



## CHAPTER 5 ADDITIONAL PLAN RECOMMENDATIONS AFFECTING THE PLAN AREA

The following Sections contain recommended elements that affect the entire planning area of this Plan Update. Many of the recommendations were carried over from the previous 2000 Comprehensive Plan Update where such recommendations are still valid today. The consideration and implementation of these recommendations will help to provide a cohesive implementation plan for the County for the next 20 years.

### PUBLIC SCHOOL RECOMMENDATIONS

Since the development of the 2000 Campbell County Comprehensive Plan Update, the Campbell County School District has seen an increase in the student population throughout the district and, as a result, has added a new elementary school, Crossroads Elementary, in Cold Spring in August 2007. In order to help fund this new school, the district sold the former A.J. Jolly Elementary School in California and the Highland Heights Elementary School building to partially fund the new construction. A.J. Jolly Elementary School closed in May 2005 and merged with Alexandria Elementary. The merged facility was renamed Campbell Ridge Elementary School. The Highland Heights Elementary School was closed after the 2006 – 2007 school year.

The Campbell County School District finalized a facilities plan update which was completed in 2007 and adopted by the Kentucky Board of Education in June 2007. Highlights include:

- Continued participation and cooperation between the Campbell County School Board and the Campbell County Fiscal Court and Planning and Zoning Commission is essential to successful decisions.
- The practice of sharing public school recreational facilities between the school and non-school population should be increased in scope;
- The Campbell County Fiscal Court should actively participate with the school district in the land acquisition process. This participation should begin in the early stages of acquisition to ensure that sufficient and appropriate land is obtained for future expansion of school facilities, without displacing recreational facilities. The legislative bodies of Campbell County should also continue to actively participate in the actual design and provision of school sites and related recreational facilities to provide for area residents as well as the school population;
- Inform and encourage private businesses, landowners, and public and semipublic organizations to donate undeveloped land for educational or recreational use;
- When even athletic fields are established they should be multi-use in nature and be located close to public schools to maximize use and take advantage of existing parking;
- Public swimming pool development should be done concurrent with school development to maximize usage and share costs;
- Outdoor Educational Centers should be developed, to provide a unique addition to the school curriculum;



- The Fiscal Court, through its personnel, should provide assistance to the school system when it develops its Master Educational Facility Plan;
- Future school facilities should be located to take advantage of existing transportation networks;
- Road networks should be developed to serve high growth areas so services of fire, ambulance, and school bus transportation could be efficiently provided; and
- The school system should be asked to review and comment on any residential or business development, especially where a zone change is requested, prior to being addressed by planning and zoning so the concerns regarding the impact on the schools could be considered.
- The replacement of the Area Tech Center with a new building on the High School Campus (approximately \$5,500,000.00).
- Construction of a combined High School/Middle School Facility to serve 1,000 High School students and 750 Middle School students (approximately \$29,000,000.00).
- Major renovations to the Campbell County Middle School to expand kitchen, cafeteria, library, administrative area, auditorium and gymnasium (approximately \$4,000,000.00).
- Major renovations to Reiley Elementary School including: library, office, security, kitchen and classrooms (approximately \$3,400,000.00).
- Major renovations to Cline Elementary School including: elevators, library, office, security, kitchen, classroom and parking (approximately \$3,400,000.00).
- Major renovations to Grants Lick Elementary School including: parking, doors, windows, HVAC replacement, electrical, lighting, plumbing and ADA accessibility (approximately \$3,400,000.00).
- Major renovations to the Alexandria Elementary School to convert into the district alternative school including: parking, doors, windows, HVAC replacement, electrical, lighting, plumbing and ADA accessibility (approximately \$2,900,000.00).
- Providing fixed active white boards and projectors in all classrooms, district wide, with wireless capability (approximately \$1,140,000.00) (\$6,500.00 per classroom).
- Construct a new central office facility at 20,000 square feet (approximately \$3,500,000.00).
- Construct a new 15 acre sports complex at the High School including lighted softball field and football field (approximately \$1,000,000.00).
- Minor renovations to the Central Bus Garage and the maintenance building (no costs identified).
- Construction of a gymnasium addition to the Grants Lick Elementary School (approximately 5,500 square feet) (approximately \$950,000.00).



## RECOMMENDATIONS FOR PARK AND RECREATION

In February 2002, Campbell County completed its Parks and Recreation Master Plan, which included a detailed inventory of the County's existing parks and recreational facilities. The Plan identified a total of 999 acres of County-owned park facilities, as well as 47 City parks and 12 school sites that provided recreational opportunities. The Parks and Recreation Master Plan identified community parks, neighborhood parks and mini-parks.

The Parks and Recreation Master Plan identifies specific recommendations for improvements to many of the inventoried parks, evaluates demand for various recreational activities and projected existing and future need for additional park facilities in non-specific areas of the County. The Parks and Recreation Master Plan also include a consensus-based ranking of proposed improvements and new facilities. The reader is encouraged to review this Master Plan in conjunction with the recommendations of the County Comprehensive Plan Update.

## RECOMMENDATIONS FOR THE FIRE PROTECTION PLAN

As was the case with the 2000 Plan Update, there continues to be a shift in population and housing development to the central and southern portions of the county. This trend is expected to continue with the 2007 opening of the Eastern Regional Wastewater Facility and upgrades to the transportation network. Based on the continued projected growth in these areas, this plan continues to suggest that fire protection services in the central and southern areas need to be continuously reviewed as new developments are proposed and may require the location of a new fire station, in addition to the existing stations, in order to provide adequate response times, staff and equipment to all areas of the County. It is highly recommended that the appropriate fire district be included in the review of non-residential use and residential subdivision approval to ensure adequacy of fire protection and emergency medical services.

### *Recommended Standards for the Distribution of Fire Companies*

BASIC FIRE FLOW	NUMBER OF COMPANIES REQUIRED	FIRE FLOW DURATION (3)
500-1,000 GPM (2) Ladder Companies	1 engine company within 2-1/2 miles 1 company within 2-1/2 miles	2 hours
1,250-2,500 GPM Ladder Companies	2 engine companies within 1-1/2 miles 1 company within 2-1/2 miles	2 hours
3,000-3,500 GPM Ladder Companies	2 engine companies within 1-1/2 miles 1 company within 2-1/2 miles	3 hours

(1) Total number of companies required in an area the size of Northern Kentucky would be based on the distribution standards as contained herein.

(2) Gallons per minute.

(3) A water system capable of delivering at least 250 gpm for a period of two hours, plus consumption at the maximum daily rate.

SOURCE: Fire Suppression Rating Schedule of ISO commercial Risk Services, Inc., as coordinated with the Insurance Services Office, 1980.



## RECOMMENDATIONS FOR THE POLICE PROTECTION PLAN

No major changes have taken place since the 2000 Plan Update. This plan further recommends no major changes from the existing activities currently undertaken by the police departments serving the area covered by this Plan. Population growth and new development may create additional demands on police service. This Plan Update suggests that each department consider the future growth of the area when decisions on manpower and equipment are made. It is highly recommended that the appropriate police department be included in the review of non-residential use and residential subdivision approval to ensure adequacy of police protection.

## RECOMMENDATIONS FOR THE LIBRARY PLAN

The 1992 Campbell County Plan Update recommended the location of a library branch in the Alexandria area with continued validation in the 2000 Plan Update. The 2005 Campbell County Public Library Long Range Plan identifies one additional branch south of the Alexandria area along U.S. 27 near Parkside Drive by the AJ Jolly Park. No other long range plans to construct additional branch facilities are identified. The existing outreach program has made it somewhat easier for rural residents to have access to some library functions; however, the nearest facility is in Cold Spring. Continued projected population growth and residential development anticipated in the central and southern portions of the County not currently served by libraries may override the capabilities of the outreach program. Therefore, this Plan Update maintains the need for another facility, as does the Public Library Long Range Plan to be located in the southern part of the county. The Public Library also has identified expanded outreach services, in particular for children, electronic formats of books, publications and documents available on line and wireless internet access at all Public Library branches.

## RECOMMENDATIONS FOR THE WATER SYSTEM PLAN

Although the Northern Kentucky Water District constructs, repairs and upgrades its lines and facilities on a regular basis, information on long-range capital improvement planning is not readily available to the public after the events of 9/11. Recommended improvements within this plan update are based on the previous recommendations of the 2000 Plan Update which focused on a twenty (20) year planning period. Planned improvements by the Northern Kentucky Water District are incorporated by reference within this plan update.

General recommendations within previous Water System Plans are listed under sections entitled: Urban Development and Water System Expansions, Pumping Stations and Distribution Systems, and Recommended Improvements for Water Treatment Plants, Raw Water Supply and Distribution Systems. All recommendations made at that time should still be considered valid for implementation within a twenty (20) year planning period unless otherwise specified.



## Urban Development and Water System Expansion

The Water System Plan is based on the interrelationship between urban growth and water system needs. Areas recommended for development have been evaluated on the ability to be provided with reasonable, economical and adequate water system facilities. At the same time, improvement expansion of water systems, particularly the staging of construction, should be designed to encourage planned and orderly growth and to discourage undesirable development patterns.

- It is recommended that design criteria for distribution systems, proposed within new developments, be based upon the Insurance Services Office (ISO) Fire Suppression Rating Schedule and the National Fire Protection Association's (NFPA) Fire Protection Handbook. The following factors should be considered: Public Protection Fire Rating Classifications, Needed Fire Flows, Fire Flow Testing, Fire Hydrant Distributions, Water Main Sizes and Fire Hydrant Spacing. Provision for an adequate water supply is essential to ensure that developing and redeveloping areas do not reduce current fire protection class levels within each municipal fire department or fire protection district.
- It is recommended that water distribution systems within existing and new developments and redevelopments be interconnected or looped wherever feasible, to improve circulation of potable water supply. Amendments to water regulations by the State of Kentucky impose rigid requirements regarding water quality for drinking water, including improved measures for chemical testing, fire hydrant flushing to further ensure against stagnated areas causing lower levels of chlorine residual associated with health problems.

## Recommended Improvements - Distribution Systems

In addition to strengthening the distribution system in areas presently being served, the Water System Plan recommends expansion of existing systems to provide water supply to all areas of proposed urban development. Water system modifications, additions, and/or deletions to the previous Water System Plan including Water Treatment Plants and Raw Water supplies, Transmission Systems, Pumping Stations and Storage Facilities, were previously prepared hydraulically by the water service district's consultant Black & Veatch, LLP. The analysis using complex computer software programs generated a master plan including specific capital improvement projects. These projects extracted from that plan, recommended to be constructed as part of Phases I, II and III have been incorporated within this comprehensive plan.

The aforementioned Master Plans for Kenton and Campbell Counties by Black & Veatch published in 1998 included a total of 120 water supply system projects estimated at a probable cost of approximately 155 million dollars. Seventy (70) projects, at a probable cost of 39 million dollars, were recommended within Campbell County impacting the planning area.



The following planning efforts are currently underway in the planning area of Campbell County with respect to expanding and upgrading the water system:

- Stonehouse Road, Oneota Road and Washington Trace – Melbourne

The District will be installing a new 12" water main on Stonehouse Road from Nelson Road to Oneota Road. The water main will be installed on Oneota Road from Stonehouse Road to Washington Trace. The water main will be installed on Washington Trace from Oneota Road to Carthage Road. This project is intended as a hydraulic improvement to strengthen the surrounding area and provide more reliable water service and fire protection. This project is still under design.

- 4 Mile Pike

The District will be replacing the water main from Poplar Ridge Road to 9 Mile Road with an 8" water main. This project is currently under design.

- Ohio River Pump Station

The District will be installing two 1500KW backup generators. This project is currently under construction.

- Ripple Creek Pump Station

The District will bore and jack a 30" water main under AA Highway, provide a 20" redundancy main to existing 20" main serving the south end of the county and stub out for a future 24" water main along the AA Highway. The project is currently under construction and will be completed in Spring of 2008.

- AA Highway

The District will be installing a 24" water main extension from Ripple Creek Pump Station to East Alexandria Pike along the AA Highway. The project is currently under design.

- U.S. 27

The District will be installing a water main will be installed from Lickert Road to Riley Elementary School along U.S. 27. The project is currently under design.

- Main Street Alexandria

The District will be replacing the water main from Riley Road to the Alexandria Tank along Main Street. The project is currently under design.



- Fill Station – California

The District will be installing a water fill station on Shortcut Road. The project is currently under design.

## RECOMMENDATIONS FOR THE SEWERAGE SYSTEM PLAN

Recommended improvements within this Plan Update are based on a twenty year planning period. Planned improvements by Sanitation District No. 1 have been incorporated by reference within this Plan Update. All recommendations made in the 2000 Plan Update that are still valid for implementation within a twenty-year planning period, are included in the following sections.

### Operation and Maintenance of Existing Sewerage Systems

The Sanitation District No. 1 constructs, repairs and upgrades its lines and facilities on a regular basis. With respect to the existing system, the type or repairs annually performed by the District include the following: Replace manhole lids, Replace frames, Reset frame to manhole, Remove obstruction/roots, Clean manholes, Clean main lines, and Heavy cleaning via mechanical machines to eliminate blockages.

### Urban Development and Sewerage Systems Expansion

The Sewerage System Plan is based on the relationship between urban growth and sewerage system needs. Areas recommended for development/redevelopment are evaluated based on the economical and adequate centralized sewerage systems. At the same time, improvements and expansion of centralized sewerage systems, particularly the staging of construction, should be designed to encourage planned and orderly growth.

### Water Quality and Sewage Treatment

The quality of water within our streams and rivers is directly related to “point” and “non-point”<sup>6</sup> discharges dumping into these waterways. Combined sewer systems, which serve almost half of the sewered population residing in Northern Kentucky, are responsible for a significant amount of the discharge of untreated sewage, diluted with rainwater, to Banklick Creek, and the Licking and Ohio Rivers. Compounding the problem is the fact that many of the combined sewers are capable of carrying surface runoff from only a minor rainfall. More severe rainfalls result in interior flooding and ponding of runoff mixed with sewage, which constitutes a health hazard and a nuisance problem. In addition, most of the combined sewers are more than 75 years old and have not been adequately maintained.

---

<sup>6</sup> “Point” discharge refers to pollutants that come from a single source such as a factory or wastewater treatment plant. “Non-point” discharge does not have one specific source, such as a factory. Non-point source discharge comes from the cumulative effect of a region’s residents or businesses going about their everyday activities, such as fertilizing a lawn or driving a car.



Flood proofing, or raising manholes, inlets or bypasses, to 15 feet above normal pool elevation (or 470 feet) for the Ohio River Interceptor has reduced river water intrusion to less than 90 days per year. This improvement has undoubtedly improved water quality in the Ohio River Basin area, but it is not enough. Measures need to be undertaken to further protect the water supply in order to minimize the risk of contamination.

- It is recommended that regulations be prepared banning the intrusion of storm water from private sources (i.e., roof leaders, area drains and other inlets, etc.) within separate sanitary sewer service areas, a primary cause of capacity problems at waste water treatment plants. The Kentucky Division of Water (representing the US EPA) regulates sanitation District No. 1. In early 1997, the District was required to reduce the number of Sanitary Sewer Overflows (SSO's) occurring in the region's sewer system. The state's directive fits with the District's on-going action of remediating the sewer system. Capital improvements underway already include extensive relining of sewer lines with cracks, breaks and broken joints. Also included is sealing leaky manholes and flood proofing pipes located in creeks. Unfortunately, only the public source of SSO's has been addressed. Many homes direct storm water into public sewers through rain gutters, driveway drains and sump pumps. These private sources of storm water have caused frequent overflows of the public system and have created EPA violations. Regulation of private source overflows has not been reinforced in Northern Kentucky. The magnitude of the June 1998 storm was unparalleled. More rain fell during that month than in the same month within the past 40 years. The District's sewer system is not designed to handle this magnitude of water and costs for expanding infrastructure are prohibitive at the present time. As an intermediate solution in problem areas, customers are encouraged to purchase sewerage backup and/or overflow insurance. For a reasonable cost, repairs from damages incurred from frequent or infrequent storms maybe reimbursed.
- It is recommended that Short and Long Term Plans for Combined Sewer Overflows (CSO's) and By-Passes, including river water intrusion, be prepared and implemented in accord with EPA regulations. A Short Term plan was required to be put in place January 1, 1997, where EPA has indicated that no major system intrusion can occur. According to District Officials, a plan has been completed by consultants and submitted to EPA identifying the problems with combined sanitary and storm sewers. Severe rainfall results in interior flooding, mixed with sewage, and by-passing constitutes a health hazard and water quality problem.
- It is recommended that further modifications to the Dry Creek Waste Water Treatment Plant be made for improved waste water treatment of all such flows associated with Infiltration and Inflow (I/I) problems and river water intrusion, in accordance with state and federal regulations. Addressing the problem for handling Suspended Solids is a priority according to District personnel. If and when regulations change, improvements to upgrade capacities or other processes must follow.
- It is recommended that alternatives for disposal of sewage sludge be studied and implemented, when practicable. Earlier practices impacted water quantity and capacity of landfill sites. Current resource recovery practices regarding sewage sludge indicate that other beneficial uses are available following processing techniques.



- It is recommended that whenever feasible tie-ins to new centralized sewer systems be initiated, thereby reducing the number of individual on-site sewage systems. Incentives are encouraged to require owners of on-site systems to connect to new centralized systems to prevent further sickness and disease which result from improperly working on-site sewage disposal systems.

## Recommended System Improvements

In addition to providing centralized sewer systems in areas presently served by alternative systems (such as small waste water treatment plants and on-site sewage disposal systems), the Sewerage System Plan recommends expansion of existing systems to provide adequate centralized systems, according to a prioritized schedule, to all areas of proposed urban development within the Urban Service Area as identified on the Future Land Use map (**Figure 4-2**)

### *Alternative Wastewater Systems for Rural Developments Outside of the Urban Service Area*

Centralized sanitary sewers are available within urban areas with regional treatment provided at the Dry Creek Waste water Treatment Plant. Numerous smaller packaged plants through surface discharges currently serve other waste water generators until regional centralized sewers become available. However, in most areas outside of the Urban Service Area, individual on-site sewage disposal systems are used. Unfortunately, these often do not work properly, due to poor maintenance and/or the existence of unstable clayey soils, as documented on soil maps. This is why all development in the Urban Service Area is required or encouraged to be connected to centralized sewer systems. In the meantime, it is recommended that alternative systems for rural developments outside of the Urban Service Area be considered by proper authorities. Examples and further description of such systems documented by the U.S. EPA include the following:

- On-site Tank and Soil Absorption Trench - Most common systems where solids settle in a tank and liquid is transported through perforated pipe in trenches to crushed rock and soil for treatment.
- Aerobic System and Soil Absorption Field - Air and waste water are mixed and bacteria growth liquefies solids for same above trench treatment.
- On-Site Tank and Soil Absorption Bed - Similar to System 1 but fields are smaller where space is limited.
- On-Site Tank with Alternating Absorption Fields - In problem clayey soils, one field remains inactive through a valve box while the other is used for renewable treatment.
- A) On-site Dosing System - Pump or siphon forces liquid to perforated pipes in controlled, even doses for improved renewable treatment: B) On-Site Closed Loop - Variation of A, used where ground is nearly level.
- On-Site Tank with Sloping Field - Serial Distribution - Similar to System 5, but drop boxes regulate liquids so highest trench fills first, second, third etc. This system is suitable for use on slopes.
- On-Site Tank with Seepage Pit - Liquid flows into pit with open - jointed brick or stone walls surrounded by rock and soil for treatment.



- On-Site Tank and Leaching Chambers - Open bottom concrete cavern replaces perforated pipe trenches and rocks, where liquids are spread uniformly for soil treatment and venting.
- Mound Systems - Liquid pumped from tank to perforated pipe in a sand mound for treatment through above vegetation and below through rock and soils. This is used in tight soils or high water table.
- Evapotranspiration Bed - Similar to System 9, but sand bed has waterproof liner with treatment provided through evaporation. This is used where absorption fields are not possible.
- On-site Tank, Sand Filter Disinfection and Discharge - Ground level or buried sand pit, filters liquid to disinfection tank for discharge to stream where absorption fields are not possible.
- Low-Pressure Subsurface Pipe Distribution - Pump forces liquid through small diameter perforated pipes in controlled, even doses. This system used in rocky soil or high water table.
- Holding Tank - Sewage stored and pumped out to truck where soil absorption field is not possible.
- Cluster Systems - Several home sites share a common soil absorption field or other alternative system.
- Waterless or Low Water Toilet System - Waterless composting, incinerating and/or recycling oil flush; low water recycling chemical and recycling water, treats liquids via renewable or other energy sources.
- A) Blackwater System - Toilet wastes (blackwater) are handled similar to System 9.  
B) Greywater System - Household waste water from kitchen, bath, laundry (greywater) needs separate treatment.
- Small Diameter Gravity Collection System - Smaller pipe alternative to standard 8 inch pipe is sloped for treatment cost savings.
- Vacuum Collection System - Central vacuum pump transports sewage to tank and treatment plant. This system requires standby electric power and alarm system.
- Land Applications - Sewage liquid is applied to land to nourish vegetation and purification through irrigation, overload flow and rapid infiltration.
- Pressure Sewers - GP - Grinder pumps sewage from one or more home sites through small diameter pipe to central or alternative treatment plant.
- Pressure Sewers - STEP - Septic Tank Effluent Pump forces cleaner liquid from one or more home sites through plastic pipe for treatment.

Because of the increasing number of on site septic systems throughout the county that are failing according to the Northern Kentucky Independent Health District, the majority of the aforementioned systems are dependent upon soils for treatment and should be discussed and coordinated with the Northern Kentucky District Board of Health. Open dialogue with the Kentucky Natural Resources and Environmental Protection Cabinet and the Northern Kentucky Independent Health District to investigate new and better sewage alternatives for these rural areas that will not be served by central sewage systems anytime in the near future should continue to find viable alternatives. Some of these alternatives may include the onsite or cluster treatment, such as Wisconsin Mounding, which is most appropriate for low density residential and light commercial developments.



Site evaluation factors for conventional on-site systems presently are regulated by the Northern Kentucky District Board of Health and include the following: (1) topography (slope percent); (2) landscape position; (3) soil texture and group; (4) soil structure; (5) internal soil drainage; (6) soil depth; (7) restrictive horizons; and (8) available space field inspections from the noted soil factors result in an overall site classification for suitability. Permits for on-site systems are issued based upon soil suitability classifications. However, regardless of the type of on-site system used, all such systems should include monitoring and/or inspection under government authority.

Efforts should be continued for considering alternatives to conventional systems to ensure adequate waste water treatment as an integral part of the Comprehensive Plan.

The following planning efforts are currently underway in the planning area of Campbell County with respect to expanding and upgrading the sanitary sewer system:

- Pond Creek Force Main and Gravity Sewer to Eastern Regional Water Reclamation Facility

The Project consists of preliminary studies, modeling, preliminary/final design, easement acquisition, construction engineering services and construction of the proposed collection system improvements. Scheduled completion is 2008.

- U.S. 27/AA Service Area

The project consists of modeling, preliminary/final design, easement acquisition, construction engineering services, and construction of the proposed improvements to the collection system. Scheduled completion is 2011

- Riley Force Main and Gravity Sewer to the Eastern Regional Wastewater Treatment Plant

The Project consists of preliminary studies, modeling, preliminary/final design, easement acquisition, construction engineering services and construction of the proposed collection system improvements. Scheduled completion is 2008.

- Sunset Force Main and Gravity Sewer

The Project consists of preliminary studies, modeling, preliminary/final design, easement acquisition, construction engineering services and construction of the proposed collection system improvements. Scheduled completion is 2008.

- Alex Licking Gravity Sewer to Contract 1

The Project consists of preliminary studies, modeling, preliminary/final design, easement acquisition, construction engineering services and construction of the proposed collection system improvements. Scheduled completion is 2008.



- Riley Road #2 Pump Station

The Project consists of preliminary studies, modeling, preliminary/final design, easement acquisition, construction engineering services and construction of the proposed collection system improvements. Scheduled completion is 2008/2009.

- Alex-Licking Pump Station

The Project consists of preliminary studies, modeling, preliminary/final design, easement acquisition, construction engineering services and construction of a new Alex Licking Pump Station. Scheduled completion is 2008.

- Highland Heights/Silver Grove Pump Station Study Phase I and II

Study to develop and evaluate alternatives to reduce overflows in the Highland Heights/Silver Grove areas. The result of the Phase II will be a planning level recommendation. Detailed design and construction costs will be developed after Phase II is complete. Scheduled completion is 2013.

- Large Diameter Sewer Assessment Program – Phase III (AquaZoom & Structural)

Assessment and rehabilitation of the large diameter sewers in the District's service area. Includes AquaZoom screening assessment of all critical sewers. Scheduled completion is 2020.

- Pump Station Generators

Purchase and installation of backup power at approximately eight pump stations. All stations are planned for the future. \$500,000 per year of five (5) year capital improvement project. Scheduled completion is 2011.



## RECOMMENDATIONS FOR THE STORM WATER PLAN

Recommended measures within this plan update are based on a twenty year planning period. All recommendations made in the 2000 Plan Update that are still valid for implementation within a twenty-year planning period, are as follows:

- It is recommended that efforts be made to improve coordination with the enforcement branch of Natural Resources and Environmental Protection Cabinet/Kentucky Division of Water regarding amendments to KRS 224 and Administrative Regulations pertaining to Storm water and Erosion Control Measures, and such regulations be enforced. Non - Point source pollution from construction activities has been an on - going problem for many years. Improved regulations adopted in 1992 provide additional criteria to further ensure that adequate preventative measures are in place and disturbed areas reseeded and mulched, in order to protect the county's environmentally sensitive areas from such non-point source pollution.
- It is recommended that Best Management Practices (BMP's) for all construction activities including Non-Point source pollution, be implemented in concert with state and local regulatory agencies. Documented practices and preventative measures to control on-site erosion, if implemented properly, have been successful in preserving top soil and improving water quality.
- It is recommended that plans for the collection and disposal of storm drainage be prepared to the extent that it is required by applicable federal and state regulations. Point and Non-Point source pollution should be controlled by Sanitation District No. 1 in accord with federal and state regulations for the public's health. Sanitation District No. 1, in late 1996, began a study on the feasibility of starting such a storm water management plan. This study should include the containment of storm water by natural means.
- It is recommended that maintenance responsibilities for Stormwater Runoff Control Facilities, now required for nearly all urban developments including single - family residential uses, be further defined and resolved among private and public entities. Maintenance of shared privately owned infrastructure (i.e., storm drainage systems including detention and retention basins) are often beyond the practical abilities of single "fee simple" ownerships. Maintenance responsibilities by Homeowners Associations, historically, have not worked for these systems. Such facilities should be owned and maintained by a regional entity or district where skilled labor and other personnel are better trained and more qualified to maintain these systems. Efforts should be made to identify funding through a Stormwater Utility to lessen storm water problems, including rehabilitation of substandard systems and capital improvements on a system wide basis. This type of revenue generating is critical for maintenance, upgrading and expanding storm drainage systems.
- Phase II of the NPDES Storm Water Program was published in the Federal Register on December 8, 1999. Specific requirements within the Phase II program directly involve storm sewer systems within urbanized areas with multiple categories of industrial activity including land disturbance of one (1) acre or larger. Permits for all



applicable discharging will be required by those entities responsible which may include the state, county, cities or specific district created for the purpose of handling storm water in the most efficient way possible. The trend of responsibility is that a community or district cannot allow post development runoff to be greater than pre-development runoff. Public demand for improved water quality and environmental protection has been important in this process. Many rate structures use calculated user fees by utilizing factors that include impervious areas (hard surface such as parking lots, driveways, rooftops, etc.), property classifications and land use. Subdivision Regulations should be put in place by the Campbell County and Municipal Planning and Zoning Commission's regional storm water district to establish a regional facility fee based upon the equivalent cost requirements for on-site storage facilities to be substituted/escrowed toward future regional facilities by a regional entity or district. Such funding mechanisms could also be used to maintain such existing facilities.

- It is recommended that location and extent of all storm sewer systems be mapped with the County GIS computer systems. Mapping of storm sewer systems is the first critical step for inventory and preparing and updating more detailed Storm water Management Plans. Densification of the county's monument control system would enable utilization of uniform state plane elevation base to begin the process necessary to analyze water sheets, evaluate undersized systems and enable improved analyses of such system for the proper management of storm water system.
- It is recommended that GIS capabilities, including updated soils information, be utilized for storm water hydraulic modeling watershed stream analyses. Watershed modeling using GIS and other software programs can identify storm water problem areas for remediation and for other new capital projects.
- It is recommended that minimum standards and criteria be studied and amendments made regarding the design of storm water inlets and increased safety measures for children. Certain storm water inlets deemed to be too dangerous or a nuisance should be prohibited and/or modified through new standards and regulations to improve safety.



## RECOMMENDATIONS FOR THE SOLID WASTE PLAN

Recommended measures within this Plan Update are based on a twenty (20) year planning period. All recommendations made in the 2000 Plan Update that are still valid for implementation within a twenty-year planning period, are as follows:

- It is recommended that the mission, goals, objectives, and tasks within the multicounty plan for the Northern Kentucky Solid Waste Management Area (NKSWMMA) be continually evaluated and implemented. Input from Campbell County, having the second largest population and number of cities, has a significant impact on the Multi-County Solid Waste Management Plan administered by a solid waste coordinator in the offices of the NKADD. Solid waste generation within five separate jurisdictions in Campbell County demands improved measures to coordinate all solid waste functions, to ensure adequate protection of the environment, and to avoid duplication of services as an integral part of the NKSWMMA.
- It is recommended that uniform comprehensive ordinances regulating solid waste management including storage, collection, transportation, disposal, open dumping, blight, litter, public nuisances, etc. be drafted and adopted by the Fiscal Court and all local government bodies. Developing a uniform ordinance applicable to the entire county would resolve conflicts with existing regulations and develop a much better framework for solid waste management at a regional level.
- It is recommended that solid waste service be provided under government authority to all areas of the county. Universal contract collection is not yet provided to all residents under governmental authority, which is an environmental concern.
- It is recommended that regional resource recovery facilities, including transfer stations and recycling technology, be provided to serve Campbell County. Regional facilities including transfer stations and other such technology for material separation, recycling, processing and compaction, will reduce long haul distances to landfill sites and create revenue through tipping fees for capital projects for funding the Northern Kentucky Solid Waste Management Area (NKSWMMA) for Campbell County.
- It is recommended that emphasis on recycling programs, which involve material separation and reduction, be continued. Improved resources conservation and recycling methods reduce landfill space and further provide for materials recovery to enhance the supply of goods and services.



## RECOMMENDATIONS FOR INFORMATION TECHNOLOGY

The distribution of information in a quick, efficient and cost effective manner can have tremendous benefits for a community. Education, news, emergency notification, and communication are just some of the ways that cellular, land line, and wireless technology can be used that benefit a community.

All recommendations made in the 2000 Plan Update that are still valid for implementation within a twenty-year planning period, are as follows:

### *Community Plan*

A unified county/region-wide plan needs to be fully developed for information technology. Aggressive development of information technology infrastructure is taking place due to consumer demand and also due to changes brought about by the Federal Communications Act of 1996. Accordingly, a comprehensive, unified countywide/regional plan must be developed and implemented to address the needs and concerns of all jurisdictions and to prevent a fractious, piecemeal approach which could adversely affect the continued orderly development of the region.

A long-range goal, first established in the 2000 Plan Update, was to be able to offer everyone in Campbell County, the ability to have individual residential access to information technology and infrastructure if desired. A short-term goal should be to first make services available at local libraries, shopping malls, or other public places. A long range plan of the Campbell County Public Library is to provide free wireless internet access at its branches in the near future.

### *Education*

Continuous efforts should be made to inform decision-makers and the general public about present and future information technology developments in a timely fashion. Decision makers must be well informed in order to make intelligent decisions. Training programs, on-going education, and public awareness programs will all contribute to the goal of making people aware of developments and their potential impacts. Since information technology developments are unfolding so rapidly, it is imperative that these educational efforts be sustained and continually offered in order to provide the most up to date information.

### *Cellular Towers, PCS Facilities and Satellite Dishes*

Siting of cellular phone towers, Personal Communications System (PCS) facilities and satellite dishes should be subject to local review and approval. The Federal Communications Act of 1996 has severely restricted, to the point of preempting local control, the ability of local authorities to control satellite dish placement for aesthetic reasons. Local authorities have no control over satellite dishes 1 meter (3.28 feet) or less in diameter in residential areas and 2 meters (6.56 feet) or less in commercial areas. Under current state statutes, cellular towers and their facilities are subject to local review by the Municipal Planning and Zoning Commission only after registering with the Kentucky Public Service Commission. Kentucky Revised Statutes, Chapter 100.985 through 100.987 provides the authority and process for Planning Commission review. The Campbell County and Municipal



# Comprehensive Plan Update

## Campbell County, Kentucky

Planning and Zoning Commission has registered with the Public Service Commission and has adopted local procedures for administering the provisions of KRS 100 relating to cellular towers and accessory structures.

Infrastructure within the public right-of-way is still subject to local control. However, under current state and federal restrictions regarding cellular, Personal Communication Services (PCS) and satellite dish technologies, it is a simple matter to bypass local review and control as none of these technologies are restricted by right-of-way access. Legislative initiatives in this area should be examined and considered.

Sites for cellular phone towers, PCS, satellite dishes, and other similar technologies which may be developed, should be examined and evaluated through technologies such as GIS and computer imaging. GIS can be used to locate optimal sites for facilities while computer imaging permits creation of visual models of proposed facilities. Service providers themselves use these technologies when making presentations before boards and commissions in areas of the country having local review and control authority.

Service providers should be required, where feasible, to share towers through co-location and site facilities in order to minimize their proliferation. Aesthetic issues are prominent and will need to be addressed at the local level to ensure the preservation of the rural character, where applicable. It will be important also, as new technologies make such towers or other facilities unnecessary to assure their removal and disposal.

Campbell County is currently limited, as are most communities within the state, due to current state law regarding these facilities. This Plan Update recommends that officials and the Planning Commission work cooperatively with the service providers and use the following list of recommended criteria when evaluating siting of such facilities:

- Cellular Phone Service Providers should be required to co-locate or share tower/facilities with other providers in order to minimize the proliferation of towers/facilities.
- Wherever possible, service providers should be required to use existing structures or facilities which meet all of the requirements of the proposed installation. For example, water towers, radio and television towers, tall buildings, commercial signs, church steeples, etc., in order to minimize the proliferation of new towers/facilities.
- Wherever possible, siting of such facilities should be required to be located in areas identified for industrial or commercial type uses.
- When located in residential areas, such facilities should be heavily screened from view and towers should be camouflaged or designed in such a manner to blend into the surrounding area. Changes in topography of the land can be used effectively to separate such facilities from adjacent residential uses.
- To provide for proper separation, adequate setbacks should be provided based upon adjacent land uses.
- The type of tower (e.g., monopole, carillon, etc.) should be evaluated based upon adjacent land uses and character of affected areas.
- When the facility is no longer required, it should be removed by the owner and the land restored to its natural state.



## *Employment and Economic Development*

In order to provide for a stable and diversified employment capability (Economic Development and Employment Goals and Objectives), appropriate information technology infrastructure requirements must be described, understood and encouraged. Information technology will play an increasingly important role in employment and economic development. Decision makers must recognize and examine the long term impacts (both good and bad) of decisions made in this area regarding the information technology infrastructure requirements of future employers, as well as new job skills and educational requirements for the workers of the future. These needs must be clearly described, understood, and encouraged where appropriate.

## *Zoning Issues*

The potential impact of increased telecommuting on transportation and land use is recommended be examined in light of the county's present and future zoning code and requirements. With its ability to alleviate dependency on vehicular trips to accomplish many tasks, information technologies will permit many people to work out of their homes, resulting in potential zoning and/or business permit issues. These issues are recommended to be examined when the zoning code is reviewed.

## *Future Facilities*

Construction of future facilities is recommended to be examined in light of capacity, technology, and other information technology needs. Information technologies will impact the design, construction, and wiring of future facilities, both public and private. Decision makers must examine these issues, in terms of new technology developments, capacity, and expansion when designing and building new schools, libraries, city buildings or any other public buildings. Right-of-way issues in subdivision development need to be examined in light of emerging technologies and public expectations for the use and delivery of information services. Libraries, schools, and other public buildings need to have a flexible design in order to accommodate future developments as simply as possible. Electronic linking of community facilities can improve access by the public.

It is important to recognize that simply installing equipment or computerizing information which currently exists in paper form is not the end in itself. Taking advantage of improved capabilities in the delivery of the information through reductions in cost, improved availability and timeliness, and better decision-making is the ultimate goal.

## *Examination of and Improved Use of Information Technologies*

Public and semi-public organizations or agencies should examine their current use of information technologies in the provision of services to the public and strive to improve such use where appropriate. Increasing numbers of our citizenry are becoming familiar with the use of computers and on-line systems. Information of a public nature should be made available, where practical, in a format which is increasingly being expected by the public. Care must be taken however, that in so doing, traditional access methods are not inadvertently denied to those without the latest technology. This can be achieved through



# Comprehensive Plan Update

## Campbell County, Kentucky

the use of "Public Access Stations", information kiosks, or on-line sites such as a "home page" on the Internet's "World Wide Web". Here, citizens can get the latest information about public hearings, meeting agendas, minutes of previous meetings, maps of zoning districts or a multitude of other kinds of information in one, central location. Citizens could also use e-mail to deliver their comments on issues to county staff and officials. Campbell County has already successfully embraced this use of information technology in many aspects of county government (Fiscal Court, Public Schools, Public Library, County Government, etc.).

### *Community Reference Base Station and Monumentation*

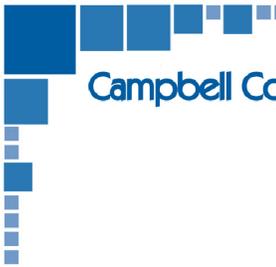
In order to maintain accurate and reliable land records in the future, a Global Positioning System (GPS) community reference base station and a program of land monumentation have been established. Currently, all new properties can be referenced to a known monument within two miles of the property. This system should be continually updated and have a goal of ensuring that all new properties can be referenced to a known monument within one-half mile of the property. As development continues to take place, it will be important that accurate records of property boundaries be maintained by use of the improved methods, technologies and equipment available to surveyors today. By using GPS capabilities and a system of established monumentation, references will be simpler to track and recreate in the future. A Community Base Station and monumentation will also prove useful in future map updating and as a reference for other uses.

### *Automation of Land Records*

The electronic submission of land records such as final plats, improvement drawings, and record copies of drawings (as-built drawings) are recommended to be made in a prescribed and uniform digital format, wherever possible, for purposes of improved record keeping and reduced errors.

### *Implementation*

A county-wide information technology plan is recommended to be prepared and should include all local jurisdictions and a steering committee of local representatives and professionals with knowledge of this technology.



# Comprehensive Plan Update

Campbell County, Kentucky

