

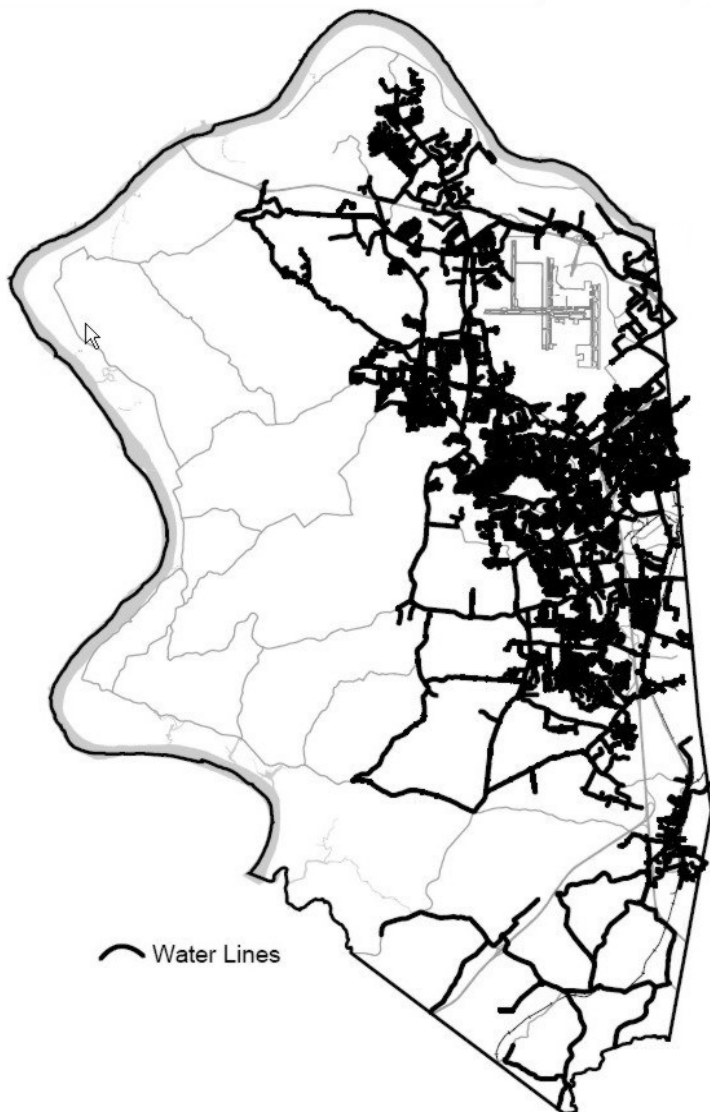
# PUBLIC FACILITIES

This Element discusses the public facilities and services within unincorporated Boone County and the Cities of Florence, Union, and Walton. Water distribution, sanitary sewage collection and treatment, gas and electric supply, municipal/public services, education, health care, and public communications are the services discussed. This element presents current data and provides insight into future expansion of these services. Several conclusions are also presented as to the various facility impacts on the future land use pattern.

## WATER DISTRIBUTION

Within the geographic areas of the three Cities and the unincorporated County, there are seven different public water distribution systems. These current systems are the Boone County, City of Florence, Boone-Florence, City of Walton, Bullock Pen, Gallatin County, and Northern Kentucky districts. The Boone-Florence District exists primarily to convey water from the City of Cincinnati District to Boone County and the City of Florence. The major service lines of all the systems are depicted on **Figure 10.1**. Public water service should be correlated between these districts to use common mains and avoid duplication of services. If it makes sense from an efficiency standpoint to serve areas across political boundaries then districts should be encouraged to do so. As shown on this map, broad areas of the east and northeastern parts of the county are currently served by public water. The remainder of the county is currently dependent on cisterns or occasional wells.

**Figure 10.1 - Water Lines**



### **Boone-Florence Water Commission**

This Commission was formed in order to deliver a supply of water to the Boone District and the Florence District within Boone County. It has contracted with Cincinnati Water Works for a supply of 30 million gallons per day. During 2002 and 2003, major facilities were constructed, including a transmission main under the Ohio River and pumping station near Anderson Ferry, several large transmission mains in the eastern and northern portions of Boone County, and a 2 million gallon storage tank next to Ryle High School near Union. The Commission also maintains most of the water towers within the county. There is future potential for another storage facility in the U.S. 25 corridor, further south in the county. As a result of the formation of this Commission, the Boone County and Florence Districts no longer obtain their water from the Northern Kentucky Water District.

### **Florence District**

The City of Florence provides treated water service to all areas within the corporate limits of Florence and some land areas adjacent to the City. The Boone-Florence Water District began to deliver water to the City of Florence in late 2003, thereby alleviating supply limitations that were becoming a problem with the amount of new development.

Current storage capacity in the Florence system is 3.5 million gallons with three existing water towers. Average daily water usage within the system is approximately 3.5 million gallons. Since 1995, the City has concentrated on creating loops in water service areas to improve pressure and service. Several annexations by residential developers in the

U.S. 42 corridor, west of Florence, have extended water service in that area, but have not yet required major main extensions.

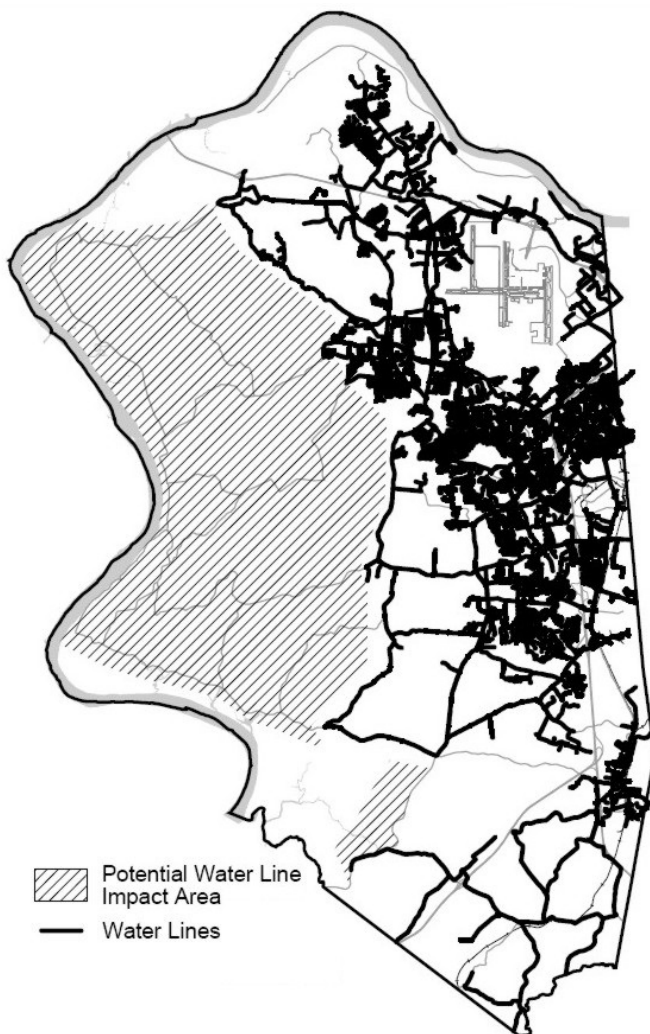
### Boone County District

The Boone County Water District provides water service to areas contiguous to the City of Florence, the Hebron and Bullittsville area, the Burlington area, the City of Union and surroundings, and the area southward from Florence to Richwood. This District also currently obtains all of its water from the Boone-Florence Water District, which in turn contracts with Cincinnati Water Works via a transmission main under the Ohio River. This main went into service in late 2003 and eliminated supply problems that were encountered during recent summers.

Current storage capacity within the County system is five million gallons in water towers and tanks owned by the Boone-Florence Water District and located at Graves Road, the Ryle campus, and U.S. 25. There is a two million gallon tank planned for U.S. 25, south of Frogtown Rd. The old water towers in Hebron and at Frogtown Road have been removed. An average daily use of approximately 5.5 million gallons is currently supplied by the District.

The Boone County Water District primarily serves the east-central portion of the County. This coincides with the more populated and growing areas of the County. Since development usually occurs more rapidly where new water lines are placed, good planning and growth management policy would be to not encourage water line extension in environmentally sensitive areas or areas planned for farmland preservation. Public comment during the comprehensive planning process in 1995 indicated that the installation of water lines in new areas has a negative affect on agricultural uses by causing an increase in tax rates for undeveloped property. Since that time, however, there has been a change in state law. Land owners in an Agricultural District receive a deferred assessment of fees for water service line extensions until the land is removed from the District and sold for non-agricultural uses. Public water districts have a responsibility to provide cost-effective water service. When there is existing demand in rural areas, the placement of water lines has historically not been a realistic growth management tool. It is difficult to argue that residents should not receive the benefits of public water supply in the name of growth management.

Figure 10.2 - Water Service Area



The Boone County Fiscal Court has begun to implement significant rural water system expansion plans for most of Boone County. The Fiscal Court initiated this program in 1999 based on the fact that Boone County has less water service area for its residents than many other Kentucky counties. This will allow many rural areas of the county to connect to public water supply (see **Figure 10.2**). Although the initial intention of this project is to provide water to existing residents, it does have significant potential impacts on growth in Boone County, particularly the Western Boone County area. Preliminarily, the report indicates 65-70 miles of water main construction along the primary roadway corridors of Western Boone County. Future side extensions would be based on assessments. The program is funded by general obligation Revenue Bonds.

The Fiscal Court has constructed water lines in the Rt. 20/Idlewild Road area and the Big Bone Road/Rice Pike/KY 338 corridors (Phase I). Phase II is proposed to include water line construction on KY 20, East Bend Road and Big Bone Church Road. Public meetings are anticipated to occur during 2005 on these specific projects. The Land Use Element should consider the possibilities of this water line construction, and how land use regulation should be designed in its event.

One common phenomenon of water line construction in rural areas is the change in habits of the residents. Households that are served by a cistern or well often exhibit a conservative use of water. When these households receive a continuing, inexpensive supply of water from a public system, water use habits often change. The increased use of water has an impact on

existing septic systems by aggravating soil saturation problems. A common solution to this problem is often the public outcry for public sanitary sewer service to the area. The impact of sanitary sewer facilities on county growth patterns is well known and is described later in this element. In this way, the community needs to begin to realize that, although water lines do not always directly affect growth, they can trigger a series of changes that lead to growth. Likewise, the construction of a water line, by itself, does not entitle an area of the county to develop.

During development of the Land Use Element, and in planning efforts after the adoption of this 2005 Comprehensive Plan, Boone County, as a community needs to carefully create incentives and regulations to properly guide development in the areas affected by new water line construction. Creative ways of structuring future property assessments and blending them with planning efforts could provide a development pattern for Western Boone County that is different from typical suburban sprawl.

A prime example of the effects of water main construction on the development patterns of an area is the 12 inch main along North Bend Road. Since its construction in 1987-88, major developments have been approved in the Hebron-North River area. Sanitary sewer service for this area has resulted partly from public expenditure and partly from private construction. The effect has been that the overall momentum of development in this area has been increased. Now, with the addition of Northpointe Elementary school and road improvement designs for North Bend Road, this has become a prime example of how other infrastructure must be developed when a new water main is extended to a lightly developed area.

#### **Walton District**

The City of Walton currently provides water service to areas within the incorporated limits of the City and adjoining areas to the north of the City along Dixie Highway (U.S. 25) and Old Lexington Pike. Previously the City treated its own water for their supply. However, during the early 1980's the City contracted with Kenton County for their water supply. By this agreement, the City is limited to a maximum daily supply of 1 million gallons of water. Currently, the system is not at capacity with average daily usage of 385,000 gallons and a storage capacity within the two water towers that total 500,000 gallons.

Since the Walton Water District has contracted for a large supply and uses relatively little of it, there is great potential for expansion. Although some of Walton's water supply is transported from the city by private water-haulers, the immediate Walton area will experience moderate population growth. This increases the supply available for industrial development.

#### **Bullock Pen District**

The Bullock Pen Water District currently serves an area around Verona and southward to Grant County and Gallatin County. The Bullock Pen Lake provides the water source for this system. Any further extension of these water lines in a northwest direction would encounter rougher topography in the Mud Lick Creek area - some of which has limited suitability for development. This area of the county is not expected to experience dramatic growth, but will see some residential construction in the general Verona interchange area. The Bullock Pen Water District does have some opportunity for expansion toward Walton, however. Any further expansion of this system can have the same land use impacts as discussed earlier under the Boone County Water District. The effects on water usage habits within the Bullock Pen District area could be significant because there is no public sanitary sewer system present. To compound this situation, the Environment Element has shown that the soils present in this area have severe limitations regarding leach fields for private septic systems.

#### **Gallatin County Water District**

This District serves a small area along South Fork Church Road where U.S. 42 intersects the county line.

#### **Northern Kentucky Water Service District**

This District used to be called the Kenton County Water District, and it currently serves the Greater Cincinnati International Airport and the Northern Kentucky Industrial Park. Some areas along Donaldson Highway, originally served by the Kenton County Water District are now served by the Boone County District. The Northern Kentucky Water Service District maintains its own water treatment plants along the Licking and Ohio Rivers. Expansion of the District within Boone County would not be expected considering the current systems and their ability to meet the demands for their future needs.

### **SANITARY SEWAGE COLLECTION AND TREATMENT**

Sanitary sewage collection and treatment in Boone County includes three public systems: City of Florence, City of Walton, and Sanitation District Number 1 of Boone, Campbell, and Kenton Counties. Sanitary sewage collection and

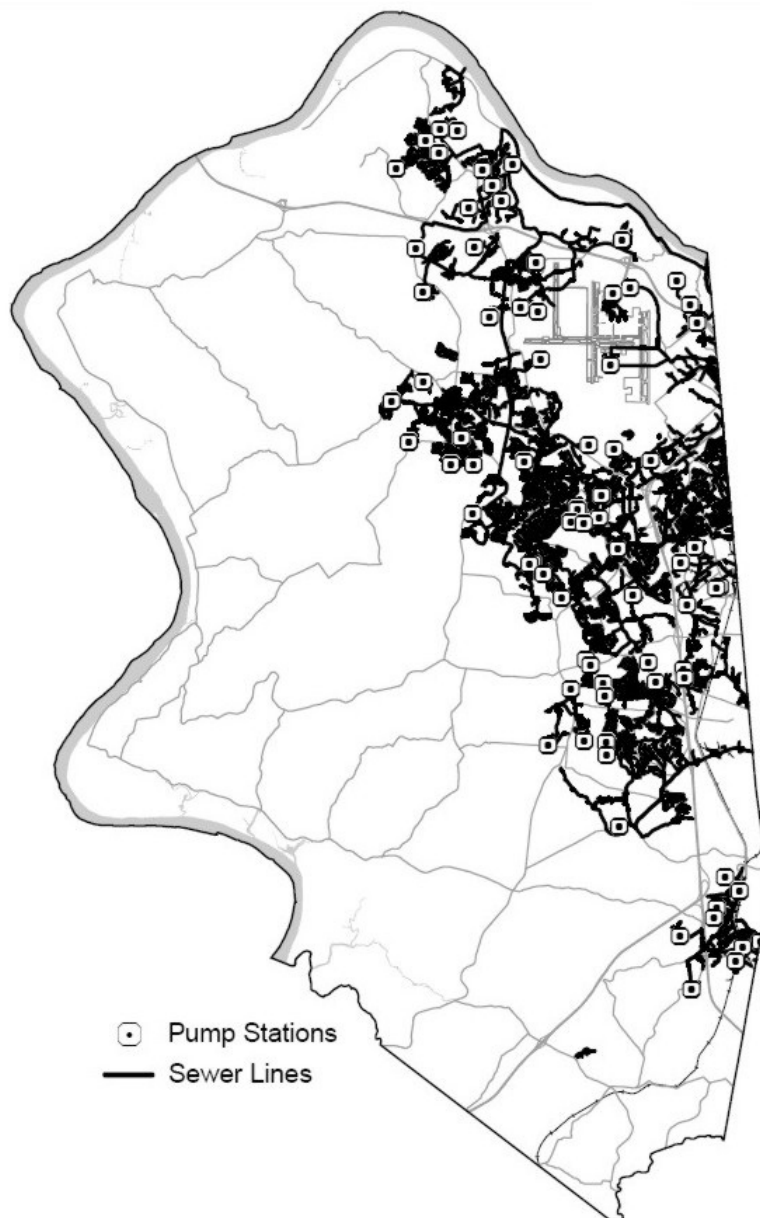
treatment also includes private package treatment plants and individual on-site septic systems. The public sewer systems usually serve large areas or clusters of developments, and private treatment plants usually serve one development.

Private, on-site systems, including leach fields, generally discharge into the soil for natural decomposition. In general, Boone County's soils are poor at accepting these discharges, and stream pollution often results. These systems also require larger lot sizes, often resulting in inefficient use of land.

Public Sewer Systems, though historically necessary for proper county growth, are expensive to install, operate, and maintain. Even more than water supply lines, sewer systems greatly influence where development occurs. Sewers must be considered for their environmental impacts, not merely for treatment plant discharges but also for their influence on future development. Sewers should be extended only to areas that can support substantial development so that most efficient use of the services is made. Development of collective sewer systems for the low density uses outside urban areas is usually not economically feasible. Individual package treatment systems have historically accommodated development in these areas, but are now generally discouraged because of their environmental impacts. This is especially true where rough terrain or other major building limitations are present.

The last decade has seen a significant transformation in sewage treatment in Boone County. The following passages describe the public sanitary sewage treatment systems.

**Figure 10.3 - Sewer Lines**



### **Florence**

During the early 1980's, the City of Florence improved their sewer system by connecting into the Sanitation District Number 1 of Campbell and Kenton Counties. By connecting the Florence system, the Commission eliminated its treatment plant, and could expand and improve its system and services. Before committing to these improvements, the Florence system was at its capacity for treatment of 2.1 million gallons per day and involved the use of eighteen lift stations throughout the City. This system required much operating maintenance and repair. Subsequent improvements included the removal of most of the stations. Ultimately, the system connects to the Sanitation District's system and the Dry Creek Sewage Treatment Plant. **Figure 10.3** shows the sewer lines and pump stations throughout the county. The Fowler's Creek pump station is being upgraded, and the City should have available capacity in this area for approximately the next decade. Future expansion will likely occur in the Pleasant Valley Road and U.S. 42 areas, and sewage is intended to be pumped to the proposed Western Regional Treatment Plant upon its construction.

### **Sanitation District No. 1, Boone, Campbell, & Kenton Counties**

Since 1995, a dramatic change has been that the Sanitation District has taken over the former Boone County Sewer District. The Boone County District system had been operating under the 1989 Boone County Water and Sewer Master Plan Report. The focus during the 1980's was to obtain public ownership for as many of the private package treatment plants as possible to enable eventual consolidation and elimination of them. The

Master Plan recommended a coordinated strategy to acquire and consolidate the numerous individual package wastewater treatment plants, expansion of the wastewater collection lines network, and the treatment of collected wastewater. The Master Report proposed two wastewater treatment plants, located in the North Bend Area and Gunpowder Creek Area, to provide wastewater treatment for service areas. After the adoption of the Master Report, Boone County Fiscal Court entered into an agreement with Kenton County Sanitation District Number One to treat Boone County wastewater at the Dry Creek Wastewater Treatment Plant. Fiscal Court's actions eliminated the need for the two proposed treatment plants in Boone County. Later agreements resulted in the Sanitation District constructing the major sewage transmission lines, while the Boone County District was responsible for the maintenance of the existing system. Finally, the agreement was reached for the Sanitation District to serve Boone County. Since many of the individual collection systems that have been removed were in poor operating condition, the consolidation of these systems into the regional system has benefitted Boone County's environment and public health.

In 1995, Sanitation District No. 1 commissioned the preparation of a 20-year Regional Facility Plan, completed in 2000. A portion of the plan addresses efforts to improve existing sewer systems. The most significant improvement recommended by this plan, to affect Boone County, is the construction of an entirely new sewage treatment plant on the Ohio River. During 1998 and 1999, there was much discussion about the location of such a plant. Several sites were considered, and finally the District selected a site north of Belleview on the river. Considerable controversy still exists over the site selection process, and final details of the sewage transmission system are currently being designed. The collection system will include force mains or a gravity flow tunnel system to reach the proposed treatment plant. SD #1 will discourage additional sewer customers from directly accessing these force mains. The major sewage collection point for all of the Boone County service area and fifteen percent of Kenton County will be in the western Florence-Union region, probably near the current pump station site on Gunpowder Creek at Camp Ernst Road. It is anticipated that the proposed treatment plant could be in operation around the year 2010. Kelly Elementary School is being considered for sewer service via a direct line to the proposed treatment plant and there is a possibility that with some private improvements the town of Belleview could be served as well. Although only a portion of the I-71 corridor in the southern part of the county is included in the 20-year plan, the trunk mains, pump stations, and treatment facility in the plan could accommodate the flow from this area at a later date.

The Sanitation District has stated that the 1995 Boone County Comprehensive Plan was used to develop the Regional Facility Plan, and that a slightly increased capacity over the 2020 Future Land Use Plan was designed. Although this represents some progress in agencies working together, the proposed improvements in the District's final Plan would create growth impacts greater than the 1989 Boone County Water and Sewer Master Plan Report or an expansion to the Dry Creek Treatment Plant. It is important that the regional treatment plant, and the service lines leading to it, are designed and implemented with specific growth areas in mind, as defined by Boone County citizens and planners, because the 2020 Boone County Future Land Use Map was prepared without the knowledge of a potential treatment plant in the far western part of the county. The Future Land Use Element of this Plan should contain creative ways of utilizing the future availability of sewer to develop a town and rural land use pattern instead of extending eastern Boone County style of development into Western Boone County.

The Sanitation District has indicated that the regional collection system is planned generally around the Year 2020 Future Land Use Map that was contained in the 1995 Boone County Comprehensive Plan. Some additional capacity has been designed into the system to safeguard public investment, however, the District has not intended to serve all of Boone County with this planned system. Sewer transmission facilities are being designed to accommodate a 20-50 year planning horizon. The District has recognized that the major growth corridor in Boone County is toward the south. Even so, most of the Verona and I-71 areas of the county are not shown as being served in SD #1's 20-year plan. Outlying areas in the I-71 corridor and the western parts of Boone County could be served in the future, but are not shown in the 2000 Regional Facility Plan. Gravity trunk mains could be built in major creek valleys if significant future development is allowed to occur in these outlying areas. The Sanitation District has adopted a policy that encourages gravity sewer lines as opposed to a series of pump stations to serve new development. This may become an important issue as development proceeds further west into the major creek valleys of the county. Developers must pay for the facilities to become part of the system if less than 40 homes are served by a proposed pump station. SD #1's 20-year plan must be updated in the future if certain changes occur in the community. This includes a situation where sewer flows come within thirty percent of the system capacity.

Boone County, as a community, needs to be careful that sewer service areas are developed in an efficient manner, but that all sewer service areas are not over-developed. Some locations within urban service areas may be more beneficial to the community if preserved or used for recreation purposes. For Boone County to develop properly in the future, Land Use Planning and Infrastructure Planning must continue to be closely intertwined. As the Environment and Agriculture Elements show, the sewer pump stations that have been constructed are promoting future development in broad new areas without local control. Construction of future sewer facilities should reflect community

and Planning Commission involvement because of the inherent relationship between Infrastructure and Land Use. Government agencies should continue to work together to define future growth areas as well as to encourage and fund significant infrastructure in those regions.

It is important to put the relationship of the sanitary sewer system and Boone County's growth into perspective. The rapid growth in the unincorporated areas of the county had occurred until the mid 1990's without a coordinated sewer system. Now that such a system is available, future growth rates are difficult to estimate. The sewer pump stations shown in **Figure 10.3** were constructed in the early 1990's and were designed to serve watershed areas, therefore future development can access them through private investment and construction of sewer lines that may include additional pump stations. The new availability of sewage service to large areas of the counties has committed many of these areas to development. The Sanitation District has passed a resolution that the improvements in the Regional Wastewater Treatment Plan are not intended to encourage additional development beyond what has been planned for the area. Although public expenditure for sanitary sewer systems can be viewed as a positive and efficient way of getting out in front of future development, it is important to realize that the need for other new services, such as police, schools, and planning will be accelerated. As a result, it can be inferred that the quicker Boone County develops, the quicker the cost of providing public facilities and services increases.

The capacity of the Dry Creek Treatment Plant is 46.5 million gallons per day with the effluent being discharged into the Ohio River at Anderson's Ferry. Final design for the Western Regional Wastewater Treatment Plant is anticipated in late 2005, and construction is planned to occur by 2010.

### **Walton**

Currently, the City of Walton provides wastewater treatment at its plant for users within the corporate limits. The current capacity of the Walton facility is 450,000 gallons per day. The average daily flow into the plant is around 300,000 gallons into Mud Lick Creek. The City of Walton also has a 50,000 gallons per day plant serving the Walton Industrial Park, and the current flow is around 8,000 gallons per day.

### **Private Sewage Treatment**

Package plants generally serve only one user, usually a business, industry, or school. Others serve a residential subdivision or mobile home park. Many are privately owned and operated, and are inspected by the State of Kentucky, Department of Environmental Protection, and the Division of Waste Management regarding maintenance and effluent discharge. There are now fewer private package treatment plants in Boone County that serve individual users and developments than there were in 1990.

Individual septic systems are historically the prevalent method of wastewater treatment in developing areas like Boone County. Other than the above mentioned areas of public or private collection systems, all of the remaining areas of Boone County continue to rely on the use of a septic tank or similar individual systems. Even though the Burlington, Hebron, and Union areas contain many such systems, they should experience little additional septic tank construction in the future with the expansion of sewer service in the area and the limited capability of some of the soils to accept septic tank discharge. Septic tanks will likely remain prevalent for low density residential uses in rural areas of the county, however, there are biological treatment alternatives available.

### **Recent Ideas Surrounding Sanitary Sewage Treatment**

Marsh systems and greenhouse or living aquatic systems can provide localized wastewater treatment in parts of Boone County, with necessary permits. These systems can provide effective treatment, but require more land area than conventional treatment plants. These systems may be considered for concentrated outlying development in Western Boone County, but should be designed to be maintained by a responsive agency.

## **STORM WATER MANAGEMENT**

The rapid development of Boone County has resulted in a large increase in pavement and roof coverage of land area. These impervious surfaces have the effect of increasing both the amount and rate of storm water runoff over the pre-development conditions. Often, existing storm water pipes and stream channels are unable to handle this increased storm water flow, resulting in property damage, loss in water quality, and potential injury.

Since there are so many different types of development impacting each drainage system, public storm water management systems represent the most effective and consistent method of establishing a coordinated approach to handling storm water runoff problems. The City of Florence has conducted extensive study in this area and produced a Storm Water Management Plan during the late 1980's, of which mapping of existing facilities was an important first step. In 1992, the City created a Storm Water Management Division under the Florence Water and Sewer

Commission, and instituted a storm water assessment that applies to all businesses within the city limits. The entire Water and Sewer Commission has recently been combined into the Public Services Department of the City. Tax credits are available to those businesses and residents that provide storm water detention according to regulations. The Boone County Public Works Department is poised to follow suit as it provides services to the unincorporated area and to the Cities of Union and Walton through an inter-local government agreement. A good first step, a Storm Water Management Plan for the Upper Gunpowder Creek Watershed, has been completed. This Plan is a logical extension of the City of Florence efforts into a highly impacted area of the unincorporated county. Some of the recommended improvements have been completed.

The United States Environmental Protection Agency maintains regulations targeting the control of storm water runoff. The purpose of these requirements, known as the Storm Water Phase II regulations, is to improve the quality of surface waters that are currently impacted by storm water runoff. Under this rule, communities had to submit an application for a National Pollutant Discharge Elimination System (NPDES) permit to the State in 2003. Instead of all the communities in Northern Kentucky submitting for permits and attempting to individually meet at the requirements of the mandate, SD #1 developed and has begun to implement a regional stormwater utility.

In an effort to comply with these requirements in a cost effective and efficient manner, local communities requested that a regional storm water management program be developed under the authority of a single entity - the Sanitation District Number 1 of Northern Kentucky. The District's Board of Directors has agreed to assume this new role and staff is aggressively working on the development of this program. SD #1's regional stormwater management program will affect the existing sewer service area for the district. Florence and Walton are not affected, and the program will affect approximately forty percent of the unincorporated county area. The boundaries of the service area have been delineated by the EPA Division of Water, and may be re-evaluated at the end of each five year permit cycle based on growth and impacts on water quality. The current permit cycle runs from 2003 to 2008, meaning that SD #1 is planning to take over ownership, operation, maintenance, and capital improvements of storm systems in the service area by 2008. To date, SD #1 has completed a storm sewer inventory, created a single set of storm water rules and regulations, established a water quality-based credit policy for commercial and industrial properties, developed a land disturbance permit process for activities greater than one acre in the service area, begun detection and elimination of illicit discharges, initiated a public education program, and initiated a storm water surcharge for properties in the service area. Detailed studies should be conducted by SD #1 for impacted watersheds, such as portions of Woolper Creek and Mudlick Creek. Such plans need to recognize the responsibility of both the private sector and government in addressing existing problems and avoiding future problems. The Banklick Creek Watershed Analysis can serve as a model.

## **NATURAL GAS DISTRIBUTION**

The Union Light, Heat, and Power Company, now owned and operated by Cinergy, supplies natural gas in parts of Boone County. The supplier for Union Light, Heat, and Power is Columbia Gas Transmission Companies.

Currently much of the northeastern part of the County, the City of Florence, and the City of Walton are receiving natural gas service. Three major natural gas transmission lines pass through Boone County. All of these pipelines are located generally in the eastern half of the County. Installation and improvement of gas lines usually require an increase in residential or industrial concentration to be feasible.

## **ELECTRIC POWER DISTRIBUTION**

Electric power distribution is broadly provided by Cinergy/Union Light, Heat, and Power Company and Owen County Rural Electric Cooperative Corporation. Some overlap within residential subdivisions and commercial developments exist. Cinergy currently operates the East Bend Power Plant, a coal powered plant. This facility is located along the Ohio River in the western part of the County. The Ohio River serves this facility by supplying the cooling water and the transportation for coal delivery via barges.

Owen Electric Cooperative purchases its wholesale power from the East Kentucky Power Cooperative in Winchester, Kentucky. East Kentucky operates three generating stations of its own and has interconnections with Kentucky Utilities, Cinergy, Louisville Gas and Electric, and Tennessee Valley Authority. This network provides the power reliability that a developing area needs.

Of all the above mentioned distribution and collection systems of the public infrastructure, electric power would offer the least limitations for urban development throughout the County. Electric and gas lines generally follow development

instead of preceding it. Electric lines are versatile and can be extended to accommodate new development. For these reasons, these services do not have a great impact on directing residential development to specific areas. The fact that some industrial enterprises try to locate near energy sources should influence the placement of these facilities. From the stand point of sustainability, conservation of energy and development of alternative forms are needed to keep the Cincinnati region competitive economically.

## MUNICIPAL/PUBLIC SERVICES

Public Facilities services such as police, fire and rescue services, and other services provided by municipal and county agencies are vital to Boone County. Consolidation studies have been conducted by private consultants to examine the advantages and disadvantages of combining some city and county services, including law enforcement and utilities. The Boone County Police Department and the Boone County Sheriff have merged.

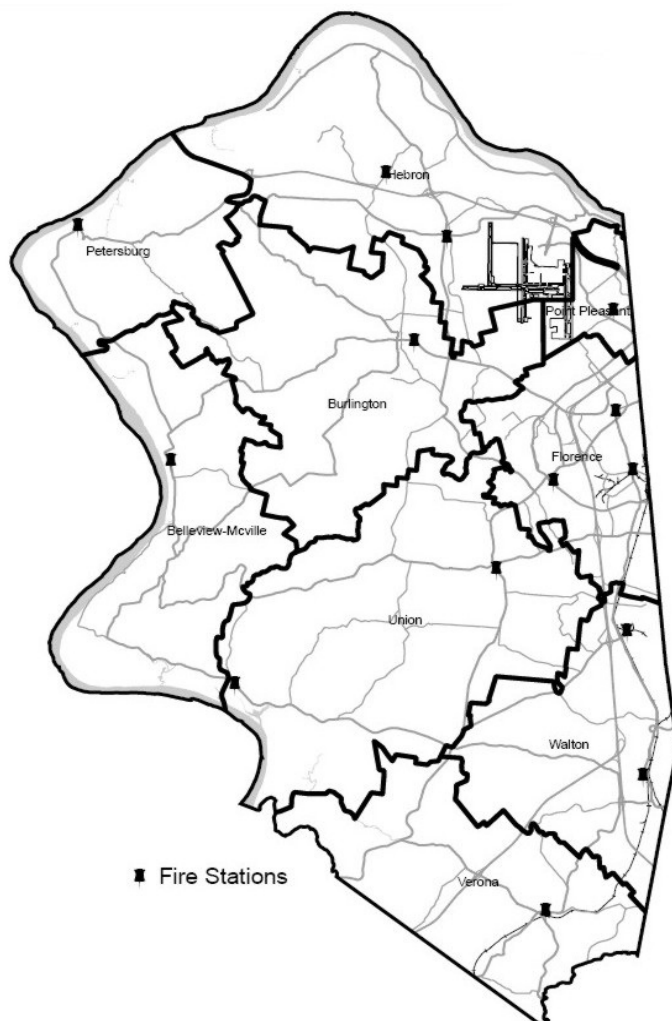
### Police

The City of Florence has their own police force, while Union and Walton utilize the services of the Boone County Sheriff. Florence currently has a police force of over 53 officers including 2 bicycle patrol officers. Florence has a fleet of 59 patrol cars and a SWAT van.

The remainder of the County, including the City of Union and the City of Walton, is served by Boone County Sheriff Department, which now has substations at the Union City Building and Walton City Hall. The Boone County Sheriff's office contains 154 law enforcement personnel.

The City of Florence Police Department has their office in the Florence Government Center. The County Sheriff's offices are located in the new safety complex just outside Burlington. The Cincinnati/Northern Kentucky International Airport has a separate force of officers and several dispatchers for the Airport and vicinity.

**Figure 10.4 - Fire Districts**



### Fire and Rescue

Florence has historically been the only fire district in Boone County where there are full-time staff members for fire fighting. However, the Burlington, Hebron, Walton, Union, Point Pleasant, and Belleview Fire Departments have added full time paid personnel since 1990. Volunteer Departments exist in Verona and Petersburg. Fire fighting equipment and personnel are also available at the Greater Cincinnati International Airport. The Airport currently has a full-time force of 70 persons and two stations. All fire departments in Boone County also handle emergency medical calls (EMS) at the basic life support level. The Airport, Burlington, Florence, Hebron, and Union departments offer advanced life support within their operations, while all other departments in the county have agreements with an outside entity to provide advanced life support.

Figure 10.4 shows the district boundaries of all Fire Districts in the County as well as the location of the fire stations. Several fire districts, such as Burlington, Hebron, Pt. Pleasant, Union, Florence, and Walton have experienced increasing demands for fire protection, because of the county's growth. This is expected to continue over the planning period. New fire stations have been added at the Airport and in the Hebron Fire District has added a new fire station on Graves Road for the northern portion of their district. The Burlington fire district also has constructed a new station on KY 18, replacing the previous location. Full-time fire personnel and paramedics will increasingly be necessary in each of these growing districts. This is especially important as new schools, residences, churches, commercial, and industrial and other facilities are built that operate during

the daytime hours. These are historically inconvenient times for volunteer districts because they coincide with typical work hours.

The Boone County Fire Chiefs Association is implementing a plan to build a county wide fire training facility within the Boone County Public Safety Campus in Burlington. The first phase is expected to be in operation in 2006. The Association also continues to operate a fire investigation team. Fire departments are increasingly using automatic aid to assist each other and to meet national standards for emergency response.

With the rapid growth of Boone County and the accompanying major roadways, transportation of hazardous materials and the emergency response to leaks and accidents will become increasingly important. Fire and rescue departments must be equipped and trained to deal with such emergencies. To coordinate emergency response, new communication and data systems have been implemented at the new communications center at the Florence Government Center. This incorporates the Boone County GIS and should in the future continue the progression toward mobile graphics terminals and automated vehicle location technology for emergency response vehicles.

With increasing traffic congestion on the major interstates, increased air traffic, increased resident population and daytime employee population of Boone County, a trauma unit will be necessary to deal with potentially large emergencies. This unit should be somewhere near I-75 and near the Florence area. Currently, trauma situations are flown by helicopter to the trauma unit at University Hospital in Cincinnati. Lastly, a new trend of urgent care facilities are appearing across the region which provides 24-hour care that may not be deemed an emergency. It is anticipated that these facilities will continue to appear in Boone County. In addition, Homeland Security has become an issue since 9/11, and emergency response needs to be designed with this issue in mind.

### **Municipal/County Offices**

Each of the municipalities within the County operate their offices out of a City or Municipal building. Each municipal building provides a central location within the community for public services. A municipal complex on Ewing Blvd. was constructed to house the City of Florence offices as well as other government agencies. Expansion of this complex could include even more public services and needed meeting facilities which would serve the entire community.

Boone County Government Administrative offices were originally spread throughout the town of Burlington providing no central location for services. Although the Boone County Administration Building was completed in 1982, it is experiencing severe space limitations. Some agencies, including the Boone County Planning Commission, have begun to move out of the building, beginning the decentralization process again. The new justice center, jail, and sheriff's building have relieved the space problems and should provide for the re-centralization of county offices and services.

The Boone County Planning Commission is an important agency that will become an increasingly vital tool for the community to deal with rapid growth. Boone County is in a beneficial situation in that the Commission is a joint planning commission and is responsible for directing land use and development for Boone County, as well as the three cities of Florence, Union, and Walton. As a result, the four legislative bodies operate under the same Comprehensive Plan and consistent regulations.

The Planning Commission has historically functioned mainly by reviewing development plans and managing growth, with the assistance of four boards of adjustment. The overall goal for land use regulation in Boone County is a balance between the right of the property owner to utilize land for economic purposes with the protection of public health safety and welfare. The chief tool for accomplishing this task has been zoning regulations and subdivision regulations, but the future likely holds new methods of regulating land use, solving problems, pursuing opportunities, and affecting infrastructure provisions.

The Success By 6 program, administered by Boone County Human Services, has been extensively promoted and is now improving the quality of life for children and families in Boone County. This department also runs the aging tax board, which is a new board. These functions are important for the quality of life of Boone County residents.

## **EDUCATION**

There are two public school systems in Boone County, the Boone County School District and the Walton-Verona Independent School District. Each system offers education for grades 1 through 12 along with kindergarten classes. Both districts excelled in the Kentucky Core Content Test with Boone County placing sixth in the state for county districts and Walton-Verona finishing fourth of all the state's independent districts. Throughout Boone County there are also several private/parochial schools.

## Boone County School District

The Boone County School District currently operates 18 schools within the County. These schools are listed in **Table 10.1**. The Boone County District had an enrollment, as of the beginning of the 2000-2001 school year, of 13,167 in grades kindergarten through 12. Four years later, this figure is now at 17,328, representing a 32 percent increase. Because of the dynamics of population migration in and out of Boone County, the usual population pyramid approach to forecasting future enrollments is often not reliable. The school district has to examine many factors in addition to natural population increase including future land uses as foreseen by this Comprehensive Plan. **Table 10.1** details the current enrollment of and the designed capacity of each school. **Figure 10.5** shows the general location of the schools in the county.

**Table 10.1 - Schools In Boone County**

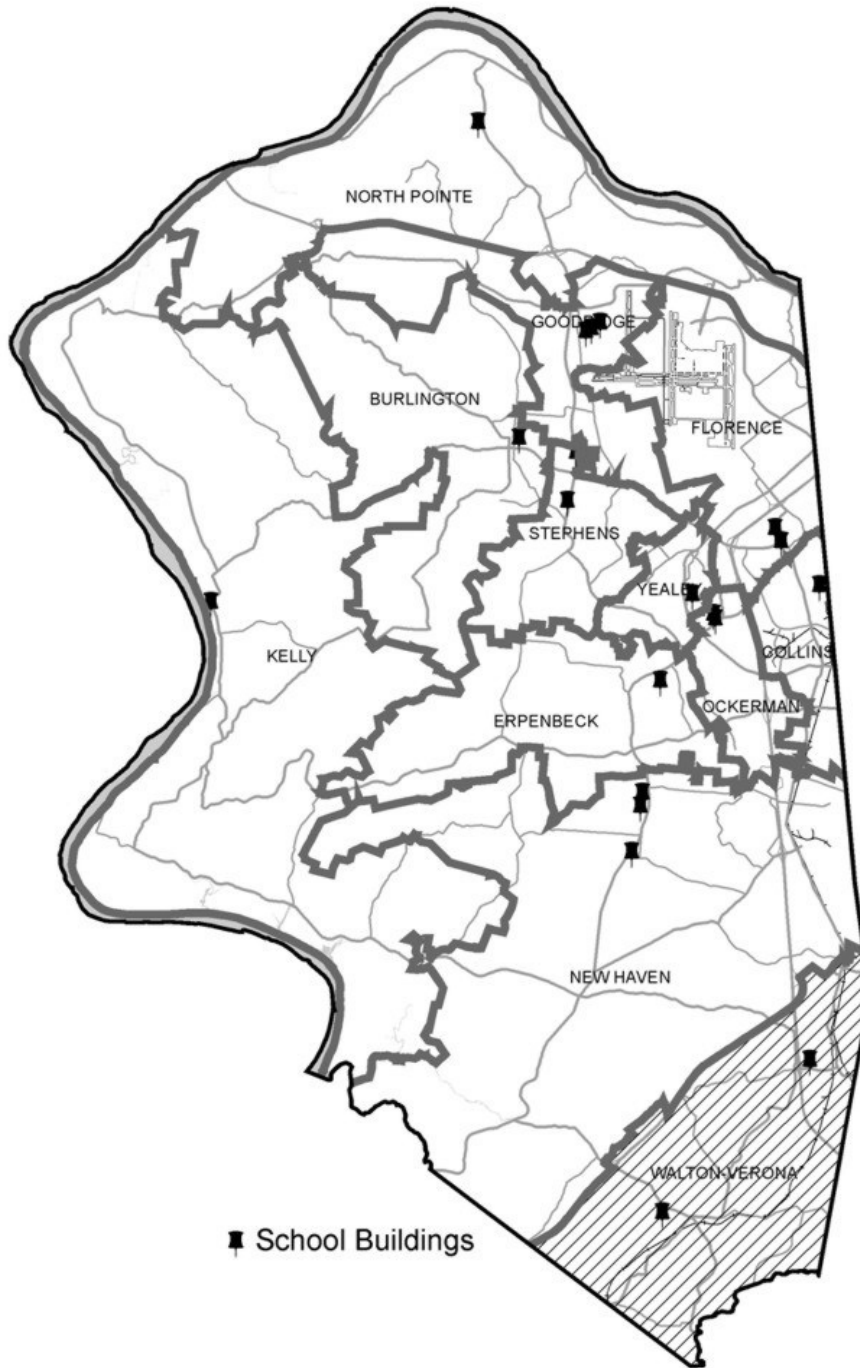
<b>BOONE COUNTY</b>						
<b>SCHOOL</b>	<b>ENROLLMENT</b>					<b>DESIGN CAPACITY</b>
	<b>1986</b>	<b>1989</b>	<b>1993</b>	<b>2000</b>	<b>2004</b>	
Burlington Elementary	810	901	567	628	873	850
Collins Elementary			622	566	656	600
Erpenbeck Elementary				798	1,041	850
Florence Elementary	798	680	654	528	679	700
Goodridge Elementary	651	754	516	549	744	650
Hamilton Elementary	145					
Kelly Elementary		415	329	306	335	450
New Haven Elementary	474	664	617	629	956	1,100
North Pointe Elementary				462	779	750
Ockerman Elementary	793	884	608	639	722	700
Petersburg Elementary	90					
Stephens Elementary			595	621	957	850
Yealey Elementary	673	860	597	597	809	750
<b>Elementary sub-total</b>	<b>4,434</b>	<b>5,158</b>	<b>5,105</b>	<b>6,323</b>	<b>8,551</b>	<b>8,250</b>
Conner Middle	814	739	891	1092	1,336	900
Gray Middle				780	1,137	1,042
Jones Middle	705	680	656	447	696	600
Ockerman Middle	738	884	781	728	861	875
<b>Junior High sub-total</b>	<b>2,257</b>	<b>2,303</b>	<b>2,328</b>	<b>3,047</b>	<b>4,030</b>	<b>3,417</b>
Boone County High	1,128	1,118	1,118	1,341	1,657	1,300
Conner High	777	772	1,088	1,216	1,585	1,200
Ryle High			1,174	1,240	1,505	1,000
<b>Senior High sub-total</b>	<b>1,905</b>	<b>1,890</b>	<b>3,380</b>	<b>3,797</b>	<b>4,747</b>	<b>3,500</b>
<b>Total</b>	<b>8,596</b>	<b>9,351</b>	<b>10,813</b>	<b>13,167</b>	<b>17,328</b>	<b>12,322</b>
<b>WALTON-VERONA</b>						
<b>SCHOOL</b>	<b>ENROLLMENT</b>					<b>DESIGN CAPACITY</b>
	<b>1986</b>	<b>1989</b>	<b>1993</b>	<b>2000</b>	<b>2003</b>	
Elementary (K-6)	337	430	485	509	570	550
High School (7-12)	405	400	450	497	483	700
<b>Total</b>	<b>742</b>	<b>830</b>	<b>935</b>	<b>1006</b>	<b>1,053</b>	<b>1250</b>

**Elementary Schools** - Erpenbeck Elementary and Northpointe Elementary have both been constructed since the 1995 Comprehensive Plan update. Burlington, New Haven, and Florence elementary schools have recently undergone additions and renovations, while Ockerman Elementary is currently undergoing major renovation in order to increase school capacity. A new elementary school, capacity of 700, is anticipated at the Ryle complex around 2006-2007.

Enrollment is generally greater than the designed capacity, even with classroom additions and mobile classrooms. Concentric locations of elementary schools have made the distribution of students more difficult without transporting children excessive distances. Recent major redistricting efforts have utilized the Boone County GIS, which is also being used in the planning for the most efficient locations for new schools in the future as the Boone County student population continues to grow.

**Middle High Schools** - The middle schools are all operating near capacity. Although they are all located in the eastern section of the county, they are strategically placed so that the rural sections of the county (south and west) are directly accessible by road. Gray Middle School was recently expanded, while a redistricting effort is in process in order to accommodate the new Camp Ernst Middle School, capacity 900, to open for the 2005-2006 school year.

**Figure 10.5 - Elementary School Districts**



**High Schools** - Two high schools in the county are operating over capacity. These schools are Boone County High School and Conner High School. Twenty classrooms are currently being added to Ryle High School because of enrollment growth. Like the middle schools, the high schools are located in the most populous areas with convenient road access to most of the county. A fourth high school is anticipated, capacity 1,000, and geographic analysis is in progress to choose a strategic location. Impact on the road system, and needed improvements should be considered in the site selection process.

Beyond 2006, the District also plans to construct a 700 capacity elementary school, site to be announced, add classrooms to Northpointe Elementary and Conner High School, and make major renovations to Boone County High School, Boone County Area Technology Center, as well as many renovations to most of the schools.

**Walton-Verona School District**

Enrollment growth has been relatively slow in the Walton-Verona Schools. Furthermore, population growth projected for that area is not anticipated to be dramatic. The Walton-Verona school system had a year 2003 enrollment of 1,053 students in grades Kindergarten through 12. This enrollment represents a 12.6 percent increase since 1993.

This school system operates an elementary school just west of Verona and a high school in Walton. The elementary school (K-6) currently operates near capacity. The high school, which also houses middle school students, is about 200 short of

its total capacity. There are currently plans to build a new high school at the I-71 Verona interchange and use the existing high school building as a middle school.

**Public Education Plan**

**Facilities Plan** - In 1991 the Kentucky Education Reform Act (KERA) was passed by the Kentucky General Assembly to totally revise the public educational system in Kentucky. Consequently, both school districts are attempting to comply with KERA requirements. In addition, the Boone County School District has adopted a Master Educational And District Facility Plan in 2003 for the needs of the District.

An overview of the future educational needs is concentrated on the central portion of the county where the greatest population growth is occurring. As the center of the county becomes more densely populated, more classroom space in the form of new schools or expansions of existing buildings will be necessary in growth areas. The current strategy

of school location in the Boone County District is to distribute the location of new schools where areas are experiencing population growth.

The next five to ten years represents an important time period for expansion of the Boone County School District. Continuing industrial development in Boone County increases the tax revenues available to education, however, continuing residential development can increase the needs impacts on the system. The education system must closely coordinate its efforts with land use planning activities. Correlation of school size and location with approved residential development, as well as the Future Land Use Map, will be a major focus of the school district's efforts. This is especially apparent with the elementary schools in the district which are currently overcrowded. A strategy of the school district is to disperse new school facilities out from the central urbanized Florence area through the use of the Boone County GIS in order to minimize student travel time and problems with traffic congestion.

Because of Boone County's rapid growth, new school facilities should be strategically located in the transportation network and near residential areas they are designed to serve. Besides being easily accessible to new growth areas, this can enable future redistricting to avoid overcrowding. Aside from elementary school construction, the major improvement to the school system will be a planned fourth high school. Future expansion of the Boone County Vocational School or construction of additional facilities will be necessary as the County becomes more urban. Transportation activities can also have a negative impact on the education system. This is apparent with airport noise impacts on several Boone County schools. Noise mitigation measures, including sound insulation, should continue to be implemented where necessary.

In terms of land acquisition, suitable land donation to the school district by Boone County land owners should be encouraged, as well as the provision of suitable land within planned developments or subdivisions, as long as the sites are somewhat level and strategically located to avoid future redistricting problems. The Boone County Zoning Regulations Planned Development Article and the Boone County Subdivision Regulations should be considered for revisions to facilitate such donations or lease arrangements for suitable school sites. Erpenbeck Elementary and Northpointe Elementary are two examples of schools built through these types of efforts.

In addition, both school districts should continue to work with the Boone County Parks and Recreation Department in providing joint use facilities. This can be beneficial in terms of land costs, maintenance costs, and provision of facilities. This is also recommended in the Boone County Parks and Recreation Master Plan.

### **Private Schools**

Currently, six private or parochial schools exist in Boone County:

- **St. Paul School**  
U.S. 25 (Dixie Highway) Florence; Enrollment - 625; Grades K-8.
- **Mary, Queen of Heaven Elementary**  
Donaldson Road at Turfway Road; Enrollment - 260; Grades PS-8.
- **Immaculate Heart of Mary School**  
KY 18; Enrollment - 540; Grades PS-8.
- **St. Joseph Academy**  
Needmore Street, Walton; Enrollment - 300; Grades K-8.
- **Heritage Academy**  
U.S. 42, Florence; Enrollment - 357; Grades K-12.
- **St. Henry District High School**  
Donaldson Rd; Enrollment - 540; Grades 9-12.

These schools are shown on **Figure 10.6**. Private schools ease part of the pressure placed on the public schools as new residents come into the county. As the county continues to grow, new private schools can be expected to emerge. The Covington Diocese has conducted a facilities plan which includes a future high school and grade school in Boone County.

This plan encourages these schools as long as they meet or surpass the standards of public schools. These schools can be expected to be built in conjunction with religious institutions.

### **Colleges/Trade Schools**

At present, there is the Gateway technical college under construction at the I-75 Mt. Zion Road interchange. There are several business and trade schools located in the Florence area. These are not regional campuses, but primarily serve individuals from the immediate Northern Kentucky Area. As the population of the County grows, expansion of these schools or construction of new schools can be expected. Furthermore, the continued increase in industrial

activity indicated that Boone County would be an ideal location for a state technical college. Any new college or trade schools should locate in urbanized areas that are easily accessible to their students.

### **Libraries**

Libraries are an important educational resource that should be further developed in Boone County. Currently, there are four libraries within the County, including the main library in Florence and branches constructed in Hebron, Walton, and Union. The Scheben branch in Union has been widely acclaimed for its programs, services, size, and architecture. Future facilities, such as the one proposed on KY 18 near Burlington, should have this type of presence in the community. The Library District has completed a strategic plan that includes a future branch north of I-275. Various educational programs in connection with public schools should be considered in the planning of new facilities.

## **HEALTH CARE SERVICES**

St. Luke Hospital West is currently the only hospital in Boone County. This hospital is located in Florence on Turfway Road, with access to I-71/75. The hospital is a full service facility with 177 beds and a 24-hour full service emergency unit. The hospital added 36,000 square feet improving the emergency and outpatient services. Major expansions, including medical office facilities will be needed in the future. The county's medical services are presently well concentrated in the urbanized areas. As the county's residential growth extends to the south and west, the placement of additional medical services will have to reflect this growth pattern.

The Boone County Health Center was previously located on Woodspoint Drive, however, a larger facility was constructed in 1988 on KY 18 in Florence to replace the Woodspoint center. The former Health Center building is now used for a Senior Citizens organization and Adult Learning Center. The Griesser Farm development on KY 18 west of Burlington is proposed to contain an assisted living component in addition to the residential development.

The following are private medical care facilities in the Florence area:

- Woodspoint Nursing Home, located on Woodspoint Drive, is a 150 bed facility with 100 intermediate care and 50 skilled care beds.
- Florence Park Care Center, located on Burlington Pike in Florence, is a 150 bed facility with 120 intermediate care and 30 skilled care beds, as well as 200 assisted living.

## **PUBLIC COMMUNICATIONS**

The written medium involves two weekly newspapers (the Boone County/Florence Recorder and the Sunday Challenger) and two daily newspapers (Kentucky/Cincinnati Enquirer and Kentucky/Cincinnati Post).

The visual medium involves several television stations located in Cincinnati and cable television. In addition, Insight Communications provides cable TV in Boone County.

### **Wireless Communications**

In 1998, the Boone County Planning Commission conducted a study on cellular towers, the regulations concerning them, and actions that Boone County could take to address impacts. The purpose of this study was to provide an informative document on the wireless communication industry, investigate the effects of this technology on Boone County, and develop a stance on how to regulate this industry while reaping the benefits of this technology.

This document and the Boone County Zoning Regulations serve as the official guides for Boone County's local governments to plan for and regulate the siting of cellular antennae towers as stated in House Bill 168. The study sets the foundation and basis for Boone County Planning Commission decisions to recommend approval or denial to the Public Service Commission for the construction of new cellular towers. The Boone County Zoning Regulations recognizes cellular antennae towers and the related equipment as permitted uses in certain zone districts, and they are subject to the Supplemental Performance Standards section of that ordinance. The Study explores the history of mass communication, the Telecommunications Act of 1996, Kentucky Revised Statutes - Chapter 100, and House Bill No. 168. It provides a catalog of existing and proposed wireless facilities in Boone County, assists service providers as a resource to select key locations for future wireless facilities, and includes possible co-location sites. It is the official guide, along with the Boone County Zoning Regulations, for recommending approval or denial to the Public Service Commission regarding new cellular tower construction in Boone County.

### **Recycling/Garbage Collection**

Garbage collection is currently contracted out to private firms. Boone County has reached the point in its development

where large scale recycling of garbage is feasible. This plan supports recycling of materials for not only residential uses, but commercial and industrial as well. Recycling should be treated as an important part in a complete Solid Waste Plan for Boone County and surrounding communities.

Recycling efforts need to also include a continual search for economic markets for materials. A well known innovative example of recycling has been instituted in Curitiba, Brazil. Here residents exchange recycled goods for bus fare vouchers. Other methods of promoting recycling as a central function in the community would include convenient facilities for composting. Large scale recycling is a key component of the concept of sustainability, which is addressed in detail in the Economy Element.

## **CONCLUSION**

Public officials are finding nationwide that in most communities revenues are not keeping pace with resources needed to provide services. In the suburbs, this is largely a result of the inefficient pattern of low density development, while in the central cities this is a result of losing resources to the suburbs. This is also why such controversial topics like development moratoriums and impact fees have received nationwide attention over the last several years.

It is well known that currently Boone County has low tax rates compared to more urbanized communities in the metropolitan area. Boone County Fiscal Court's budget situation has been positive from past growth in revenue from commercial and industrial development. Over the last five years, Boone County has applied surplus toward infrastructure and other public improvements. To accommodate rapid growth Boone County Government needs to determine whether or not taxes and other revenues adequately pay for public services, and identify the deficiencies as the first steps in preparing an effective Capital Improvement Plan. The costs of providing public facilities and services for different suburban land uses should be determined.

Government needs to find ways of analyzing different sectors of public service together instead of separately. An example would be to connect the efforts of the regional planning agencies striving to reduce air pollution through technical means with the efforts of the many urban forest commissions in the area which will likely improve air quality through entirely different means.

To fulfill the role of government as a problem solver in the future, public involvement on all types of issues is paramount. The old way of top-down government telling the community what it needs is becoming increasingly ineffective. The new way that is gaining momentum nationwide is known as Collaboration. This process is more than coordination or cooperation in that it involves all affected parties, known as stakeholders, in the very beginning of a decision process, as well as in the decision itself. Collaboration is an extremely effective way of finding a solution to a problem in situations where the problem itself cannot be agreed upon by those affected. With the increasingly complex relationship between cities and suburbs, as well as between suburbs, these types of problems are becoming more common than clear cut problems.