potential to improve safety and comfort with elements to buffer bicyclists from pedestrians</li> <li>▶ On-street parking</li> <li>▶ Availability of bicycle parking</li> </ul>



## Driveway/Access Management

Maintaining travel safety is a key consideration when planning a community. Safety is perhaps the most defensible purpose for zoning and other regulations. In Dundee Township, the highest number of crashes was reported along M-50/S. Custer between Toledo Street and Ida Maybee Road. This location had the 7<sup>th</sup> highest number of crashes within Monroe County, and 476<sup>th</sup> highest in the Southeast Michigan region.

Lack of control over the number and placement of driveways increases potential for traffic congestion and accidents. Measures for managing access are therefore based on the need to maintain safe travel for both motorists and pedestrians and bicyclists. Access management involves maximizing the existing street capacity and improving the corridor for transit, bicyclists, and pedestrians by reducing or limiting the number of access points (commercial driveways), carefully placing and spacing access points, and other enhancements.



All driveways, whether residential or commercial, require a permit from the County Road Commission or the Michigan Department of Transportation. In addition to these permits, the Township Planning Commission should take access management into account with any commercial or industrial site plan review, particularly along M-50. The Planning Commission should work with the County Road Commission and consider the following:

- ▶ Minimum sight distances from the access point should be maintained as required by the County Road Commission or MDOT depending on the jurisdiction. A safe sight distance can be estimated as the distance an oncoming vehicle travels in eight seconds, at the posted speed limit.
- ▶ The number of driveways allowed should be the fewest needed to provide reasonable access. Every effort should be made to share driveways and improve site-to-site connectivity. The number of driveways allowed along major roads will affect traffic flow, ease of driving, and accident potential.

- ▶ Along major roads, driveways should be properly spaced from one another and from intersections, especially signalized intersections. Spacing from driveways on the same side, as well as proper alignment or offsetting from driveways across the street should be required based on MDOT's required spacing standards.
- ▶ Proper and safe design of the driveway, including driveway width, radius and the need for acceleration/deceleration lanes. Coordination with the County or MDOT may be needed to ensure driveway design is appropriate.

## **Non-motorized Transportation**

There are no official pathways or trails in Dundee Township. The rural nature and low residential densities in the community do not demand highly planned non-motorized routes (pathways, sidewalks, etc.). However, maintaining safe mobility for those wishing to walk or bike should still be a goal for a variety of reasons. Walking and biking provides a healthier travel option, which improves community health and reduces obesity; fewer miles traveled by motorized vehicle also results in less fuel emissions; and finally, communities with well-connected non-motorized ways are more desirable places to live.

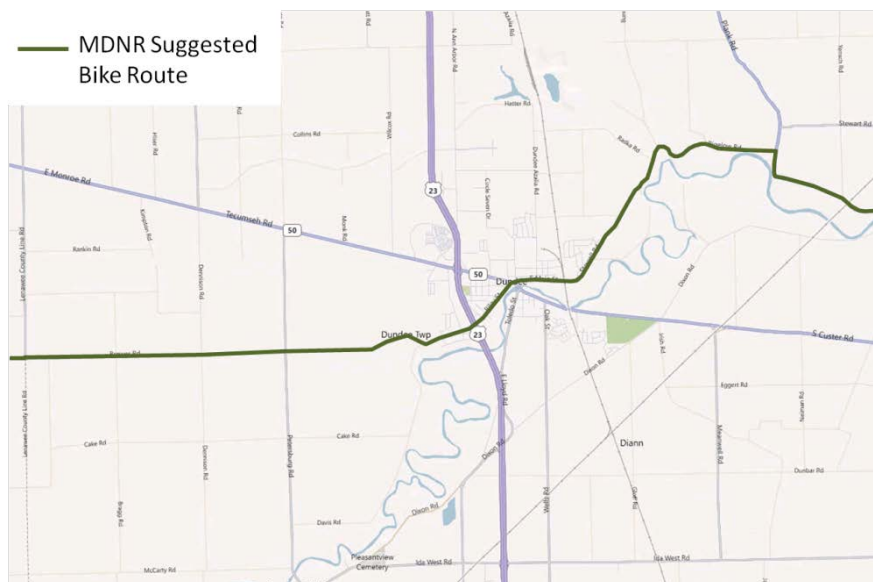
Monroe County, working with the Southeastern Michigan Council of Governments (SEMCOG) has developed a conceptual greenways plan. This plan illustrates a non-motorized system of paths and conservation corridors containing significant natural features. This document outlines goals and objectives of greenways and standards for greenway development within the County.

A greenway is a linear feature within the natural landscape that acts as a conveyance to integrate the various components of the landscape. Portions of the greenway function to tie together the cultural landscape by providing transportation routes and access between the residential population and the various recreational, civic, cultural, and natural resources. Greenways also enhance the ecological function of the natural environment by preserving natural areas and corridors which are vital to the environment. Greenways are corridors or linkages that are managed for conservation and/or recreation and which connect focal areas. These include:

- ▶ Recreational greenways featuring paths and trails of various kinds, based upon natural corridors and public rights-of-ways;
- ▶ Ecologically significant natural corridors, possibly along waterways;
- ▶ Scenic routes along public right-of-ways;
- ▶ Linkages providing for alternative modes of non-motorized transportation.

The Downriver Linked Greenways is a regional initiative of communities generally located in eastern Monroe and Wayne counties. It is an effort to connect a variety of pathway systems to facilitate better non-motorized travel within the Downriver area. While it is relevant for regional transportation purposes, the system is not located within immediate proximity of the Township. The closest portion of the system to Dundee Township is located in Monroe Township along the River Raisin. If in the future, the Township wishes to plan for pathways, long-term connectivity to this system should be a consideration.

The Michigan Department of Natural Resources (MDNR) has designated certain existing County roads throughout Monroe County as being suitable to handle bicycle traffic. These roads are generally wider and have lower traffic volumes. The routes are designated throughout the County, connecting communities as well as several counties in Michigan. The designated route (see right) through the Township follows Brewer Road to Riley, then to Main through the Village, then follows Stowell Road northeast to Bigelow to Plank Road and into Raisinville Township. This is not an official route, rather a suggestion to residents wishing to travel by foot or bike.



Map Source: Bing.com

## Railroads

There is approximately 10.5 miles of freight railroad track that pass through the Township. Two sets of tracks, utilized by Ann Arbor and Grand Trunk Western, traverse the east side of Dundee. The Ann Arbor Railroad (6.4 miles) operates in a north-south direction from Ann Arbor to Toledo, Ohio, passing through the eastern edge of the Village of Dundee. The Grand Trunk Western (4.1 miles), connecting Detroit to the northeast and Springfield, Ohio, to the southwest, is situated south of the Village and intersects the Ann Arbor line at Diann Tower (a two-story block structure located at the tracks, just south of Gloff Road).

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# COMMUNITY FACILITIES PLAN

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## Introduction

Public utilities are essential services that provide for the benefit of the general public. These services include water, electricity, gas, sewage and solid waste disposal. The future land use plan of Dundee Township will affect the distribution of these services, even though other forms of government and sometimes private and quasi-public companies are responsible for the planning and distribution of these necessary services. This section of the plan describes the services available to the residents of the Township and where they are available.

## Wastewater Treatment

Dundee Township depends entirely upon on-site, private treatment of wastewater. The Village of Dundee, located entirely within the Township is served by a sanitary sewer system, and there are currently no agreements in place for extension of sanitary sewers to the Township.

Many of the soils in Dundee are too dense and too close to the water table to support conventional septic systems. Generally, the eastern part of the Township is conducive to on-site septic systems as the soils tend to be more sandy in nature than the rest of the Township. As such, development of the Township is limited unless a shared agreement between the Township and Village is secured for wastewater treatment.

## Water Supply

Many Township residents rely on private wells for their water supply. These wells vary in depth from less than 20 feet to over 120 feet depending on the depth of the water table in the area of the well and the water quality. The shallow wells are older wells in the southeastern part of the Township. Today, Monroe County Health Department standards require wells to be at least 25 feet deep.

As with the public sewage system, the Village of Dundee is served by its own public water supply. The Village of Dundee has entered into an agreement with the City of Monroe to purchase public water. A water main has been constructed from the City of Monroe to the Village along M-50. This new water main has increased the capacity of the system to

a level sufficient to support population growth in the Village for the next 10 years.

In addition, an agreement between the Village and Township provides for the expansion of service into the Township. Residences along M-50 east of the Village and existing businesses may tap into the Village water system. In addition, the Township may establish special assessment districts to provide for the extension of public water into other areas of the Township. Property owners within 1000 feet of the Village boundaries that desire public water may transfer into the Village. It should be noted, however, that the premature extension of water services to underdeveloped areas commonly brings about development pressures and the loss of viable farmland. Extensions of services should happen only when an area is determined to be suitable for additional development.

## Fire and Police Protection

In 2009, the Township together with the Village of Dundee, launched the Mass Communication system called "Connect-CTY." The system can be used to alert residents not just of severe weather warnings and updates, but also hazardous traffic or road conditions, water main breaks, criminal or safety alerts, etc.



This service allows officials to send out emergency notifications to all residents within 60 seconds of initiating the call. Residents who sign up with the Village can receive voice messages via cell phone or land-line phone, post messages on Facebook and Twitter, and send written messages via e-mail and text messaging.



### Police Protection

Township residents are provided police protection through a contract with the Monroe County Sheriff Department. Although they are county deputies, personal service is provided to the Township through specifically assigned personal and patrol vehicles and substations located in downtown and in the Township. The Village substation provides 24-hour service to all Dundee residents.

As the population grows and more businesses develop in the Village and Township, the municipalities should re-negotiate the contract with the County to provide additional deputies and more patrol vehicles to increase the perception of safety. Additional personnel will also allow the deputies to provide better response to complaints, crimes and other related issues. Once the manpower exists, deputies should be assigned to specific neighborhoods so that residents always know who to contact, with one assigned to downtown businesses.

### ***Fire Protection***

Although the fire station is located in the Village of Dundee, fire protection is provided through the Township. The department is operated on a volunteer basis with a total of 30 fire fighters available. The department has one rescue truck and three tanker/pumper trucks.

In the future, another station house may be warranted to improve response times for Township residents. Due to physical barriers such as the river and the expressway, it is recommended that two additional areas be targeted to improve coverage in the future. This includes one in the southeast corner of the Township and one on the west side of the expressway along M-50.

## **Educational and Library Facilities**

Most children in the Township attend Dundee Community Schools. The Dundee Community School District covers over 85 square miles in the northeast side of Monroe County. The district is served by an elementary and middle school, housed in a series of connecting buildings. A bond proposal passed to fund a new high school, and a new facility was built in 2004.

Residents of Dundee seeking higher education have several institutions within a 30 minutes drive from Dundee including Cleary College, Concordia College, Monroe County Community College, Washtenaw Community College, University of Michigan, and 20 additional institutions throughout Southeast Michigan.

Dundee Township and the Village of Dundee share a branch of the Monroe County Library system, located on Main Street.

## **Parks and Open Space**

Four recreational areas are located in the Township, all of which are privately owned:

- ▶ Rod Park, equipped with ball diamonds and a natural area, located on M-50
- ▶ Dundee Golf Club, a nine-hole golf course located on M-50, east of the Village
- ▶ Wilderness Retreat, a campground/retreat area with 50 modern sites on 50.5 acres located on Meanwell Road
- ▶ Dundee Sportmans' Club shooting range in the northeast section of the Township

Additional parks located in the Village include:

- ▶ Ford West Park, located behind the storefronts on Riley Street
- ▶ Wolverine Park on Toledo Street
- ▶ Reggie's Park / Soccer Field on Strawberry Street
- ▶ West Side Park on Carney Drive

The Township should consider the River Raisin not just as a natural resource but also a recreational one. A canoe livery on the river is located just east of the Township limits off Plank Road.

If the Township wishes to purchase land to address recreational needs, it should consider locating park facilities in areas with the highest demand, or the greatest concentration of residents. These areas are generally located around and east of the Village.

If conducted, future recreation plans should be developed according to the Michigan Department of Natural Resources (MDNR) requirements for preparation of Community Recreation Plans. By doing so and obtaining the State's approval of the Recreation Plan, will qualify the Township for MDNR funding for both parkland acquisition and facility improvements. The latest emphasis by the MDNR's Trust Fund Board are facilities that provide walking and biking trails, and projects intended to improve accessibility for residents of all ages, ability and economic condition.



# IMPLEMENTATION

The following table provides a summary list of the recommendations contained in this plan and alternative implementation tools for each.

PLAN RECOMMENDATION	IMPLEMENTATION MECHANISMS
<b><i>Land Use</i></b>	
Implement future land use plan	<ul style="list-style-type: none"> <li>▶ Maintain zoning that is consistent with Future Land Use Plan</li> <li>▶ Rezone properties to the Future Land Use Plan when timing and other conditions are met, gradually over the 20 year plan time frame</li> </ul>
<b><i>Agriculture</i></b>	
Preserve prime agricultural areas	<ul style="list-style-type: none"> <li>▶ Limit non-residential development in Prime Farmland and Rural Reserve areas</li> <li>▶ Limit residential consumption and fragmentation of agricultural land through quarter-quarter zoning</li> <li>▶ Require buffers between agriculture and residential uses</li> <li>▶ Encourage preservation of agricultural land through programs such as P.A. 116, conservation easements, purchase of development rights</li> </ul>
<b><i>Natural Resources Management</i></b>	
Zoning	<ul style="list-style-type: none"> <li>▶ Maintain lower density residential and agricultural zoning districts near the River Raisin and other significant natural resources like wetlands</li> </ul>
Natural features setback	<ul style="list-style-type: none"> <li>▶ Maintain setback requirements from wetlands, creeks and river</li> <li>▶ Utilize clustering allowed by PUD to preserve wetlands as open space and provide greater setbacks from stream banks and wetlands</li> </ul>
Protect natural topography and vegetation on steeply sloped land	<ul style="list-style-type: none"> <li>▶ Utilize clustering allowed by PUD to preserve steep slopes as open space</li> <li>▶ Maintain restrictions on River Raisin floodplain</li> <li>▶ Restrict the cutting of vegetation in areas with steep slopes, especially along river and stream banks, where such vegetation is needed to prevent erosion and sedimentation of the waterways</li> </ul>
Protect quality of ground and surface water from contamination by septic disposal	<ul style="list-style-type: none"> <li>▶ Minimize residential densities in areas where septic systems are utilized</li> <li>▶ Ensure new homesites have the capability to accommodate septic and reserve fields by requiring Health Department approval as a condition of land division approval</li> <li>▶ Encourage the design of detention basins that replicate natural</li> </ul>

	wetland processes and maintain a natural character
Preserve natural vegetation	<ul style="list-style-type: none"> <li>▶ Utilize clustering allowed by PUD to preserve natural vegetation</li> <li>▶ Require natural buffer zones along public road frontages</li> </ul>
<b><i>Transportation</i></b>	
Road Paving and improvements	<ul style="list-style-type: none"> <li>▶ Coordinate with MCRC</li> <li>▶ Regulate residential densities and land division policies to minimize traffic on gravel roads</li> </ul>
Access Management	<ul style="list-style-type: none"> <li>▶ Coordinate with MDOT and MCRC to establish appropriate requirements within the Township</li> <li>▶ Incorporate appropriate access management regulations in the Zoning Ordinance</li> </ul>
Improve multi-modal accessibility	<ul style="list-style-type: none"> <li>▶ Provide dedicated millage for bike path construction</li> <li>▶ Work with MCRC to apply a “complete streets” approach to road projects</li> <li>▶ TEA 21 grants</li> <li>▶ MDNR funds for parks and pathways</li> <li>▶ Private investment and donations</li> </ul>
<b><i>Community Services</i></b>	
Continue to provide police and fire protection	<ul style="list-style-type: none"> <li>▶ Work with Village to maintain and enhance emergency services</li> <li>▶ Develop additional fire stations in Township as community grows</li> </ul>
Provide for parks and recreational facilities	<ul style="list-style-type: none"> <li>▶ Work with Monroe County, the school district and the Village to provide recreational facilities for the area</li> <li>▶ Utilize clustering allowed by PUD to preserve open space for recreation</li> <li>▶ Provide a mechanism for private investment and donations</li> <li>▶ Develop future Recreation Plans according to established guidelines published by the MDNR</li> </ul>

# COMMUNITY PROFILE

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## Introduction

This section is an overview of the regional context, history and description of existing conditions within the Township. An analysis of these issues is important in understanding how the Township has changed in the recent past, and how it is likely to evolve in the future. An appreciation of settlement, land use and demographic trends provides the framework for a wide range of policy decisions, especially with regard to future community services and housing needs.

Data contained in this report is provided by the Southeast Michigan Council of Governments (SEMCOG), which is based on the latest available U.S. Census information. At the time of this Plan update, not all of the 2010 data was reported by the Census Bureau; therefore, where not available, data was taken from the 2000 census. In Michigan, the economic recession that began in the mid 2000's explains the declines in population, income, employment and housing occupancy, among other things.

## Regional Context

Dundee Township is situated at the extreme western side of Monroe County. The Township is traversed in a north-south direction by U.S. 23, and east-west by M-50. It is bordered by Milan and London Townships to the north, Raisinville Township to the east, Ida and Summerfield Townships to the south and Ridgeway and Deerfield Townships to the west in Lenawee County. The location of Dundee Township is strategic because of its proximity to Ann Arbor, Monroe and Toledo, Ohio. The availability of land, rural atmosphere and accessibility to major employment centers are important factors in Dundee.

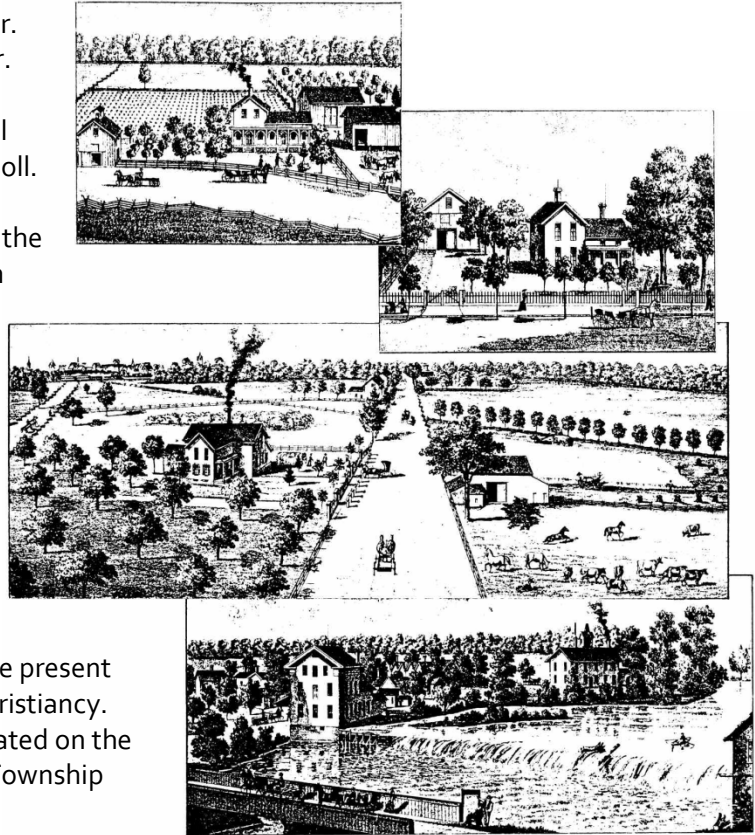
## Brief History

Monroe County was established in 1817 following the French (1673-1760) and English (1760-1815) titles to Michigan and the War of 1812. In 1825 legislation was enacted to politically organize Monroe County by dividing the territory into townships and then to incorporate them. In 1838, Dundee Township was established out of Raisinville and Summerfield Townships. The Township was named after Dundee, Scotland. The first town meeting was held at the Samuel Barber

residence on April 1, 1839. Consequently, Mr. Barber was elected Dundee's first supervisor.

The settlement of the area prior to its formal incorporation started in 1824 by Riley Ingersoll. In an effort to connect Dundee to Monroe, a road was started following the south side of the River Raisin. This road, now known as Dixon Road, eventually extended southwesterly to connect with Petersburg. In 1832, the LaPlaisance Turnpike (M-50) traversing Dundee in a westerly direction was laid out to include an initial wooden bridge over the Raisin.

The Village of Dundee, incorporated as a village in 1855, is at the heart of the Township. The mining of limestone was one of the primary industries in Dundee. The present Holcim operation was owned by Senator Christiancy. Another mine, the Dundee Quarry, was situated on the north bank of the River Raisin. Overall the Township remains primarily agricultural.



(Source: Dundee Township Land Use Plan, November 1991)

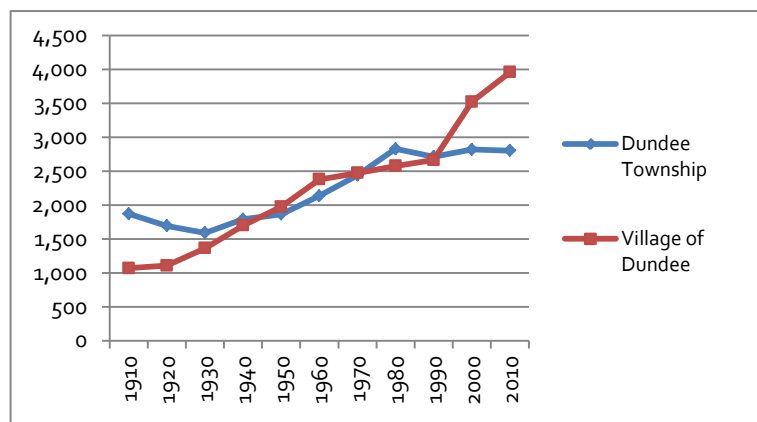
## Population Characteristics

The study of Dundee's population provides insight to settlement and development trends within the community. Based on this information, the Township can anticipate future patterns which will assist in present decision making.

### Population Trends

- ▶ Dundee Township's population has gradually increased over the past century (see Figure 1).
- ▶ Population in the township stabilized between 1980 and 2010, changing by fewer than 30 residents. The Township's largest population gain occurred between 1970 and 1980 when it increased by 381 people or 13.5%.

Figure 1: Historic Population



- ▶ When compared to other communities in the region (see Table 1), Dundee Township and Milan Township appear to be starting to lose population. While Dundee Township gained residents since 1970, it lost residents since 2000.

Table 1: Population of Select Monroe County Townships							
	1970	1980	1990	2000	2010	change 1970-2010	change 2000-2010
<b>Dundee</b>	2,439	2,828	2,712	2,819	2,802	15%	-0.6%
<b>Milan</b>	1,890	2,021	1,659	1,670	1,601	-15%	-4.1%
<b>Summerfield</b>	2,617	3,176	3,076	3,233	3,308	26%	2.3%
<b>Raisinville</b>	4,009	4,797	4,619	4,896	5,816	45%	18.8%
<b>Ida</b>	3,377	4,467	4,554	4,949	4,964	47%	0.3%

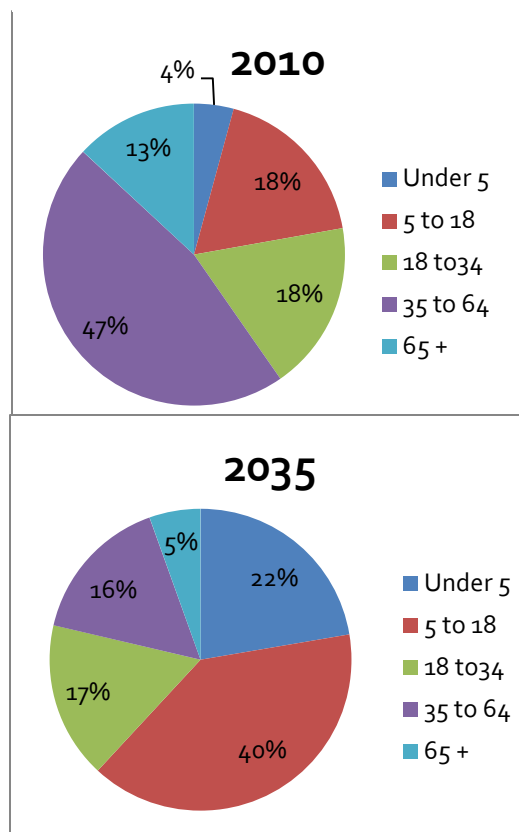
Source: SEMCOG, US Census

- ▶ Population in Dundee Township is projected to grow by 30% between 2010 and 2035.

### Age

- ▶ The largest age group is in the labor force category (ages 18 to 64), but is projected to shift to the children category (age 5 to 18) by 2035.
- ▶ Residents in Dundee Township are projected to get younger by 2035, as shown by the shrinking "65+" and "35 to 64" age groups (see Figure 2). Together, these sectors of the population dropped from 60% of the population in 2010 to 21% of the population in 2035. Residents under age 5 are expected to increase from 4% to 22%.

Figure 2: Age Breakdown for Dundee Township



## Housing Characteristics

Evaluating the number of households in a community can sometimes provide a better indicator of land use trends. Most housing decisions are made by the head of household, so trends in households are an indicator of the choices being made by the most influential resident.

### Households

- ▶ In 2010, there were 1,026 households in Dundee Township, which was 4.9% more than in 2000.
- ▶ In that same time period, the number of households with children declined by over 17%, while the number with seniors (age 65+) increased by over 44%. This indicates that more families are welcoming aging parents back into the home, and fewer households in Dundee contain "families" as defined by the census.
- ▶ By comparison, the Village of Dundee is still experiencing an increase in the number of households with children (7.3% since 2000), but the increase in the number with seniors (19.8% increase) is not occurring as quickly as in Dundee Township.

## Household Size

- ▶ The average household size in Dundee Township is almost 5% less than it was in 2000. This is likely related to the increasing "empty nester" households within the Township, but can also be attributed to national trends toward un-married co-habitation, increasing divorce rates and awareness of population growth impacts.
- ▶ Declining household sizes generally suggest that more housing may be needed to accommodate the same or smaller populations, and population densities are likely to decline over time.

## Housing Units and Tenure

- ▶ In 2010, Dundee Township had 1,107 housing units, which was 8.4% more than the number in 2000 (see Table 2: Housing Tenure of Select Communities, 2010).
- ▶ While Dundee Township has fewer owner-occupied housing units, vacancy rates are still comparable to other townships in the area.

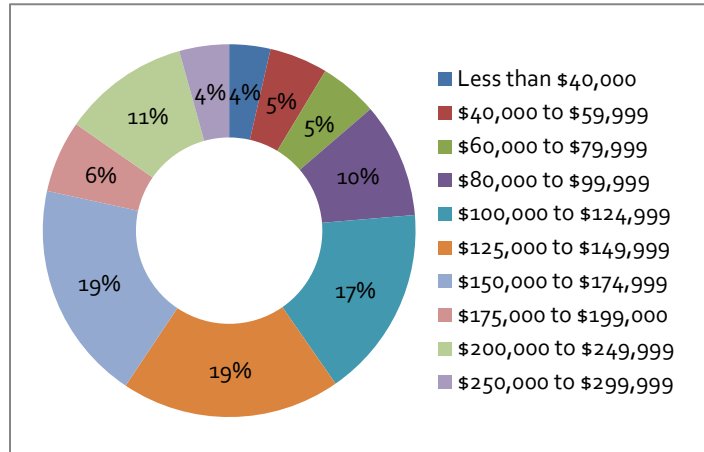
	Owner-Occupied	Renter-Occupied	Vacant
<b>Dundee Township</b>	82%	11%	7%
<b>Milan Township</b>	85%	10%	5%
<b>Summerfield Township</b>	86%	10%	4%
<b>Raisinville Township</b>	88%	6%	5%
<b>Ida Township</b>	87%	8%	5%
<b>Monroe County</b>	74%	19%	8%

Source: SEMCOG

Figure 3: Housing Values in Dundee Township, 2000

## Housing Value

- ▶ In 2000, the median housing value was \$137,700.
- ▶ More than half of homes are valued over \$100,000 in value, with no home valued over \$300,000 (see Figure 4).
- ▶ The number of homes in Dundee Township increased by 13% between 1990 and 2000, with the majority being single-family detached homes.



## Economic Characteristics

### Education

- ▶ In 2000, 82% of residents had a high school diploma (fewer than both the County and region), with 11% attaining a Bachelors Degree or higher (see Table 3).
- ▶ While educational levels in Dundee are generally lower than that in the region, residents are more educated than they were in 1990; almost 10% more residents had some college experience in 2000.

	Dundee Township	Monroe County	SE Mich
Graduate or Professional Degree	1.8%	4.7%	9.5%
Bachelor's Degree	9.5%	9.6%	15.2%
Associate Degree	9.5%	7.4%	6.6%
Some College, No Degree	23.4%	24.1%	23.3%
Graduated High School	38.2%	37.3%	28.3%
Did Not Graduate High School	17.6%	16.9%	17.1%

Source: SEMCOG

### Income

- ▶ Household incomes in the area generally grew between 1990 and 2000 (see Table 4).
- ▶ Incomes are expected to level off, or even decline in the next few years as a result the current economic recession.

	2000	% Change 1990 - 2000
Dundee Township	\$60,697	9.7
Milan Township	\$57,361	6.6
Summerfield Township	\$62,105	17.0
Raisinville Township	\$62,734	2.8
Ida Township	\$45,525	10.1
Village of Dundee	\$41,563	0.4
Monroe County	\$51,743	8.9
SE Michigan	\$49,979	7.5

Source: SEMCOG

### Employment

- ▶ In 2000, 22.4% of residents worked in the Township or Village of Dundee. Other employment centers for residents include the nearby cities of Ann Arbor (11.2%) and Monroe (8.9%).
- ▶ Most residents in 2000 traveled alone to work an average of 29.2 minutes, and zero residents reported use of public transportation.
- ▶ Although the number of manufacturing jobs in the Township grew by 60% between 2002 and 2005, SEMCOG predicts that it will drop 28% by 2035.
- ▶ Overall employment, however, has not been hit as hard. Growth between 2002 and 2005 exceeded 70%, and is only projected to fall 10% from the 2005 levels by 2035.

Figure 4: Occupations of Dundee Township Residents

