

# 8 Utilities

## 8.1 Introduction

The size and dispersed population of Madison Township make it a challenge to provide the same level of utility services as that enjoyed by more heavily populated townships and municipalities in the Northeast Ohio.

The extension of sewer and water services into a growing exurban area will spawn residential and commercial development. Sewer and water service, and the lack thereof, acts as an unofficial growth control mechanism. Without sewer and water service, the land can only support limited uses: agriculture, low density residential development, and commercial uses that generate little or no wastewater. With sewer and water facilities, higher intensity commercial and residential development can be accommodated. It is critical to ensure that utilities are not extended just for the sake of facilitating growth, but rather to ensure that development takes place in the most suitable location of the township.

The intent of the Utilities element of the Comprehensive Plan is to use urban-level utilities, or the lack of them, to shape the built environment and protect the township's semi-rural character, while still allowing it to prosper.

*Please note this is not a capital improvement plan. A capital improvement plan is a budgetary document that links the programming of capital projects, such as public utilities, to the planning goals found in this document.*

## 8.2 Previous comprehensive plans

### 1963 VILLAGE COMPREHENSIVE PLAN

The 1963 Madison Village Comprehensive Plan included a "community services" element that provided an inventory of and basic policies for water supply, sanitary sewers, storm drainage, public buildings, and private utilities (electric and natural gas distribution).

Recommendations of the 1963 plan related to utilities include:

- Connecting the village water system, at the time drawing its water supply entirely from wells, to lake intake and treatment facilities.
- Consolidating the village sewer system into a larger, then-proposed county sewer system.
- Eliminating storm water from entering the sanitary sewer system.
- Establishing a storm drainage system.

### 1994 COMPREHENSIVE PLAN

The 1994 comprehensive plan recommended extension of sewer and water lines along Bates Road, following a planned extension from North Ridge Road/US 20 south across Interstate 90; along Dock Road, and along Bennett Road south of Interstate 90. Although this was intended to serve planned industrial areas, there was no warning of the implications such an expansion would have on sprawl and farmland conversion. The plan also recommended absorption of the village sewer system into the larger county system.

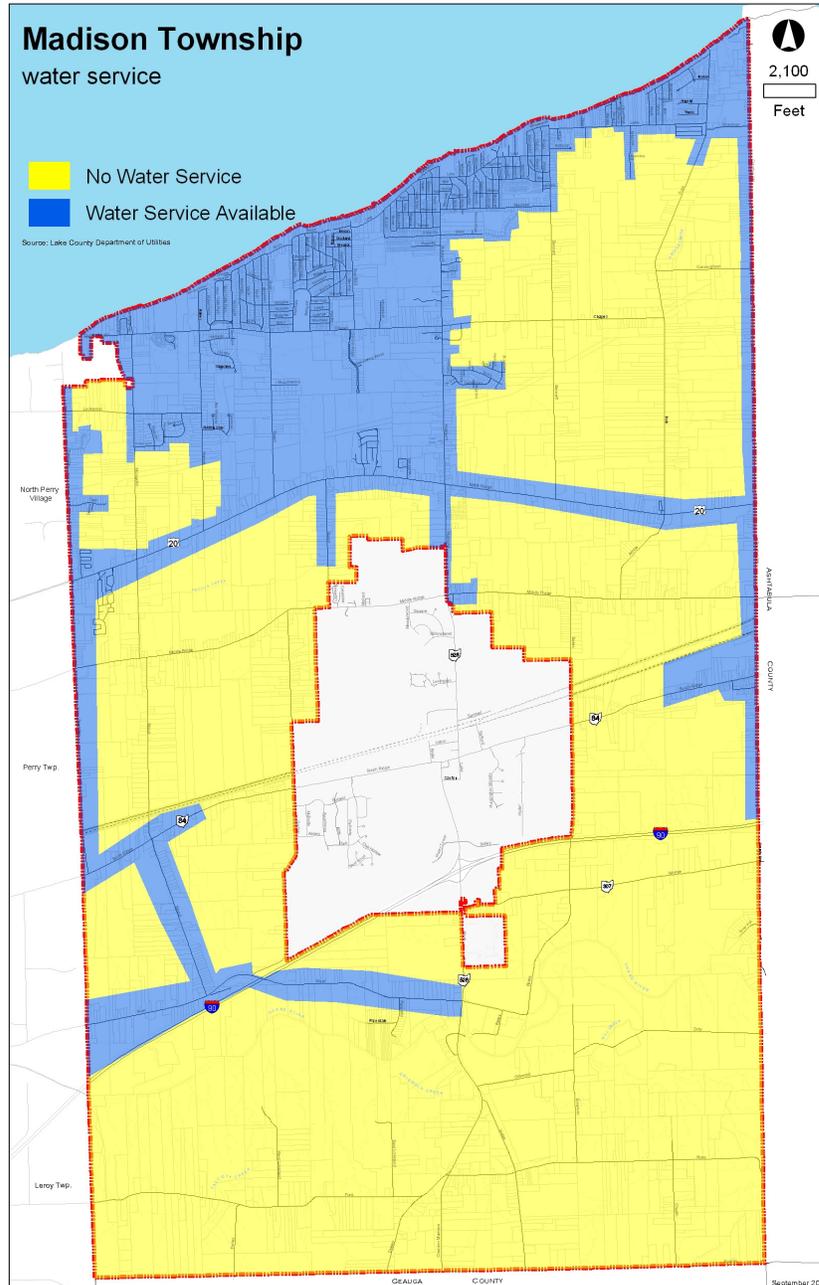
### 8.3 Water service

#### MADISON TOWNSHIP WATER SYSTEM

The Lake County Department of Utilities provides water service to much of Madison Township. The bulk of water lines are located north of North Ridge Road/US 20, providing service to most streets in North Madison and newer subdivisions in the area. Large trunk lines are located along Lake Road, Chapel Road, portions of North Ridge Road/US 20, and south along Hubbard Road to Madison Village. According to the 1990 census, 65.8.8% of housing units in the township are served by the public water system. (Source of water and sewer disposal was not included in the 2000 Census survey.)

In Question 4 of the resident survey, residents were asked to rate the quality of 20 community

services and attributes. The public water system was given a median rating of 3.36 on a scale of 1 (poor) to 5 (very good). Question 9 of the resident survey asked users to score the importance of 26 various issues that may be addressed in this plan. Among utilities-related issues, water availability scored 4.26 on a scale of 1 (not important) to 5 (most important).

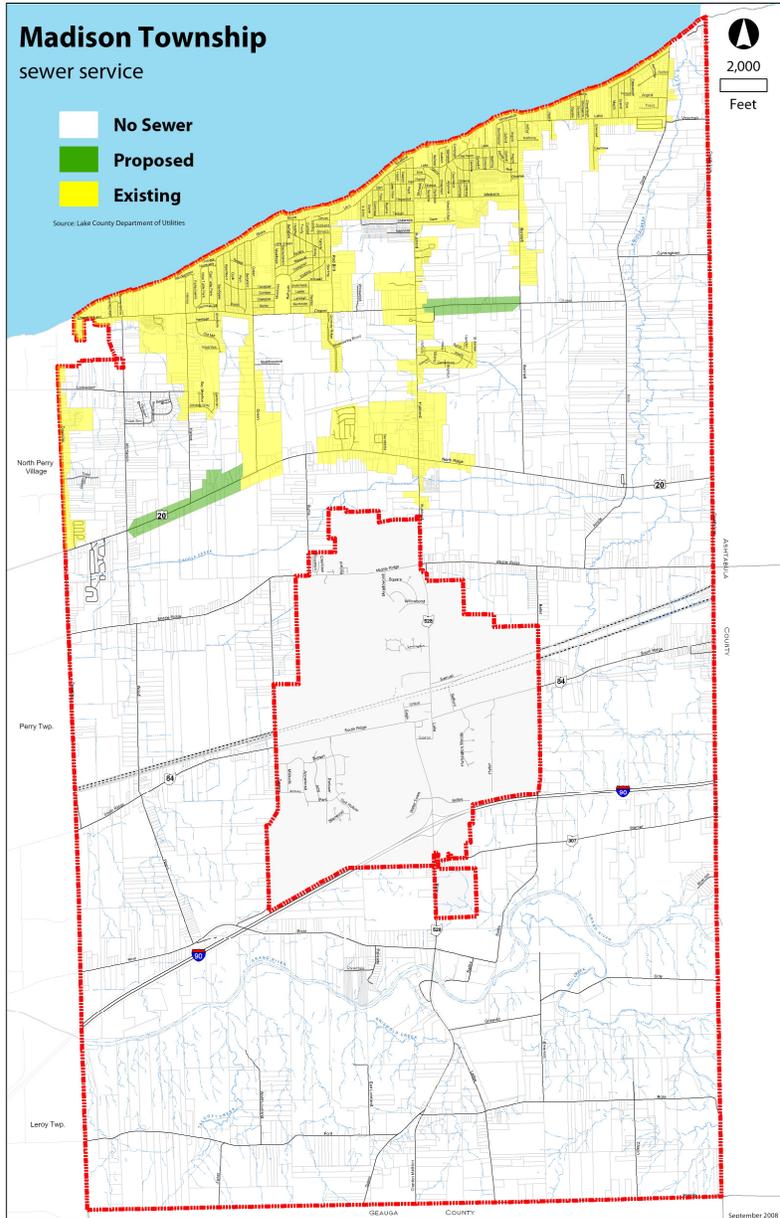


### 8.4 Sewer service

#### MADISON TOWNSHIP SEWER SYSTEM

In Question 4 of the resident survey, Madison Township residents were asked to rate the quality of 20 community services and attributes. The public sewer system was given a median rating of 2.76 on a scale of 1 (poor) to 5 (very good). Question 9 of the resident survey asked users to score the importance of 26 various issues that may be addressed in this plan. Among utilities-related issues, sewer capacity lines scored 4.04 on a scale of 1 (not important) to 5 (most important).

Sewage is processed at the Madison Wastewater Treatment Facility on Vrooman Road.



## **DEVELOPEMENT WITHOUT SEWER SERVICE**

The lack of sewer and water service in an area can keep the overall capacity for development low, and help in part to preserve an exurban and rural character many residents find important.

Unsewered commercial districts in rural and exurban communities are often dominated by vehicle-related uses, such as auto and truck dealers, tire stores, gas stations, auto repair and body shops, and heavy equipment rental. While appropriate and viable businesses mechanical commercial uses generate little wastewater, so the lack of a sewer system is not a critical factor in their site selection. However, the grouping of these uses in the area (US 20) may yield an inaccurate impression of the corridor to travelers and prospective residents.

Federal Environmental Protection Agency (EPA) regulations prohibit package plants that could otherwise serve limited commercial uses, because they could harm the sensitive watershed areas in eastern Lake County. Most commercial uses desired by town residents, such as supermarkets, mid-end retail development, and sit-down restaurants, create more wastewater than what can be handled by a septic system.

A lack of sewers also limits potential industrial uses – and the accompanying property tax revenue – to a few that generate little wastewater.

## **THE EFFECTS OF SEWER AND WATER UTILITY EXPANSION**

In drafting the US 20 Corridor Plan, utility service was considered the second most important issue by those participating in a dot sticker survey, and it was a frequent topic of discussion at corridor planning committee meetings. The extension of sewer and water services into a previously underserved area can increase the value and development capacity of a property. Sites served by sewer lines can better accommodate middle-end retail and restaurant development – uses that generate more wastewater than what can be handled by a septic system – and make them less viable locations for low-end commercial and semi-industrial uses.

However, the benefits of sewer and water service carry a price. Premature or overly aggressive expansion, though, can result in an undesirable and unsustainable development pattern that can harm the semi-rural character of the township, accelerate conversion of farmland to residential use, and promote development that conflicts with the land use goals of this plan. The availability of sewer service outside of more intensively populated areas would encourage a pattern of leapfrog and strip development, because the lack of sewer service would no longer be a barrier to developing a property; sewer service makes intensive commercial and retail development feasible at any location.

Serving as a growth control mechanism, it is important that the location of new and upgraded utility services be carefully planned and considered so it does not encourage premature or inappropriately located commercial and residential development.

## **MADISON FACILITIES PLAN AND UTILITY EXTENSION COORDINATION**

The 1998 Madison Facilities Plan, adopted by the Lake County Utilities Department, proposes an expanded network of sewer lines throughout the township, with lines following all north-south major and minor roads, and following US 20 except for a section extending about 2000' west of Bennett Road.

The Madison Facilities Plan has no timeline for sewer expansion. The plan indicates the diameter of future sewer lines, if they are to be built. According to Utilities Department policy, sewer lines are not extended or upgraded in anticipation of future development, but rather as

the demand for service warrants. Developers or property owners must request and pay for new sewer lines.

The need for better coordination between land use and sewer plans will be necessary in the future to prevent premature sewer expansion, and thus minimize leapfrog development, reduce urban sprawl, and make this comprehensive plan a more effective tool for controlling growth.

## 8.5 Electricity service

First Energy (formerly CEI) provides electrical service to the entire village.

Most electric utility lines in the township are above ground, strung on poles placed in the public right-of-way. Utility lines are buried in the newest subdivisions. Undergrounding existing utility lines is expensive; more so in low-density exurban communities. Nonetheless, the township should work towards a long-term goal of placing all utility lines underground. New electrical substations should be carefully placed, and well-designed and screened so they are visually unobtrusive.

First Energy has not announced any plans to provide broadband over power line (BPL) service in Madison Township or Lake County.

Question 9 of the resident survey asked respondents to score the importance of 26 various issues that may be addressed in this plan. Among utilities-related issues, overhead utility lines scored 3.48 on a scale of 1 (not important) to 5 (most important). Question 10 offered statements regarding the built environment and other qualities of the village, and asked respondents to rate how strongly they agreed or disagreed with them. There was general agreement with the statement "Overhead utilities should be placed underground" (+0.66, median +1, mode +0).

## 8.6 Natural gas service

Much of Madison Township, mainly areas in North Madison and newer subdivisions north of Interstate 90, is provided with natural gas service by Dominion Energy.

According to 2000 census data 1,523 housing units (58%) in Madison Township are heated with natural gas provided by a central utility; the remainder are heated with bottled gas, electricity, fuel oil and wood,

## 8.7 Telephone and ADSL broadband Internet service

Telephone service in Madison Township is provided by Windstream Communications (formerly Alltel Ohio/Western Reserve Telephone Company). DSL broadband Internet service is available in much of the township. Service availability depends on proximity to central switching offices.

Telephone lines are above ground in parts of the township where electrical lines are also above ground.

## 8.8 Cable television and cable broadband Internet service

Time Warner Cable provides cable television and high speed Internet access throughout Madison Township. Cable lines are above ground in areas of the township where electrical lines are also overhead.

## 8.9 Goals and policies

Each primary paragraph (in bold type) is a statement of a goal. The subparagraphs are policies for implementing the goal. Some goals and policies related to land use are found in other elements.

### **UT-1 Water and sewer systems will be adequate to meet the demands of the community, but not expanded in a manner that results in undesirable land use patterns or premature development.**

- UT-1-P1 Discourage unnecessary or premature expansion of sewer services. Critically review expansion and upgrade of sewer service in low priority expansion and improvement areas outside of developed areas. Consider the possible harmful effects of sewer expansion in agricultural areas. Phasing of sewer expansion shall follow the future land use pattern established in the comprehensive plan, unless sewer service will remedy groundwater contamination and other health problems.
- UT-1-P2 Work with the Lake County Utilities Department and other agencies and officials to support better coordination of sewer plans with underlying land use plans. Work with the Lake County Utilities Department when the Madison County Facilities Plan is updated.
- UT-1-P3 Maintain water service. Conduct regular inspection and routine maintenance of water lines. Ensure facilities are available to serve new development, and that water pressure and overall system reliability is not reduced with the addition of new customers.
- UT-1-P4 Encourage higher intensity infill development which takes advantage of existing sewer and water system capacity.
- UT-1-P5 Require sewage gravity collection system connections for all new development including single-family residential development in submissions, unless otherwise consistent with this comprehensive plan and its future land use map.

### **UT-2 The visual impact of wired utilities will be decreased.**

- UT-2-P1 Encourage utility companies to work with property owners and lessees when siting utility facilities.
- UT-2-P2 Require undergrounding of all wired utilities, such as electricity, telephone, and cable television service, in all new subdivisions, retail and office centers, and industrial parks.
- UT-2-P3 Require undergrounding of existing overhead utility lines when commercial development occurs on the site.
- UT-2-P4 Work towards a long-term goal of undergrounding all wired utilities in the township.
- UT-2-P5 Require visual screening for new utility substations. Work with utility companies to screen existing utility substations.

**UT-3      Telecommunications infrastructure will remain up-to-date.**

UT-3-P1      Work with telephone and cable television companies to ensure the township is provided with the same level and quality of service and technology as in urban areas.

UT-3-P2      Work to ensure high-speed Internet access is available to all residents and businesses in the township.