TOWN OF BLACK CREEK UTILITIES MAP WILL BE INSERTED HERE

VILLAGE OF BLACK CREEK UTILITIES MAP WILL BE INSERTED HERE

# UTILITIES AND COMMUNITY FACILITIES ISSUES & CONCERNS

## REGIONALIZING SERVICES

In the wake of Wisconsin's debate over the future of shared revenue, the Town and Village understand the need to carefully consider all expenditures. This consideration certainly extends to providing utilities and community facilities for the community. To provide efficient, cost-effective services, the Town and Village will continue to consider opportunities to regionalize additional services. Regionalizing services will minimize duplication and promote cost efficiency, which may reduce the tax burden for all residents. As demonstrated in this chapter, the Town and Village use regionalized services and contracts for many of its existing utilities and community facility needs, including: police, fire, rescue, libraries, and waste management.

## STORMWATER REGULATIONS

To meet the requirements of the federal Clean Water Act, the WDNR developed the Wisconsin Pollutant Discharge Elimination System (WPDES) Stormwater Discharge Permit Program, which is regulated under the authority of ch. NR 216, Wis. Adm. Code. As part of the EPA National Pollutant Discharge Elimination System, the WPDES Stormwater Program regulates discharge of stormwater in Wisconsin from construction sites, industrial facilities, and selected municipalities. Additional information about WDNR stormwater requirement is provided in the box on the right.

In 1999, the EPA finalized its Stormwater Phase II Regulations. Neither the Town nor the Village was identified as a government entity located in an urbanized area required to obtain a stormwater discharge permit through the WDNR. However, the regulations require construction sites of 1 to 5 acres obtain a permit.

**WDNR Stormwater Regulations**
In Wisconsin, the WDNR is responsible for issuing stormwater permits. The WDNR has recently adopted a series of stormwater resolutions and requirements.

**NR151, Runoff Management**– Modified in 2002, to include five resolutions impacting performance standards for agricultural operations, wetlands and in-fill development.

**NR 152, Model Ordinances for Construction Site Erosion Control and Stormwater Management –** Modified in 2002 to reflect changes to NR 216 and NR 151.

**NR 216, Stormwater Discharge Permits** – Defines the WNDR stormwater permit requirements. Certain industrial sites are required to obtain discharge permits under this law through the WDNR.

~~A complete copy of the law is available at: http://www.legis.state.wi.us/rsb/code/nr/nr216.pdf~~

**P-8 Urban Catchment Model**~~—~~ - Available free of charge from the WDNR, this model is used to evaluate site plans for stormwater performance.

~~**For more information:**~~
~~Cheryl Bougie, Stormwater Management Specialist~~
~~(920) 448-5141~~

~~Or check the Internet at: www.dnr.state.wi.us/org/water/wm/nps/stormwater.htm~~

## DISTRIBUTED ENERGY PRODUCTION
## ~~ENERGY CRISIS – WIND, METHANE, NATURAL GAS, SOLAR & NUCLEAR RESPONSES~~

Distributed energy, also referred to as decentralized energy, is generated or stored by a variety of small, grid-connected devices known as distributed energy systems. Conventional power stations, such as coal-fired, gas and nuclear powered plants, and hydroelectric dams (among others), are centralized and often require electricity to be transmitted over long distances. By contrast, distributed systems are decentralized, modular, and utilize flexible technologies. More importantly, the energy is produced at or near the point of use.

Decentralized systems typically use renewable energy sources, including, but not limited to, small hydro, biomass, biogas, solar power, wind power, geothermal power and increasingly play an important role for the electric power distribution system. A grid-connected device for electricity storage can also be classified as a decentralized system.

~~The recent blackouts and brownouts in California and the east coast bring to light the energy crisis America is facing. This problem will not fade away and will require every city, village and town to address energy needs in a way that is both cost effective and efficient. If and when the Town or Village receives applications to construct or install the technologies described below, the Town and Village should consult with special experts to ensure that the application of these technologies will not jeopardize public health, safety and welfare. All reasonable costs and expenses associated with such consultations shall be borne by the applicant. It is anticipated that state and federal regulations will play a significant role in the location, regulations, and operation of these facilities.~~

## Wind Power~~.~~

WE Energies Wind Turbines, ~~Wind Turbines~~
Fond du Lac County, WI

Wind power has great potential as an alternative energy source. Unlike fossil fuel dependent technologies, wind power does not pollute the environment. One of the nearest successful examples of wind power in Wisconsin is found along Highway 41 south of Fond du Lac. Here, WE Energies has two low-speed wind turbines operating. The turbines began operation June 14, 1999.

Depending on wind speeds, each turbine is designed to produce a maximum flow of 660 kilowatts of electricity, enough electricity to supply about 300 homes with energy. During the course of a year, the wind turbines will generate approximately 3,450 megawatt-hours of electricity. If that power were produced using conventional fossil fuels, there would be 1,956 tons of carbon dioxide emissions; the equivalent of 260 people driving sport utility vehicles for a year.

There are proponents and opponents in Black Creek to the use of wind power. If this technology were to be seriously pursued, local officials must pay careful attention to the siting and visual impact on the community. Moreover, migratory bird patterns should also be considered before placing a windmill in Black Creek. Standards restricting location, height, noise and other issues with respect to the turbines should be included as conditions to any approval to minimize potential impacts on neighboring property owners. To make an educated decision, the Town and Village will require studies for any proposed wind tower site to document how the proposed site was identified, alternative sites considered, and the best sites in the community to locate such a technology. These studies will be required before any application can be approved.

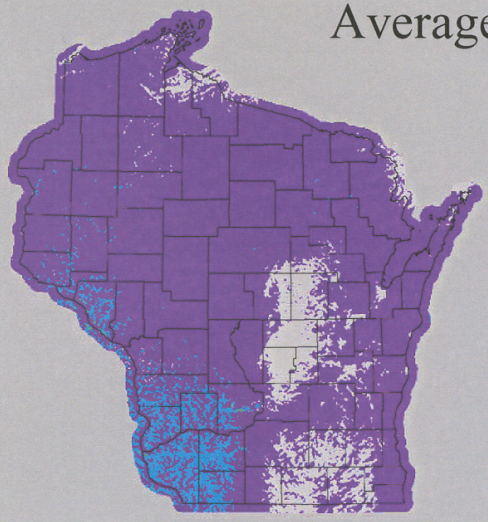
The illustration provided on the next page illustrates average annual wind speeds across Wisconsin. More specific information based on individual site assessments would be required for any application in Black Creek.

## Methane~~.~~

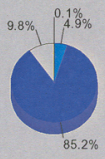
Given the importance of farming, Black Creek has some energy generating potential opportunities it can consider. Methane extracting technologies used to generate electricity, could not only provide energy to residents, but also serve as a revenue source for property owners (or possibly the Town) through the sale of excess energy.

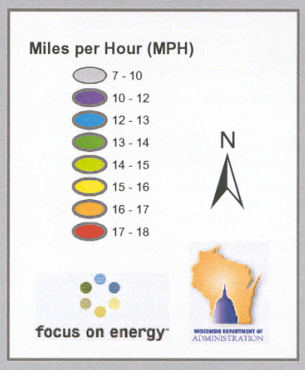
Methane based energy is a renewable energy source that may become more prevalent in the future. The amount of energy generated from methane is comparable to the amount of energy generated by wind turbines. Currently, a state mandate requires that power companies generate a small portion of their

# Average Annual Wind Speeds



**30 meters**



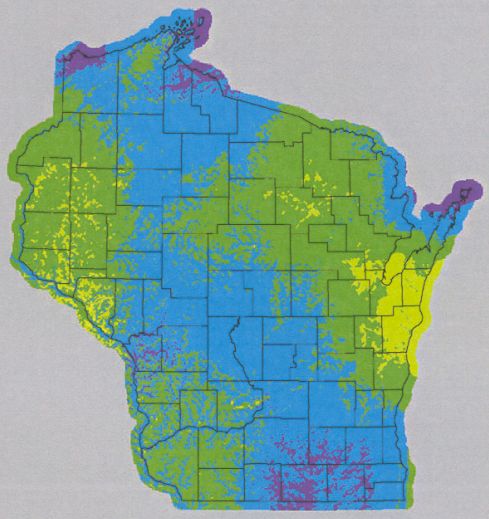

Average annual wind speeds depicted in these maps were calculated in February of 2003 using WindMap software. The State of Wisconsin Division of Energy was responsible for developing these maps.

Many factors help determine the wind resource in Wisconsin. Major factors include elevation, land cover, wind speed and wind direction. Wind data can come from a number of sources. Currently, the main source for wind data derives from tall tower data in Wisconsin collected through the Wisconsin Wind Resource Assessment Program. Other sources include tall tower data from Minnesota and data from navigation structures on Lake Superior and Lake Michigan.

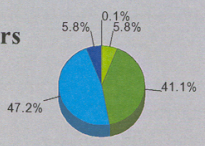
Use these maps as a guide or reference. Site assessment is always necessary for identifying sites with good wind resources.

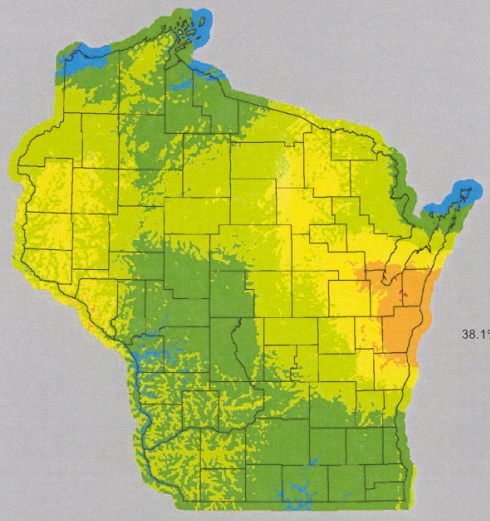
*Montfort Wind Farm*

For more information regarding wind power, please visit www.focusonenergy.com or www.doa.state.wi.us. Copies of this map can be obtained through the Focus on Energy or Department of Administration Web site.

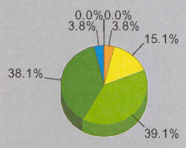


**60 meters**

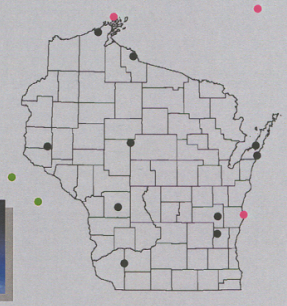


**100 meters**




**Wind Monitoring Sites**



*Anemometer*

electricity from renewable sources. As methane technologies improve, energy companies foresee it as a viable supplementary energy source. The Theuinis Farm, a 1,800 head dairy farm located just north of the Village of Wrightstown in Brown County, has recently begun the operation of a manure digester that makes use of the methane contained in cow manure for energy. Similar opportunities may arise in Black Creek, particularly if larger CAFOs are approved, or perhaps, if a facility is retrofitted at the wastewater treatment plant. The use of this technology (and approval of any CAFO) would require local, county and state approvals.

~~Natural Gas Peaking Plants[6] Electric power demand in northeast Wisconsin has significantly increased over the past decade. In a number of incidents since 1997, various residential and commercial customers have been threatened with blackouts and/or brownouts during peak use periods (usually summer periods). This problem has also been compounded by routine power plant maintenance and unforeseen plant shutdowns. In the fall of 1997, the Public Service Commission determined that there was need to add additional electric power generation in the state by June 1, 2001. WE Energies was ordered to supply 250 megawatts (MW) of power of the projected 550 MW need. The Electric Power Reliability Act (1997 Wisconsin Act 204) supported the PSC plan and provided a schedule for implementation.~~

~~In order to comply with this order, WE Energies has been entering into contracts with other energy providers who have constructed natural gas-fired peaking energy facilities. In addition to traditional location requirements (zoning, noise, etc.) two specific questions must be addressed before a plant can be located:~~

- ~~First, will the natural gas supply be plentiful enough to accommodate the needs of existing homes and businesses in addition to a new power plant?~~
- ~~And second, can the cooling needs of the power plant be supplied while not adversely affecting groundwater supplies?~~

~~Most recently, Fox Energy Company LLC (Fox Energy) decided to build a new baseload natural gas-fired combined cycle power plant with 530 MW of nominal capacity and 105 MW of additional peaking capacity in the Town of Kaukauna. The company states that the facility is intended to provide competitively priced electricity to Wisconsin and the Midwest region.~~

~~The proposed plant has an anticipated operational life span of at least 30 years. Actual operations would depend on market conditions and the market price for natural gas. The entire facility is expected to occupy approximately 30 acres.~~

~~The ANR Pipeline Company (ANR) would transport the natural gas by existing interstate natural gas transmission pipelines (including those in Black Creek) and build a new metering station to accommodate the Fox Energy facility. From this metering station, Fox Energy would construct, own and operate its own pipeline and related facilities such as heating, odorizing, and overpressure protecting devices. The gas transportation and supply contracts for the proposed project are not yet finalized. Fox Energy is also considering buying wastewater from the Heart of the Valley Treatment Plant to meet the water supply and wastewater discharge needs for the plant.~~

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~~[6] Much of the information used to develop this section was obtained from a Fox Energy Generation Project DRAFT EIS. The DRAFT EIS is available on-line at ***www.psc.wi.gov***.~~

~~Given this new facility, it is unlikely that a second facility will be built in the vicinity during the life of this plan. If a new facility were proposed, local, county, regional and state approvals are necessary.~~

~~Solar Energy. Solar energy is used by homeowners across the country as a way to supplement their energy needs. Given technology limitations, Wisconsin's global position, days of sunlight, temperature extremes and other challenges, solar energy is not anticipated to be the primary means of providing energy locally during the life of this plan. Nevertheless, solar energy opportunities are still being explored. For example, Wisconsin's energy providers have been integrating solar technologies in schools across the state to decrease energy costs and educate students about solar energy opportunities. In 1993, Wisconsin Public Service installed a 12-kilowatt solar power plant at its Green Bay service center capable of generating enough electricity for approximately three homes.~~

~~Nuclear Power. Vice-President Dick Cheney and U.S. Energy Secretary Spencer Abraham have both been quoted as saying that the United States will need to build more than 200 energy plants to sustain current energy demands. Nuclear power plants are being considered as a clean way to generate electricity in mass quantities. Although nuclear power technologies do certainly present risk, with such a severe energy crisis being predicted, they also present a viable solution.~~

~~Currently, a number of the country's nuclear plants line the shores of Lake Michigan and the other Great Lakes. These sites offer cooling waters for the nuclear power generation process. There are no plans to develop a nuclear power facility in Black Creek. Moreover, given the fact that the Town and Village do not have necessary cooling waters it is not at all likely that a facility would be built.~~

## Personal Energy Systems

As energy costs have risen during the past decade, more Americans are utilizing personal energy systems to reduce costs associated with electricity, heating, and cooling. In addition, state and federal tax incentives have reduced the total costs of these systems making them available to a greater percentage of users. Personal energy systems include photovoltaic solar, solar thermal, small wind, geothermal, and wood-fired boilers, among others.

The Wisconsin Solar and Wind Access Law (66.0401, State Stats.), defines how local governments are permitted to regulate solar and wind energy systems. These laws cover zoning restrictions by local governments, private land use restrictions, and system owner rights to unobstructed access to resources. The state's original laws, enacted in 1982, have subsequently been amended and expanded numerous times. Under the law, counties, towns, villages, and cities may not place any restriction on the installation or use of solar or wind energy systems unless the restriction:

- Serves to preserve or protect public health or safety.
- Does not significantly increase the cost of the system or decrease it's efficiency.

- Allows for an alternative system of comparable cost and efficiency.

The law effectively prohibits unreasonable public land use controls covering solar and wind energy systems by defining a fairly narrow set of "reasonable" conditions. The law subsequently allows for a local permitting procedure for guaranteeing unobstructed access to wind or solar resources. A permit will not be granted if obstruction already exists or if the construction of such an obstruction is already well into the planning stages.

## INFRASTRUCTURE TO SUPPORT LOCAL GROWTH

Reliable capacity with respect to water, sewer, natural gas and ~~electricity~~electricity services is critical if growth is to be possible. Many of these services are reaching their capacity based on current infrastructure today. To address this issue, this plan recommends:

- Capacity studies be completed with respect to sewer and water service. These studies may be completed in coordination with the ECWPRC.
- Any recommendations from those studies should become part of a Village Capital Improvement Plan.
- Coordination with private providers (e.g. WE Energies, ANR natural gas and telephone service companies) to share anticipated growth and needs for service upgrades to support growth based on the recommendations in this plan.

## WI-FI

A community that lacks adequate high-speed internet access will find itself at a competitive disadvantage in the economic development arena. One means of helping the Town and Village to better compete in a digitally based world is implementing Wi-Fi zones, or individual *hot spots*, within designated areas of the communities. Wi-Fi is a wireless networking technology that uses radio waves to provide wireless high-speed Internet and network connections. These zones allow free internet access to residents and visitors alike. Within publicly owned spaces such as parks, community centers, municipal buildings, and the like the cost of providing such a service is typically borne by the local government. Elsewhere, public-private partnerships work best, with the local government often funding the costs associated with equipment and installation while private businesses manage the ongoing cost of the internet connection.

The areas best suited to such hot spots would include the Black Creek Town Hall, the Village of Black Creek Public Library and Community Center, and the entirety of the Village's downtown.

## UTILITIES AND COMMUNITY FACILITIES FUNDING OPTIONS

Other governments and agencies (i.e. county and school district) provide many of the utilities and community facilities serving the Town and Village. As such, they are funded through their general budgets, tax revenues and referendums. The Town and Village are proud of the quality services they provide locally. The Village especially is proud of its "big city services." However, the Village also understands the financial commitments and challenges to maintain these amenities.

The Town and Village are constantly seeking opportunities to finance needed utilities and community facilities. There are numerous grant and loan programs that the town may seek to

help finance needed improvements. These programs are available through the State of Wisconsin and the U.S. Federal Government. What follows is a description of some of the major opportunities available to the Town and Village.

### Water and Wastewater Grant and Loan Program

The USDA Rural Development (Rural Utility Service) has a water and wastewater grant and loan program to assist cities, villages, tribes, sanitary districts, and towns in rural areas with a population up to 10,000. The program provides loans and grants to construct, improve, or modify municipal drinking water and wastewater systems, storm sewers, and solid waste disposal facilities.

### Wisconsin Community Development Block Grant Program

The Wisconsin Department of Commerce administers the Wisconsin Community Development Block Grant (CDBG) Program to provide cities, villages and towns with a population of less than 50,000 and all counties except Milwaukee, Dane and Waukesha to obtain matching grants for the installation, upgrade or expansion of municipal drinking water and wastewater systems. Successful applications are based on a distress score, documentation of need, ability to repay, matching fund availability and project readiness. CDBG funds are also available to communities seeking to improve municipal fire protection services.

### State Trust Fund Loan Program

The Board of Commissioners of Public Lands provides this loan program with terms of up to 20 years and deeply discounted interest rates. Loans may be used for a variety of purposes including: road improvements, community centers/halls, trail development, and property acquisition. The funds available fluctuate annually. The current annual loan limit is $3,000,000.

### Rural Development Community Facility Grants

The USDA Rural Development also offers grants to communities seeking to build or improve their community buildings (i.e. halls, libraries, community center, and fire departments). These grants are awarded to communities with a population up to 10,000 based on a competitive application process. The Village may want to consider these funds when remodeling or expanding facilities.

### Fire Administration Grants

The Federal Emergency Management Administration (FEMA) offers over $100,000,000 in annual grant awards to fire departments in six specific areas: training, fitness programs, vehicles, firefighting equipment, and Fire Prevention Programs. Applicants from communities, which serve a population of less than 50,000, must provide a 10% match.

### State Stewardship Fund

The Stewardship Fund is the State of Wisconsin's land acquisition program for public outdoor recreation and habitat protection. Administered by the Department of Natural Resources, the fund makes millions of dollars a year available to buy land for parks, trails, habitat areas, hunting grounds and local parks and for site improvements, like trail building and campgrounds.

## LOCAL FUNDING OPPORTUNITIES

### Capital Improvement Program

The Town of Black Creek uses a Capital Improvements Program (CIP) to anticipate future expenses and plan accordingly. A CIP is a five to six year short-range plan with updates occurring annually. A CIP outlines a community's capital item needs and purchase plans, including:

- Park acquisition and improvements.
- Public buildings improvements and maintenance.
- Emergency vehicle purchase and replacement.
- Streets.

Capital items are generally defined as those items that are expensive (cost $5,000 or more) and will last at least 3-5 years. The CIP also includes improvement projects required for the community's future and the appropriate timeline and funding to be followed to implement the improvements.

The general steps involved in developing and maintaining a CIP include:

1. Identifying desired capital items. Items should be categorized by type (i.e. road, fire, water, sewer, etc.).
2. Estimating the cost and means of financing each capital expenditure.
3. Comparing the desired expenditures to the budget to determine annual spending priorities.

This process helps to ensure that improvements are made in a logical order and do not surprise local officials or taxpayers. Moreover, a CIP helps a community focus on community needs and goals and allows a community to establish rational priorities.

The Village of Black Creek may want to follow the model set by the Town to establish its own CIP. A CIP is as an important planning tool for implementation of this Smart Growth Comprehensive Plan, as well as other community objectives. The Town will continue to use its CIP approach to plan for future expenditures, thereby linking planning to the annual budgetary process. In the future, the Village should consider doing the same.

### Utility Districts

Utility districts provide a variety of public services and improvements including roads, sewers, stormwater, electricity and water. Utility districts establish a "district fund" to finance district improvements. These funds are obtained through taxation of property within the district. Service costs are covered through direct billings. The sanitary district is an example of a successful

utility in the Village. The creation of additional utility districts is another option available to fund needed improvements.

## ~~Coordination with Other Comprehensive Plan Elements~~

~~Utilities and community facilities can dictate future planning for a community if capacity, location, and services are not adequate to support development. Therefore, it is important to inventory existing utilities and community facilities and understand how utilities and community facilities will be provided over the planning period. Furthermore, utilities and community facilities have a direct impact on the other elements of the comprehensive plan. In particular, the Housing, Economic Development, Land Use, and Intergovernmental Cooperation Elements are most directly impacted by utilities and community facilities.~~

### ~~Housing~~

~~Improvements such as roads, sewer, water, parks, recreational facilities and schools all need to be coordinated with the housing decisions and vice versa. The best method to coordinate improvements is to follow the land use pattern presented on the *Future Land Use Maps* as closely as possible and plan for future improvements in a Capital Improvement Plan and Budget. This approach will greatly enhance the efficiency of capital improvements expenditures.~~

### ~~Land Use Element~~

~~Land use dictates the need for utilities and community facilities. Inversely, the availability of utilities and community facilities can dictate where development can occur. The *Future Land Use Maps* were developed after careful consideration of where utilities and community facilities are now available, or will be available, within the planning period.~~

### ~~Intergovernmental Cooperation~~

~~As is obvious from this chapter, utilities and community facilities are not provided solely by the Town and Village. Utilities and community facilities that serve the area are provided by Outagamie County, private companies and others. It is important that utilities and community facilities continue to effectively serve the community. Therefore, continued cooperation is essential to ensure that development is compatible with local utility and community facility capacities. Goals and objectives included in this chapter, as well as the Intergovernmental Cooperation Element, support continued coordination to efficiently provide needed utilities and community facilities.~~

## Utilities & Community Facilities Goals, Objectives & Policies

It is the goal of the Town and Village that all future utilities and community facilities needs will be met through the year 203~~2~~5 (and beyond). Though many of these facilities will be located outside of the community limits, they will be easily accessible in nearby cities and villages. The services provided will also meet the special needs of the elderly and youth populations. The Town and Village will support the continued efforts of the school districts, Outagamie County, and private companies, which provide community facilities and utilities that can be used by residents.

The Utilities and Community Facilities goals, objectives and policies provided in Chapter 12: Implementation are related to actions that the Town and Village can control. Neighboring communities, private utilities and Outagamie County will establish their own objectives and priorities for the future. The Town and Village will work, in accordance with the Intergovernmental Cooperation Element of ~~the~~ Wisconsin's Comprehensive Planning Law ~~"Smart Growth" Law~~, with neighboring communities and school districts to ensure that adequate community and utilities facilities are available to serve the area.