Chapter 4

COMMUNITY FACILITIES AND UTILITIES ELEMENT

INTRODUCTION

With 37 municipalities in Waukesha County, community facilities and utilities are important in providing high quality services to enhance the safety and welfare of County residents. The major community facilities and utilities within the county include telecommunications infrastructure, public and private utilities, school districts, libraries, cemeteries, healthcare facilities, childcare facilities, and public safety.

WAUKESHA COUNTY COMMUNITY FACILITIES AND UTILITIES STRENGTHS, CONCERNS AND WEAKNESSES

The Waukesha County Comprehensive Planning Community Facilities and Utilities Element subcommittee expressed the following strengths, concerns, and weaknesses.

Community Facilities and Utilities Strengths

- **Waukesha County operates a state of the art central communication center for police, fire, and emergency response**
  All municipalities within Waukesha County have the opportunity to become a part of the County's central communication center for dispatching emergency calls. The ultimate goal is to have all municipalities in the county participate.
- **Waukesha County has an extensive network of police and fire departments**
  Twenty-four municipal police departments, the Waukesha County Sheriffs Department, and the Wisconsin State Patrol provide law enforcement services to Waukesha County residents. Thirty fire departments operate 51 fire stations within the County.
- **As an agent for the Department of Commerce, Waukesha County has assured that private sewage systems are properly designed, sited and maintained**
  The use of private sewage systems provides for development in areas not served by municipal sewer; infill development of vacant lots; returns groundwater to the aquifer; prevents most replacement systems from using sewage holding tanks; and are a cost effective means of providing safe on-site sewage disposal.
- **Waukesha County municipalities have well planned sewer service areas**
  These sewer service areas allow for higher density development and adequate services for residential and business growth.
- **Waukesha County has a nationally recognized recycling program**
  Thirteen villages, and seven towns participate in the Waukesha County Recycling Program.
- **Waukesha County has an excellent public school system and several districts are nationally recognized for their performance**
  Twenty public school districts and 54 private schools within Waukesha County provide K-12 education to over 80,000 students. These exceptional educational institutions are a major reason why families are attracted to Waukesha County.
- **Private electric, gas, phone and cable systems are in place to meet projected county growth**
  The intermediate population growth projection for Waukesha County is 446,768 residents by Year 2035. The existing private electric, gas, phone, and cable systems are in place to meet the County's growing population.

Community Facilities and Utilities Concerns and Weaknesses

- **Businesses compete in a global environment and it is very important to make certain that all new business parks are built with the necessary infrastructure**
  In the 1970s, the biggest concern for industrial parks was adequate municipal sewer and water capacity. Today, the biggest concern for business parks is the need for adequate fiber optics and wireless infrastructure to compete in a global business environment.
- **Concern about new technology private sewage systems that are available**
  New technology is available for alternative on-site wastewater treatment systems (POWTS) to address soil conditions not suitable for in-ground conventional systems. The types of systems available demand that several Waukesha County divisions discuss and cooperate on all levels of land development.
- **New pharmaceutical products are creating concern about water quality**
  Public waste treatment and private on-site sewage systems do not have the capability to filter out pharmaceutical waste, which eventually ends up in surface and groundwaters.

UTILITIES

Telecommunications Service

In September 2006, SEWRPC adopted *"A Wireless Antenna Siting and Related Infrastructure Plan"* for Southeastern Wisconsin. This plan serves as the regional wireless plan for the southeastern Wisconsin region. The intent of the plan is to develop a high level of telecommunications service within the Region to maintain economic competitiveness and to help meet growing needs in such areas as public safety, emergency response, and home health care.

Although there are many telecommunication service providers, there are only a few basic types of communication services. These are: 1) Voice Transmission Services, including "Plain Old Telephone Service" (POTS) cellular wireless, satellite wireless, packet-based telephone networks, and Internet voice services; 2) Data Transmission Services, Including the Internet, ATM-Frame Relay, and third generation (3G) cellular wireless networks; 3) Multimedia Services, including video, imaging, streaming video, data, and voice; and 4) Broadcast Services, including AM/FM terrestrial radio, satellite radio and television, terrestrial radio and television, terrestrial television, and cable television.

Two hundred and seventy six cellular tower antenna sites exist in Waukesha County, (Map IV-1). This includes City of Oconomowoc – 10 sites; Cities of Delafield and Pewaukee – 13 sites each; City of New Berlin – 15 sites; City of Muskego – 17 sites; City of Waukesha – 26 sites; City of Brookfield – 30 sites; Villages of Big Bend, Butler, Chenequa, Oconomowoc Lake, Sussex and Wales – 1 site each; Villages of Dousman and Eagle – 2 sites each; Village of Lannon 3 sites; Villages of Hartland and North Prairie – 4 sites each; Villages of Elm Grove and Mukwonago – 5 sites each; Village of Pewaukee – 9 sites; Village of Menomonee Falls – 28 sites; Town of Eagle – 2 sites; Town of Mukwonago – 5 sites; Town of Oconomowoc – 6 sites; Towns of Brookfield, Delafield, Merton and Waukesha – 7 sites; Town of Vernon – 9 sites; Town of Genesee – 16 sites; and Town of Lisbon – 18 sites.

Wireless (WiFi, WiMAX)

The first broadband wireless standard that served as an alternative to a wired local area network (LAN) was IEEE 802.11 or wireless fidelity (WiFi). Introduced in 1997, this standard initially utilized the frequency hopping spread spectrum (FHSS) technology operating in the 2.4 gigahertz band. The frequency hopping spread spectrum technology was soon abandoned and replaced with direct sequence spread spectrums (DSSS-IEEE standards 802.11b) or orthogonal frequency division multiplanning (OFDM-IEEE standard 802.11g) for physical layer operation. The 802.11b standard became the popular WiFi for coffee shops, airports, schools, hotels, and other