

# **COMPREHENSIVE PLAN 2008 UPDATE**



## **CITY OF BELLEVUE**

**CAMPBELL COUNTY, KENTUCKY**

**PREPARED BY:  
THE CITY OF BELLEVUE  
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# **2008 CITY OF BELLEVUE COMPREHENSIVE PLAN UPDATE**

## **TABLE OF CONTENTS**

<b>I. Background Information</b>	Pg. 3
<b>II. Goals and Objectives</b>	Pg. 6
<b>III. Environmental Characteristics</b>	Pg. 14
<b>IV. Population, Housing, and Economic Conditions</b>	Pg. 18
<b>V. Land Use</b>	Pg. 24
Proposed Land Use Map	Pg. 38
Historic Districts Map	Pg. 39
<b>VI. Community Facilities</b>	Pg. 40
Community Facilities Map	Pg. 46
<b>VII. Water Supply and Waste Management</b>	Pg. 47
Water Distribution Flow Chart	Pg. 64
<b>VIII. Transportation</b>	Pg. 65
Transportation System Map	Pg. 71
<b>IX. Information Technology and Infrastructure</b>	Pg. 72
<b>X. Implementation</b>	Pg. 83

# **CHAPTER I**

## **BACKGROUND INFORMATION**

### **BACKGROUND**

In 1972, after five years of detailed research and study, contacting public officials, organizations, agencies, and various special interest groups, and holding public hearings, the Northern Kentucky Area Planning Commission (NKAPC) completed and adopted the first comprehensive plan to guide development within Campbell and Kenton Counties. That plan was entitled Northern Kentucky's Future. A Comprehensive Plan For Development 1972 -1990.

In 1981, the NKAPC prepared and adopted an update of the comprehensive plan entitled Northern Kentucky's Future. A Comprehensive Plan For Development: An Update-1980-2000. This plan with some modifications was adopted by the NKAPC as it pertains to the City of Bellevue. In 1982 the Bellevue Planning and Zoning Commission adopted this plan as it pertains to their area of jurisdiction, with slight modifications. In 1984, Campbell County withdrew from the Northern Kentucky Area Planning Commission. In December of 1987 the City of Bellevue and the Bellevue Planning and Zoning Commission adopted an update to the 1982 comprehensive plan. The 1987 plan was the first prepared specifically for the City of Bellevue, as previous plans had included every jurisdiction in both Campbell and Kenton counties. The plan was then updated in 1993 and 2000 to document any changes since 1987 and project future plans. Like the 2000 plan update, this comprehensive plan update is not a new plan for the Bellevue Planning and Zoning Commission, but an update documenting what has occurred during the period since the previous update and projecting future plans based on a current review of citywide development issues.

### **STATUTORY REQUIREMENT**

The comprehensive planning process is one of the basic requirements that must be fulfilled by the Bellevue Planning and Zoning Commission, as defined by Chapter 100 of the Kentucky Revised Statutes. This update, the original 1972 Comprehensive Plan, the 1981 Comprehensive Plan update, the 1987 Comprehensive Plan update, the 1993 Comprehensive Plan update and the 2000 Comprehensive Plan update have all been structured to meet the statutory requirements for local planning units under Chapter 100 of the Kentucky Revised Statutes. This update fulfills the specific requirements of KRS Chapter 100.197, which calls for the research and all elements of the Comprehensive Plan to be reviewed, and amended, if necessary, at least once every five years.

### **GENERALITY OF COMPREHENSIVE PLAN**

The contents of the comprehensive plan are intended to serve as a guide for public and private actions and decisions to assure development of public and private property in the

most appropriate relationships. The land use plan element is not intended to provide precise boundaries between proposed land uses. Rather, it is designed to provide land use recommendations for general areas. Additionally, various areas may be suitable for more than one type of land use. The question/evaluation of whether a given land use might be appropriate for a given area must be viewed considering the comprehensive plan as a whole, including the goals and objectives, development concepts, other elements (i.e., land use, transportation, community facilities), and other regulations which are determined to serve the purposes of the comprehensive plan.

## **METHOD**

The method used to update the comprehensive plan consisted primarily of evaluating existing conditions, changes that have occurred between 2000 and 2007, development plans proposed by the public and private sectors, and a general re-evaluation of previous plan recommendations. The 2000 Comprehensive Plan update was evaluated to determine if projections and anticipated events were occurring as expected (e.g., population growth, school enrollment, extension of water and sewer facilities, etc.). The process to update the Comprehensive Plan consisted of the following steps:

1. The city contracted with the Northern Kentucky Area Development District (NKADD) to assemble the plan update. The City then organized the Comprehensive Plan Task force consisting of planning commission members, a representative from city council, the historic preservation commission, the board of adjustment,, the urban renewal board, tree commission and Renaissance Board. The Task Force was formed to provide a broad representation from the city in the preparation of this plan update.
2. The Comprehensive Plan Task Force evaluated the statement of Goals and Objectives, which served as the framework for the 2000 Comprehensive Plan Update. During this review city residents and representatives of local organizations were invited to attend a meeting to make comments on the goals and objectives, as well as, on other planning related issues. The Task Force revised the goals and objectives on May 30, 2007 and on July 9, 2007 recommended their adoption to the Bellevue Planning and Zoning Commission.
3. The Bellevue Planning and Zoning Commission after a public hearing on July 30, 2007 adopted the goals and objectives as proposed by the Comprehensive Plan Task Force (Resolution #07-004). The Bellevue City Council adopted the goals and objectives on August 8, 2007 (Resolution #00-4-1).
4. The NKADD worked with city staff to review information on environment, population and housing, land use, community facilities, water and sewer, transportation, information technology and implementation.
5. These meetings culminated in the preparation of proposed future environment, population and housing, land use, community facilities, water and sewer, transportation, information technology and implementation plan elements.
6. On June 26, 2008 the Bellevue Planning Commission held the required public

hearing on the proposed update to the Comprehensive Plan. Following this hearing the Planning Commission then unanimously voted to adopt the 2008 plan update (Resolution #08-002).

# **CHAPTER II**

## **GOALS AND OBJECTIVES**

### **GENERAL**

The Goals and Objectives Element of the Comprehensive Plan (one of the four statutorily required elements of the Comprehensive Plan) continues to be a fundamental part of the comprehensive planning process, identifying the overall ends toward which the planning effort is to be directed. Chapter 100 of the Kentucky Revised Statutes requires a Statement of the Goals and Objectives, which "...shall serve as a guide for the physical development and economic and social well-being of the planning unit." These statutes also require that:

"The Planning Commission of each planning unit shall prepare and adopt the statement of goals and objectives to act as a guide for the preparation of the remaining elements and the aids to implementing the plans. The statement shall be presented for consideration, amendment and adoption by the legislative bodies and fiscal courts in the planning unit..." "...If the goals and objectives statement is not proposed to be amended, it shall not be necessary to submit it to the legislative bodies and fiscal courts for action..."

The Goals and Objectives, utilized in development of the 2000 Comprehensive Plan update, were evaluated for this plan update. Several amendments were made to reflect new or current desires of the City of Bellevue. The Bellevue Planning and Zoning Commission following a public hearing on July 31, 2007 took action to adopt these goals and objectives (Resolution #07-004). They were then forwarded for review and adoption by the Bellevue City Council as required in KRS 100.193. City Council adopted these goals and objectives on August 14, 2007 (Resolution #07-8-1).

These Goals and Objectives were used as the basis upon which all other elements of the update were built. They will continue to be used as the basis upon which all proposed plan and zone change requests and proposals for new development shall be judged.

## **GOALS AND OBJECTIVES**

### **HOUSING – RESIDENTIAL DEVELOPMENT**

**GOAL:** To ensure safe and sanitary housing is available to all residents.

OBJECTIVE: Encourage maintenance and renovation of existing homes in all areas of the city.

OBJECTIVE: Encourage redevelopment of existing housing in mixed use buildings.

OBJECTIVE: Provide incentives for eliminating blighted and substandard housing.

**GOAL:** To ensure a variety of housing types and residential developments are available to accommodate the different needs and desires of the population.

OBJECTIVE: Encourage development of a variety of housing styles to meet the needs of a wide range of family sizes, age groups and income levels.

OBJECTIVE: Discourage the conversion of single-family dwellings to multiple family dwellings and encourage conversion of multi-family dwellings to their original status.

**GOAL:** To achieve the goals of this element without unduly disrupting the goals of other elements.

OBJECTIVE: Effort should be made to ensure that areas that are proposed to be developed for purely residential purposes are protected from the intrusion of incompatible land uses. Development of new urban residential areas should be promoted only where they can be reasonably and economically served with essential public services.

### **TRANSPORTATION**

**GOAL:** To develop a transportation system capable of moving people and goods throughout and beyond the area in the safest and most convenient manner.

OBJECTIVE: Improve traffic flow along Fairfield Avenue by encouraging off-street parking.

OBJECTIVE: Improve north-south access on the east side of the city.

OBJECTIVE: Provide incentives for off-street parking throughout all areas of the city.

- OBJECTIVE: Integrate various modes of transportation to satisfy the needs of all segments of the population such as elderly, children, handicapped, low income families, and others.
- OBJECTIVE: Promote use of alternative forms of transportation, such as all forms of public transportation including buses, light rail, streetcars, and shuttles.
- OBJECTIVE: Develop and improve bike paths and sidewalks throughout the city.
- OBJECTIVE: Develop and promote use of water transportation, such as water shuttles.
- OBJECTIVE: Improve parking conditions throughout all areas of the city.
- GOAL: To achieve the goals of this element without unduly disrupting the goals of other elements.**
- OBJECTIVE: Ensure that transportation facilities do not have a negative impact on areas of concentration such as residential, commercial, recreation or public land uses. Such facilities should be developed so that they do not consume a disproportionate amount of urban land area, divide neighborhood or commercial centers, or adversely effect land uses along their corridors.

### LAND USE

- GOAL: To utilize the limited land resources within Bellevue to their best possible potential.**
- OBJECTIVE: A balanced mix of land uses including residential, commercial, industrial and recreational should be achieved while preserving the residential nature of Bellevue. Efforts should be made to ensure that all land is utilized in a manner compatible with surrounding land uses.
- OBJECTIVE: Encourage and promote new development and redevelopment of residential and commercial uses in the areas between Fairfield Avenue and the Ohio River, keeping in mind the character of the community.
- OBJECTIVE: Encourage and promote development and redevelopment of residential and commercial uses in the areas along Donnermeyer Dr., Grandview Ave, and Colfax from Riviera to Taylor Avenue.
- OBJECTIVE: Encourage and promote Fairfield Avenue as a retail corridor and community/tourist destination.
- OBJECTIVE: Encourage the restoration and reuse of historic mixed-commercial properties in the City.
- OBJECTIVE: Encourage adaptation to new approaches in land management and zoning.

- GOAL:** To restrict land use in environmentally sensitive areas.
- OBJECTIVE:** Restrict development in floodway to open space uses that do not interrupt the flow of water. Require new structures within the 100-year floodplain to be protected from a 100-year flood. Prohibit commercial and industrial development on slopes steeper than 12% and on residential property with slopes steeper than 18% unless developers can prove that the construction techniques employed will overcome the site's limitations.
- GOAL:** To ensure that the amount and location of facilities providing goods and services are based on need.
- OBJECTIVE:** Effort should be made to determine the amount and location of facilities providing goods and services, primarily on the basis of what can be supported. Inherent in this objective is the constant need to discourage over-development or premature development of facilities providing goods and services, which are not based on sound findings of need.

### EMPLOYMENT

- GOAL:** To increase employment capability in appropriate areas of the City.
- OBJECTIVE:** Utilize the land and buildings in commercial and industrial areas to provide the highest level of employment possible.
- OBJECTIVE:** Attract commercial activities that appear to have the greatest potential for success in this region.
- OBJECTIVE:** Efforts should be made to encourage and attract technology oriented commercial and industrial activities.
- GOAL:** To achieve the goals of this element without unduly disrupting the goals of other elements.
- OBJECTIVE:** Effort should be made to ensure that industrial areas are protected against intrusion of incompatible land uses. Elimination of undesirable intrusions will be necessary in order to minimize any adverse environmental effects caused by such uses.

### PUBLIC HEALTH

- GOAL:** To ensure adequate public and/or private health facilities are available to protect and care for the population.

OBJECTIVE: Effort should be made to ensure that adequate and well-located public health centers are available to serve the entire population. Support public health programs that seek to accommodate the unique needs of different segments of the population.

**GOAL: To ensure that an effective comprehensive program is available to prevent sickness and disease.**

OBJECTIVE: Effort should be made to ensure adequate, sanitary, and safe means of collecting, transporting and disposing of solid wastes and storm water.

OBJECTIVE: Effort should be made to ensure that the storm water collection system meets or exceeds all federal and state regulations.

OBJECTIVE: Promote a program of pollution control.

### **PUBLIC SAFETY**

**GOAL: To provide an effective program of public safety to prevent, where possible, and minimize, when necessary, injury or damage to persons or property.**

OBJECTIVE: Provide appropriate levels of fire and police protection, civil defense programs, flood protection programs and traffic safety programs.

OBJECTIVE: Increase the use of alternative policing activities.

### **EDUCATION**

**GOAL: To ensure that a quality education is available to all children in the area.**

OBJECTIVE: Effort should be made to ensure that adequate facilities and personnel are available to provide a quality education for all children including those with special needs.

**GOAL: To ensure that a variety of additional educational opportunities are available to serve the unique needs, desires and interests of the population.**

OBJECTIVE: Encourage and support programs for specialized education for pre-school children, the general adult population, persons seeking vocational training, and other specialized types of education programs including access to modern technological equipment.

**GOAL:** To ensure that educational facilities are conveniently located to their intended service population.

**OBJECTIVE:** Locate elementary schools within a reasonable walking distance in urban areas. Other educational facilities should be located in easily accessible areas. Location and size of educational facilities should be based on their ability to provide the most effective education to all segments of the population.

### UTILITIES

**GOAL:** To ensure that a dependable and adequate supply of all essential utility services are available to the residents of the city, while maintaining the most reasonable costs possible.

**OBJECTIVE:** Ensure that existing development, new development and redevelopment are provided with essential utility systems. Encourage underground utilities for new development and redevelopment especially along Fairfield and Taylor Avenues. Provide a safe water supply and centralized sewage facilities. Adequate safety factors should be installed to ensure dependability of system under normal and emergency situations.

**OBJECTIVE:** Meet standard of storm water management.

**OBJECTIVE:** Encourage the use of best management practices to reduce the strain of storm water on the current system.

**GOAL:** To encourage the development of future wireless services including wireless internet access without unduly disrupting the goals of other elements.

**OBJECTIVE:** Develop a list of criteria for the evaluation of wireless service facility sites that encourages co-location and universal access.

**OBJECTIVE:** Maintain accurate records and maps of existing facilities.

**GOAL:** To evaluate the development of future telecommunication facilities to provide universal access without unduly disrupting the goals of other elements.

**OBJECTIVE:** Develop a list of criteria for the evaluation of telecommunication facility siting that encourages co-location and universal access.

**OBJECTIVE:** Maintain accurate records and maps of existing facilities.

## **RECREATION AND OPEN SPACE**

**GOAL:** To provide an adequate amount and variety of recreational facilities and programs to satisfy the full range of needs of the population.

OBJECTIVE: Develop more recreational facilities and programs for the elderly and youth populations. Increase the amount of open space.

OBJECTIVE: Provide an indoor recreational facility or senior center.

**GOAL:** To achieve the goals of this element without unduly disrupting the goals of other elements.

OBJECTIVE: Effort should be made to ensure that the recreation and open space areas will complement and enhance surrounding development. Effort should also be made to protect recreational areas from intrusion of other uses.

## **RESOURCES AND ENVIRONMENT**

**GOAL:** To prevent long term damage to the environment and minimize short-term disturbances.

OBJECTIVE: Require adequate erosion, noise and air pollution controls at all areas, including but not limited to construction projects. Monitor and control potential contributors to all forms of pollution (air, water, visual, noise, etc.). Control development in environmentally sensitive areas such as flood plains and steep slopes.

OBJECTIVE: Preserve man made or natural features that have unique historical, architectural or natural value.

OBJECTIVE: Promote the development and preservation of urban forests.

## **HISTORIC PRESERVATION**

**GOAL:** To preserve and protect the unique historic sites and aesthetic qualities of Bellevue.

OBJECTIVE: Encourage the designation of historic districts. Encourage renovation, rehabilitation, restoration and maintenance of historic structures as well as homes and businesses within historic districts.

OBJECTIVE: Provide incentives for the renovation of buildings within the historic district.

OBJECTIVE: Encourage adaptive reuse in historic preservation districts throughout the city.

### **GOVERNMENT**

**GOAL: To ensure that all necessary functions of government are performed in the most responsible manner possible.**

OBJECTIVE: Structure government and governmental activities to meet the immediate needs and long term objectives of the population. Such structuring should involve and promote responsible leadership, both in and out of government, which should be accessible and responsive to the public.

OBJECTIVE: Ensure equitable and expeditious administration of uniform laws.

OBJECTIVE: Ensure technological needs are adequately met.

OBJECTIVE: Remove arbitrary jurisdictional barriers to permit essential public services to be efficiently and economically provided and to ensure that benefits gained and problems encountered anywhere in the area are shared equitably and solved cooperatively by the entire area.

OBJECTIVE: Achieve fiscal responsibility, including adequate and equitable financing of services and facilities.

OBJECTIVE: Appoint adequate number of qualified administrative and service personnel to effectively conduct government business.

OBJECTIVE: Coordinate activities and operations of all government functions to achieve efficiency and avoid duplication.

OBJECTIVE: Provide necessary infrastructure and building facilities for the efficient operation of governmental functions.

OBJECTIVE: Realize greater capacity to achieve the basic goals and objectives as envisioned herein.

# **CHAPTER III**

## **ENVIRONMENTAL CHARACTERISTICS**

### **GENERAL**

This chapter describes, in a summary fashion, those features used as predominant physical determinants in developing the recommended land use plan such as: (1) topography; (2) flood prone areas; (3) information regarding depth to bedrock; and other selected features of engineering geology and natural resources.

Recommendations for future land use are described in some detail in Chapter V and at that time it will become evident why the information included in this chapter is so important to the study.

### **PREDOMINANT PHYSICAL DETERMINANTS FOR LAND USE PLANNING**

The 1987 Comprehensive Plan update and the 1972 area wide comprehensive plan contains a series of maps and related text which describe the aforementioned physical features, in some detail. This study incorporates only a summary of that information and earlier work must be used in combination with this summary in order to gain a full understanding of the impact of physical features on future land use recommendations.

#### Topography

Land areas between the 400-foot and 750 MSL (mean sea level) are generally found along steep slopes and narrow, winding valleys extending south from the CSX railroad. To the north, toward the Ohio River, elevations decrease and topography becomes much less steep.

A significant amount of the developed and undeveloped land within the city are classified as Physically Restricted Development Areas (PRDA) which provide for very limited potential for intensive types of urban development. These limitations of the PRDA will be discussed in further detail in Chapter V Land Use.

Topography has played a major part in development. However, new and more effective methods of earth moving and the pressure and necessity of need for more land to develop, has caused this limitation to be less of a deterrent in recent years. Use of these severe slopes for urban development type purposes is already beginning to occur and will, undoubtedly, become a matter of even more concern in future years. To some degree, this severe topographical condition may be considered an asset, in that it has resulted in a significant amount of "undevelopable" land area which can easily be retained in its natural open state, providing "breaks" in the urban landscape.

The variety of slope conditions has had a significant effect on land use planning -this will be further discussed in some detail in Chapter V.

### Depth to Bedrock

Information concerning depth to bedrock can be important for many considerations of future land development. For example, one of the characteristics which might be considered important, in terms of location of areas for future industrial development, would be where the depth to bedrock is comparatively shallow, so that heavy construction could be accommodated without the requirement of excessively deep foundation structures. Conversely, if the depth to bedrock is very shallow, construction of basements, pipelines, etc. may be difficult due to the necessity of excessive ripping through rock to construct such facilities.

### Other Selected Features of Engineering Geology and Natural Resources

The soils of the planning area have been the subject of reports prepared by the Soil Conservation Service (SCS) of the U.S. Department of Agriculture. These reports show the extent and abundance of the various soil types in the planning area and they delineate favorable and unfavorable characteristics of each soil type.

Generally, the soils of the area are of three predominant types: alluvial, residual, and glacial. The characteristics of these types of soils are generally described in the earlier 1972 area-wide comprehensive plan and the earlier SCS studies. Further detail, for purposes of construction, will be necessary in most all cases; likely through necessity of an on-site soils report.

### Surface and Subsurface Geology

The land forms of Campbell County are divided into four basic groups: (1) glacial outwash terraces -- predominate in those areas immediately adjacent to the Ohio River and consisting of deposits of silt, sand, and gravel that accumulated from melt waters off the glacial ice; (2) alluviated valleys -- the Ohio and Licking Rivers flow in the most predominant alluviated valleys, which are filled with unconsolidated silt, sand, and gravel that have been deposited by the streams occupying them; (3) limestone plateaus -- represented by the upland areas which have relatively flat slopes and steep side slopes and whose rock formations have enabled them to resist weathering and erosion over the years (the northern part of Campbell County is characterized by these plateaus, where close stream spacing produces a fine topographic texture); (4) shale uplands -- found more often in the southern portion of Campbell County where streams are farther apart and less deeply incised.

### Earth Stability

The movement of soil under loads is encountered in many areas throughout Campbell County. These movements range from the long-term consolidation of silty soils to the relatively rapid flow or sliding of clay soils. Silty soils, particularly those found in the valley and vicinity of the Ohio and Licking Rivers, consolidate when loaded and settle. The overall abundance of potentially unstable soil conditions in the planning area is unknown. However, the existence of these types of soil conditions when combined with the existence of the Kope rock formation and steep slopes, are usually indicative of very severe landslide potential.

## Climate

Climatological data concerning the Cincinnati Metropolitan Area was acquired from the U.S. Department of Commerce Weather Bureau. Such information is of potential significance to individuals, businesses, and industrial interests in considering location in this area.

Generally, temperatures of 90 degrees Fahrenheit (32.2 Celsius) or above occur on the average of 28 days each year. The summers are moderately warm with daily maximum temperatures, during June, July, and August, in the mid 80's (29.4 C). Temperatures range from an average daily minimum of 27.0 degrees Fahrenheit (2.8 C), in January, to an average daily maximum of 87.4 degrees Fahrenheit (30.8 C) in July. The Cincinnati Area experiences an average of 39.51 inches of precipitation annually. The winters in this region are relatively mild with average winter temperatures of 38 degrees Fahrenheit (3.3 C).

## Air Quality Characteristics

The state implementation plan for the Northern Kentucky Region was submitted in 1986 to the U.S. EPA, indicating that attainment of ozone standards could be met by December of 1987. It should be realized, however, that this plan is based on a modeling technique, as opposed to ambient air quality conditions. Previously, the 1979 implementation plan demonstrated that the region could not attain ozone standards by December of 1982. As such, the Clean Air Act indicated that those areas categorized as non - attainment areas would have to pass legislation initiating an inspection and maintenance (I&M) program on auto emissions. Kenton and Campbell Counties did not take such action, resulting in sanctions by the U.S. EPA. These sanctions affected certain federal funds for highway and wastewater construction and prohibition of large hydrocarbon industries from locating or expanding in the area. Subsequently, in 1986, Kenton and Campbell Counties opted to implement an inspection and maintenance program, resulting in the removal of sanctions by EPA. That program is in place and being administered by the Northern Kentucky Air Quality Board.

The 1990 amendments to the Clean Air Act categorize the Northern Kentucky Area and the Cincinnati Metropolitan region as a non-attainment area for ozone. This Act requires the new State Implementation Plan (SIP) be submitted indicating a reduction of 15 percent in hydrocarbons by late 1996.

The State of Kentucky submitted a 15 percent Reduction Plan (SIP) in 1993 that included the following strategies:

1. Enhance inspection and maintenance program (I/M).
2. Use of reformulated gasoline.

In 1994 the State of Kentucky requested re-designation to attainment status, based on three years of good air quality in the region (1992-1994). This request included withdrawal of Kentucky's 15 percent reduction plan. However, in the summer of 1995,

the region had ozone standard violations that prompted the U.S. Environmental Protection Agency to propose disapproval of Kentucky's re-designation request in April of 1996. Since April 1996, the U.S. Environmental Protection Agency has mandated implementation of a basic I/M program for Kentucky. The SIP of a 15 percent reduction plan has been updated, and implementation began in 1999. The plan includes continuation of reformulated gasoline, implementation of Stage II vapor recovery systems, and initiation of an improved basic I/M program.

### Environmentally Sensitive Areas

A combination of many of the foregoing described characteristics may result in the identification of areas that could be considered environmentally sensitive. For example, lands which are underlain by geologically fragile formations and covered by somewhat unstable soil conditions would dictate that such lands are environmentally sensitive for developmental purposes; areas which are subject to periodic flooding would be considered environmentally sensitive; land areas characterized by steep slope conditions, unstable soil characteristics, etc. would also easily be classified as environmentally sensitive.. The terminology used is comparatively new -- the resulting problems are not. Serious consideration must be given to the potential development of such lands for any intensive purposes.

Lands with such characteristics should be protected from such intensive development or very stringently regulated as such development is considered. The area-wide comprehensive plan recognizes such areas by a land use designation described in Chapter V as "Physically Restrictive Development Areas".

### **REFERENCE TO FURTHER DETAIL**

The foregoing information is very general in nature. Further detail and mapping is provided in the 1987 Comprehensive Plan update and the area-wide comprehensive plan adopted in 1972. And, even further detail concerning geologic and soils information is available from the U.S. Soil Conservation Service and the Northern Kentucky Area Planning Commission. However, the type of detail necessary to determine construction, feasibility, availability of economic minerals, problem soils and geologic strata, is only available with detailed on-site investigation. More air quality information will be forthcoming from studies now underway by the Ohio-Kentucky-Indiana Regional Council of Governments. Water quality information is also available from that same source.

# **CHAPTER IV**

## **POPULATION, HOUSING, AND ECONOMIC CONDITIONS**

### **GENERAL**

The purpose of this chapter is to provide information about basic population, housing, and economic characteristics necessary for use in planning for the future. Information presented pertains to the entire Cincinnati Metropolitan Region, with specific emphasis on the City of Bellevue, Campbell County, and Northern Kentucky.

### **POPULATION**

The 2000 U.S. Census of population reveals that Campbell County has experienced some growth in population since the 1990 U.S. Census, with an increase of approximately 5.7 percent. In 1990, Campbell County had a population of 83,866. In 2000, the population in Campbell County was 88,616, an increase of 4,750 persons. During this same period of 1990-2000, Boone County registered an increase of approximately 49.3 percent, while Kenton County registered an increase of approximately 6.6 percent (see Table 4 - 1).

Since 2000, Campbell County has experienced a population decrease of approximately 2.0 percent. Population estimates for Campbell County indicate a 2006 population of 86,866, a decrease of 1,750 persons since 2000. Between 2000 and 2006, the population of Boone County has increased approximately 28.0 percent, while Kenton County population increased approximately 2.3 percent.

Population in the three-county Northern Kentucky Area increased from 327,350 in 2000, to an estimated population of 351,857 in 2006, representing an estimated increase of just over 24,507 persons, or a 7.5 percent increase. Northern Kentucky's growth rate was greater than that of the state of Kentucky, as a whole, while Boone County's figure (28.0 percent) was one of the highest in the state.

Table 4-2 reveals that the growth that occurred in Campbell County between 1990 and 2000, of 4,750 persons, was a result of an increase in births over deaths (4,693) rather than in-migration. In fact, net migration had very little effect on the population growth (57 persons).. Kenton County's population increase was also due to the number of births over deaths (10,459), which compensated for net migration of -1,026 persons. Only Boone County's population increase (11,747) was due to people moving into the county, a net migration of 21,796 people.

Population projections for Northern Kentucky and the region are shown on Table 4-5(A). Campbell County is projected to increase in population from just under 89,000 in 2000 to slightly over 91,000 in 2010, an increase of almost three percent and approximately 2,500 people. From 2010 to 2030, the county is projected to increase to approximately 108,024

people, an increase of just under 17,000 people, or 18.5 percent. This increase in population will be more than Kenton County, which is expected to increase by only 9.6 percent, with the addition of just under 15,000 people, but less than Boone County, which is projected to increase by 54.7 percent, growing by over 65,000 people.

Table 4-5(B) shows population projections by age group for Campbell County from 2000 to 2030. Age groups over 50 will increase their proportion of the population, especially the 50-64 year age category. This group is projected to increase from 14.2 percent of the population in 2000 to 19.4 percent by 2030. Younger age groups are projected to decrease their proportion. This is the common trend in the United States, which is experiencing an aging of the population.

Table 4-5(D) represents the 2000 and 2006 population of Campbell County cities. Between 2000 and 2006 total population in the cities in Campbell County decreased by 3.7 percent. Only two cities, Cold Spring (44.0 percent) and Wilder (13.3 percent) gained substantially during this period. The unincorporated areas of the county increased 6.5 percent from 2000 to 2006. The growth in these areas indicates the new development that is taking place in the southern area of the County. Compared with the information on net migration found in Table 4-2, this is an indication that while the northern areas of the County are losing population to out-migration the southern portion is gaining through in-migration and/or a shift of population from the northern part of the county.

The City of Bellevue 2006 population estimate of 5,943 represents a decrease of 537 persons, or 8.3 percent. Between 1990 and 2000 population decreased from 6,997 to 6,480 persons, representing a loss of 7.4 percent during that period. This trend is consistent with the population decrease in the older, northern cities of Campbell County.

Table 4-5(C) provides information on population change by age group for the City of Bellevue. This table indicates that has experienced losses in almost all of the age groups. The most drastic losses can be found in the 0 to 4 (-16.5 percent) and the 65 to 74 (-25.6 percent) age groups. The 45 to 64 age group is the only group that has experienced growth from 1990 to 2000 (3.6 percent). The decreasing population is consistent with the other urban areas in Northern Campbell County. However, the decreasing population over 65 is inconsistent with trends in the area. This lends reasoning to why the median age in the City of Bellevue (34.6) is less than Campbell County (35.2).

## **HOUSING**

According to the 1990 U.S. Bureau of the Census, Campbell County contained 32,910 housing units, approximately 71 percent of which (23,298) were single - family units. The three - county region of Northern Kentucky contained just under 110,500 housing units, of which approximately 31,000 were multi - family units and almost 80,000 were single - family units (see Table 4-6(A)).

During the period between 1990 and 2000, a total of 3,988 housing units were added to the housing supply within Campbell County (see Table 4-6(A)). Of this total, approximately 62 percent (2,465 units) were single - family units and just over 1,500 or approximately 38 percent were multi - family units. Within the three Northern Kentucky counties, a total of 23,348 units were added during this same time period. Of this total, 5,692 were multi - family units and approximately 17,600 were single - family units.

Table 4-6(B) shows housing counts for the City of Bellevue. This table shows both the 1990 and 2000 census counts. Although the total number of housing units in the City of Bellevue has decreased (-1.5 percent), this can be explained by the increase in single-family units (4.2 percent) and a decrease in multi-family units (-2.0 percent).

Table 4-6(C) shows housing occupancy information for Campbell County, the City of Bellevue and the other cities that border Bellevue. Table 4-7 shows more specific information on housing occupancy for the City of Bellevue.

## **HOUSEHOLD CHARACTERISTICS**

Information provided in Tables 4-8 provides information for the City of Bellevue in comparison with Campbell County. Bellevue is experiencing similar trends to the county in terms of decreases in married couple families and increases in female headed families.

In comparison with the Campbell County, the City of Bellevue is experiencing a decrease in total households and family households, while the county is experiencing growth in these areas. However, the city is not experiencing an increase in female headed households and non-family households at the rate that the county is increasing.

### HOUSING FOR SENIOR CITIZENS

The Bellevue Senior Center and the Washington Apartments in Bellevue provide housing units for the elderly, which include independent living services. As discussed previously (see Table 4-5(B)) population growth in the older age groups is projected to increase over population growth in the younger age groups. This is indicative of the potential for increased demand for housing units for the elderly.

### SUBSIDIZED RENTAL HOUSING

The Section 8 program requires the tenant to pay only 30 percent of their income for rent, but in this case, the housing is privately owned and the balance of the rent is paid by HUD to the private owner. There are two separate Section 8 programs: the Project-based program and the Certificate program. The Section 8 Project-based program attaches a Section 8 subsidy to a particular housing unit, so that as tenants come and go, that housing unit always has a rent subsidy. Tenants who have Certificates must find a housing unit in the private market anywhere that will accept their certificate.

Some housing units in Campbell County are subsidized through the Federal Housing Administration (FHA) using the Section 202, Section 221(d)(3), and Section 236

programs, which provide low interest loans and federally-backed mortgage insurance to assist developers in building, renovating, and/or managing property. In exchange for receiving subsidies from FHA, developers are required to pass savings on to tenants in the form of lower rents. The rent must be low enough to be affordable to households making a given percent (usually 80 percent) of an area's median income. Although most of the units in these programs do have additional Section 8 Project-based rent subsidies.

Information regarding LIHTC (Low Income Housing Tax Credit) units is not readily available by jurisdiction. The LIHTC program is the newest subsidized housing program. This program was established by Congress in the 1981 tax code, and today is the main vehicle for affordable housing production for low income families and individuals. This program provides to an investor in a low income housing development project a dollar for dollar tax credit on the money invested. Savings of this subsidy to the investor are passed on to tenants in the form of lower rents.

Currently, it appears that the intent of Congress is to rely primarily on the LIHTC program to create new units of affordable housing for moderate income families and individuals. The Section 8 Project-based subsidies, along with the rest of the older programs (e.g. Sections 236 and 221 (d)(3)) which were used to create additional units of affordable housing for those at lower income levels through new construction or rehabilitation, will be phased out. But the rents on the LIHTC units will not be low enough for those at the lowest income levels. They will have to rely on Public Housing, or obtain a Section 8 Certificate and try to find a housing unit on the private market. The Public Housing program will be maintained, but few new units will be added. The Section 202 program for the elderly and handicapped will probably continue to provide new units for the elderly and handicapped.

## **EMPLOYMENT / UNEMPLOYMENT CHARACTERISTICS**

Between 2000 and 2006, the total number of persons in the total civilian labor force increased from 178,014 to 191,809 in Northern Kentucky. In the same time period, employed persons within the total civilian labor force residing in Northern Kentucky, regardless of where they work, increased from 172,304 persons to 182,418 persons. This represented an increase in employed persons in the labor force of 10,114 or a 5.9 percent increase. Campbell County was the only county in Northern Kentucky to experience a decrease in employed persons (-2.0 percent). Boone County experienced the largest growth at 21.6 percent..(see Table 4-11).

The difference between the total civilian labor force and the total employed persons within the labor force gives us the unemployment rate for Northern Kentucky. In 2006, the number of unemployed persons in Northern Kentucky, those able to work and actively seeking employment was 9,391 or 4.9 percent of the labor force. These unemployment figures have been increasing steadily since 2000, although, all of the 2006 figures are down from 2005. Unemployment rates for Campbell County increased from

3.3 percent in 2000 to 5.5 percent in 2005, but dropped to 5.1 percent in 2006. Within the three county region, Boone County registered the lowest unemployment rate of 3.0 percent, while Kenton County had a rate of 3.3 percent, both in 2000.

Between 2000 and 2006, employment by place of residence (persons living in Northern Kentucky regardless of where they may work) increased by approximately 5.9 percent, for a total of 10,114 new jobs for Northern Kentucky residents. During this period, employed persons residing in Boone County increased by 21.6 percent (10,267 new jobs) thus, registering the largest numerical increase in employment in the three county region. Campbell County decreased by -844 jobs or a 2.0 percent decrease (see Table 4-12).

Table 4-13(A) shows employment by industry type for Campbell County as compared to all of Northern Kentucky for both 2000 and 2006. In 2006, the wholesale and retail industry provided the largest employment base for the Northern Kentucky area and the educational, health, and social services sector provided the largest base for Campbell County. Employment in services and manufacturing are the next largest employment sectors in Northern Kentucky..

Table 4-13(B), Employment by Occupation, presents information on City of Bellevue residents. Most categories of employment listed on Table 4-13(B) increased between the 1990 and 2000 Census. The categories of professional, scientific, and management (125.6 percent) and service (49.3 percent) increased the most.

## **INCOME**

Table 4-15(B) presents per capita income for Boone, Campbell, and Kenton Counties for 1990 and 2000. Kenton County had the highest per capita income (\$13,587) in 1990, but due to the highest growth rate (73.4 percent) Boone County surpassed Kenton County in 2000 (\$23,535). While Campbell County was lowest, with a per capita income in both 1990 (\$12,603) and 2000 (\$20,637), these values exceed the per capita income of the State of Kentucky. Per capita income in the Northern Kentucky area was higher than in the State of Kentucky as a whole.

The most recent information for per capita income by city is only available up to 2000. Within Campbell County, the City of Fort Thomas had the highest per capita income in both 1990 and 2000. The City of Highland Heights had the highest percentage increase of approximately 180.0 percent (Table 4-15(C)). The City of Bellevue experienced a 55.4 percent increase in per capita income from 1990 to 2000. Bellevue ranked eleventh in Campbell County with a per capita income of \$17,983 in 2000.

While Table 4-15(C) reveals the overall per capita wealth of the city, Table 4-15(D) shows the population (by percentage) that does not share in this wealth. Table 4-15(D) indicates the percentage of population, in Bellevue, below the poverty level. Three categories of information are found in this table: individuals below poverty level; individuals age 65 and over below poverty level; and, families below poverty level. Table

4-15(D) compares this information for the city of Bellevue with other neighboring cities, the Campbell County and the state of Kentucky.

## **SUMMARY AND CONCLUSIONS**

In general, Campbell County is not experiencing growth at this time at the rate of the neighboring counties, but growth is expected in the future. All the indicators of growth are positive and show that the county and the cities can place themselves in a position for continued growth and development. The population of Campbell County appears to be shifting to the south as indicated by the population growth in the unincorporated part of the county, most of which is south of 1-275.

The City of Bellevue's situation, when compared to other cities in the north part of Campbell County, is quite good. Although the city is losing population, per capita income compares favorably and overall employment appears to be high for city residents based on service employment increases.

# **CHAPTER V**

## **LAND USE**

### **GENERAL**

This Chapter presents information on existing and future land use for the City of Bellevue. Information on existing land use, community facilities, water supply, waste management and transportation is synthesized with data found in previous chapters on environmental characteristics, population and the economy to form the base studies for the comprehensive plan update. This chapter reflects the combination of this information as it relates to future land use. In addition to this information, the Bellevue Planning and Zoning Commission also utilized the goals and objectives, found in Chapter II, as a guide to land use decisions. It is also the goal of the Bellevue Planning and Zoning Commission to apply the most current urban planning and design principles when analyzing potential developments.

### **EXISTING LAND USE ANALYSIS**

The City of Bellevue is defined as a mature city, one that contains minimal vacant land. It generally relies on re-development, development of small vacant parcels, new development activity, and renovation/preservation of its existing structures. In general, large tracts of vacant land are restrictive for development due to physical limitations such as steep topography and location in a flood plain. Local development issues primarily involve the use/reuse of existing structures and activities to enhance the urban environment.

The city is addressing these issues and is working to enhance the urban environment in a progressive manner through specifically created boards. The city has an organized and active Urban Renewal Board, formed under the provisions of KRS 99, to assist in efforts to redevelop land. To date most activity of the Urban Renewal Board has been done along the city's riverfront. Efforts to enhance the built environment through preservation of historically significant structures are addressed through the city's Historic Preservation Commission. The city has two historic districts listed on the National Register of Historic Districts. These are the Taylor's Daughter and the Fairfield Avenue Districts. The city has adopted an historic preservation ordinance and designated two areas as historic overlay districts in the official zoning ordinance (see Plate 5-A). Two districts are commercially oriented historic overlay zones entitled Neighborhood Commercial - One Historic Preservation Overlay zone (NC-1(HP)) and Neighborhood Commercial - Two Historic Preservation Overlay zone (NC-2(HP)). The other is a residentially oriented zone entitled the Residential - 1H Historic Preservation Overlay zone (R-1H (HP)). In addition to the parks system (see Chapter VI) the city has formed a Tree Board to enhance the natural environment. This board has received urban forestry grants to reforest the city's streets and to assist with developing local expertise to maintain and promote urban forestry in the city.

In 1965, the Northern Kentucky Area Planning Commission conducted a detailed survey of existing land use for all of Campbell and Kenton Counties. The survey recorded how land was being used, by type of development, using a standard system of land use classification that included approximately 9,000 land use types. This land use classification system was a modification of the Housing and Home Finance Agency's land use manual - "Standard Land Use Coding Manual: A Standard System For Identifying And Coding Land Use Activities", Urban Renewal Administration, Housing and Home Finance Agency (now the Department of Housing and Urban Development) and Bureau of Public Roads, Department of Commerce, January, 1965. For simplification of description, all types of development were then grouped into one of 19 different land use categories. This survey was updated for the same geographical area in the latter portion of 1969 and early 1970, and again in the summer and latter portion of 1975. The 1981 Comprehensive Plan Update also presented a detailed land use survey, which included the City of Bellevue. In 1987, 1993 and 2000 the existing land use was again analyzed during the preparation of the comprehensive plan updates.

Since the previous comprehensive plan update, the most significant change in land use has occurred along Bellevue's riverfront. Several projects have been completed or are in the process of completion. Directly east of the initial phase of the Port Bellevue development, which was mentioned in the previous update, construction is in progress for the Waters Edge development along Eden Avenue. This development will include 3 six-story buildings, each containing twelve condominium units, and seven townhomes. Two of the condominium buildings and five of the townhomes have been constructed.

Another project along the riverfront is the mixed-use development Harbor Greene. This project will include 110 condominiums, office space, retail and an Urban Active gym. The first phase of the development has been completed, which includes 38 condominium units. Construction is also underway for Bellevue Hilltop Condominiums at the intersection of Lake Street and Robson Street. This development will include several townhomes and a detention pond.

One project that has been completed is the Holiday Inn Express located on Landmark Drive.

Further east, the development along Fairfield Avenue has maintained the mixed use nature of the corridor. Several new businesses, including art galleries and specialty shops, have opened since the previous comprehensive plan update.

## **LAND USE PLAN ELEMENT**

The land use plan element has traditionally been the most critical element of the comprehensive plan, since it forms the primary basis for local zoning. The first step taken to update the land use plan element was an evaluation of the land use categories. The future land use map in the 1987 plan update contained five categories of land use (residential - single family, residential - multiple family, commercial, industrial and recreation). In the 1993 plan update, the land use categories were expanded to provide more specificity and detail for the land use decision-making process. Generally, the changes were as follows:

- Residential land use categories were expanded from two (2) to five (5) and described by density and dwelling unit type.
- Commercial land use was expanded from the general category of commercial to two (2) categories (Retail/Service and Office).
- A category entitled, Special Development Area, was added to designate areas that are intended for uses of a specific nature that do not fit into a more typical land use category.
- A category entitled, Community Facilities, includes recreation, as well as, schools and school parks and other community facilities, such as churches and other public and semi-public buildings was expanded.

Since the 2000 Plan Update, changes have been made to the Land Use Plan Map which reflect more accurately the current land uses.

The process for the 2000 Update to the Comprehensive Plan consisted of the following steps:

1. Identification of all public facilities (e.g., schools, parks, fire stations, etc.) which had been built since the 1993 Plan Update;
2. Identification of areas where development, which was not in agreement with the Comprehensive Plan, has occurred since the last Plan Update;
3. Identification of changing conditions which had some effect on land development, as described in the other chapters in this plan update;
4. Identification of recent zone changes that have not been reflected on the Comprehensive Plan and which effectively have changed the plan;
5. Identification of major premises upon which development of the Comprehensive Plan Update was based. These major premises are as follows:
  - a) A basic premise of this plan update is a recommendation concerning “how land should be developed over the next 20 years.” The plan consents to accept less sophistication in the projected 2020 land use acreage determination while placing more importance on insuring that development takes place in accord with plan recommendations. If development occurs at a faster or slower rate than anticipated, planning for service systems will have to be modified - extended or developed at a more rapid or slower rate - but the integrity of the plan will not have been sacrificed. Development will still be taking place in accord with land use recommendations.
  - b) Some areas may be recommended to be redeveloped for other than their present use in order to eliminate existing or anticipated undesirable types of development and to ensure compatibility with overall plan

recommendations.

- c) Due to the fact that the City of Bellevue is for the most part a "mature" or developed city with only limited undeveloped land available for new development, this plan envisions the need to redevelop existing areas and to provide additional parking facilities.

The "Development Concepts" are as follows:

### Residential

#### **"Density" is the major determinant of residential development.**

Residential densities provide the major bases for "utilities and community facilities systems" planning.

#### **A variety of residential densities is desirable.**

Various densities would accommodate a variety of housing types to serve a variety of economic and social desires and capabilities.

#### **The type of development that should occur within an area should be based, in part, upon the unique characteristics of the development site and the character of adjacent development.**

Such a concept would insure that the proposed development would be compatibly incorporated into the area and would enable the development to best utilize the area's existing features.

#### **The density of development for undeveloped land should be based on considerations such as: (a) the density of adjacent developed areas, of which the undeveloped land would be a logical extension; (b) access to major transportation facilities; and (c) the nature of adjacent activities.**

Such a concept would result in development which is compatible with surrounding land uses and which would not result in generating high volumes of traffic through low density areas.

#### **Multi-family residential development should occur in areas which: (a) are located near activity centers or major access ways; and (b) are desirable for residential development, but are characterized by topographic problems, unusual shape, or otherwise unsuitable for single-family residential development.**

Such a concept would afford a greater number of people immediate access to activity centers and major streets, would reasonably assure that undue traffic volumes will not be drawn through lower density type development, and would provide for the utilization of "difficult to develop" parcels of land.

**The increase or decrease of density can function as a transition between incompatible land uses.**

Such a concept would enable the provision of a variety of land uses that might otherwise result in incompatible land use relationships.

**The preservation and restoration of housing should be encouraged.**

Such a concept would provide quality housing for the existing and future population, and would preserve structures that have architectural and/or historical significance.

**Revitalization of central city core areas, by planned redevelopment and rehabilitation of residential uses, should be encouraged.**

Such a concept would aid in preserving a valuable resource, provide much needed variation in residential types and densities and maintain and enhance the viability of such urban areas.

#### Commercial

**Proposed commercial uses should be located on the basis of: (a) adequate service population, according to forecasted population distribution; (b) access via good transportation facilities; and (c) relationship to surrounding development.**

Such a concept would discourage over-development of commercial activities and result in commercial development that is easily accessible to the population and adequately buffered from adjacent incompatible land uses.

**In certain cases, some limited mixing of residential and commercial use types may be desirable (e.g., in certain areas 2nd floor residential uses above 1st floor commercial type uses should be encouraged). It is imperative that such mixing be well planned and well regulated.**

In such instances, critical attention needs to be paid to off street parking needs/requirements and continuous assurance of compliance with all regulations of commercial use type changes within such structures.

**Major commercial concentrations should be encouraged along only one side of major highway facilities in a given area.**

Such a concept would minimize traffic control problems and safety hazards, decrease the number of conflicting turning movements, and limit cross traffic movements between activities on opposite sides of the major highway.

**Spot and strip commercial developments are undesirable and should be discouraged.**

Such developments are usually characterized by: (a) inadequate room for expansion as the need for additional commercial services increases; (b) little or no coordination of vehicular or pedestrian access; (c) inadequate parking; (d) multiplicity of curb cuts; and (e) additional trip generation between facilities, resulting in inconvenience for shoppers and unnecessary additional traffic volumes and hazards on the adjacent street network.

**Existing commercial activities, which are presently located in areas that are not desirable for commercial development, should either be redeveloped or stabilized and not expanded.**

Such a concept would: (a) eliminate or control problem types of development; and (b) discourage over-development of commercial activities, which could have the effect of endangering the economic health of well-located commercial developments.

### Industrial

**Location of industrial type development should be based on area-wide considerations. Location should be determined on the basis of the advantageous characteristics any given area exhibits for such development and without consideration to arbitrary jurisdictional limitations.**

Such a concept would result in utilization of the most suitable and desirable land for industrial development and the location of employment centers that would be accessible to the greatest number of persons.

**Land that is most advantageous for industrial development should contain the following characteristics: (a) access to major transportation facilities; (b) proximity to urban development (employment sources); (c) relatively flat land; and (d) a full range of urban services.**

Industrial development generates significant traffic volumes (automobile, trucks and sometimes rail services) necessitating access to major highways and to employment sources (urbanized areas) in order for the street network to be able to accommodate the traffic volumes and prevent the generation of traffic through low density areas. Most industrial development, by its very nature, requires central sanitary sewer services and water supply, gas and electric service, higher levels of police and fire protection, etc. Such development often also depends upon water and rail for delivery and/or distribution of products and supplies.

**Land that can be most advantageously used for industrial purposes should be identified and reserved for industrial use and encouraged to be exclusively**

**used for such purposes.**

Land that is most advantageous for industrial development in the Northern Kentucky Area is at a premium. Thus, identification and reservation of such land is necessary. Increased industrial development in these well-located areas would increase employment opportunities. It would also result in an increased tax base for the provision of public services; and insure better use of transportation systems, thus utilizing less energy and causing less pollution to the environment.

#### Physically Restrictive Development Area

**Areas which are flood-prone (within the 100-year floodplain) and/or landslide prone (slopes of 20% and greater and/or areas which contain known soil and/or geologic formation problems) should be preserved or controlled.**

Such a concept would prevent unnecessary construction problems that might consequently result in hazardous or dangerous conditions; and, encourage certain areas to be maintained in their natural open state as an integral part of the landscape.

#### Community Facilities

**Locations of existing and future community facilities should be based on an area-wide approach to the provision of such services. Such locations should also be based on logical service areas, defined according to generally accepted standards promulgated by authorities in each of these specialized fields.**

Such a concept would insure adequate provision of well located facilities without unnecessary duplication.

**The school-park concept should be utilized in development of both school and park facilities.**

These two types of facilities serve similar population groups and there exists a great potential for coordination and joint use of facilities to the benefit of the public.

**Appropriate authorities and private developers should be encouraged to assure realization of community facilities planning by requiring and/or incorporating designs for such facilities into the early stages of development.**

Such early incorporation shall serve to insure that such facilities do not appear as "after-thoughts" located only where remnants of undeveloped land exists and that capital improvement planning for completion of such facilities can be reasonably programmed.

## Environment

**Development of land that is highly susceptible to hillside slippage and/or erosion should be limited and strictly controlled.**

Such a limitation on development would prevent hazardous conditions and also result in maintaining the environmental quality of the area by preserving open space.

**Solid waste management should be both long and short-range in nature and should consider collection and transportation, disposal methods, public vs. private involvement, time sequencing, cost alternatives, and environmental impact.**

Solid waste "management" is intended to be an all encompassing term inclusive of the study of amounts collected, methods of transportation and disposal, alternatives of private and public involvement (control and accountability), time sequencing of moving from short to long-range, cost comparisons, financing alternatives, etc. Methods utilized should be organized to avoid health hazards, provide reasonable accessibility without detrimentally affecting urban concentrations, take advantage of whatever techniques and methods of energy and resource recovery which prove to be within the practical support capabilities of the area, and that the problem be viewed on an area-wide basis.

**Federal, state, and local performance standards should be strictly applied to all development.**

Such compliance should help to ensure adequate control of air, water, noise, and other types of pollution.

**Erosion prevention and control techniques should be stringently applied to reduce sedimentation problems.**

Such control would improve water quality; prevent damage to stream channels, prevent siltation of storm sewer systems, prevent flooding of yards and basements and prevent the loss of prime topsoil.

## Energy

**Energy-efficient development should be promoted by employing those types of land use arrangements that minimize the distance and number of vehicular trips to work, commercial activities, schools, etc. Such land use arrangements should also facilitate the provision of mass transit via the concentration and coordination of population and employment centers.**

Minimizing the distances and number of vehicular trips would reduce the

amount of fuel consumed and reduce the impact of pollution. Facilitating the provision of mass transit would decrease the use of automobiles and increase the use of alternative forms of transportation.

### Transportation

**A balanced transportation system should be encouraged through the provision of a comprehensive multi-modal approach.**

Such an approach would achieve the most efficient utilization of all modes of transportation including air, water, rail, mass transit, highways, bicycle paths and pedestrian walkways.

**Unnecessary and disruptive traffic should be minimized in residential areas through a combination of street improvements and the location of high volume traffic generators along major arterial streets.**

The generation of traffic through residential areas creates noise, pollution, and potential safety hazards that would be detrimental to the residential character of the area. It would also result in overloading the design capacity of streets not intended for such purposes.

**Development on major arterial streets should incorporate adequately designed access controls.**

Such a concept would aid in maintaining existing and projected roadway capacities, and would provide for safe vehicular and pedestrian movements.

**The increased use of, and provision for, mass transportation as a significant mode of transportation should be strongly encouraged.**

Such use of mass transit would result in a more efficient means of transportation, reduced energy consumption and air pollution, and making an alternative means of transportation more available to the population.

### Information Technology

**Information Technologies and infrastructure should be incorporated into all developments.**

This would ensure that all sectors of the population would have access to such technologies.

**Location of information technology equipment should be accomplished in a manner that discourages duplication.**

This would ensure that providers locate their facilities on the same site or structure.

## LAND USE PLAN ELEMENT DESCRIPTION

The following text describes the Recommended Land Use Plan, including a general description of each land use category and the general locations recommended for each type of land use. The adopted official land use plan map is on file at the Bellevue City Hall.

### RESIDENTIAL

Five density ranges of residential development were identified in preparation of the 1993 Comprehensive Plan Update. It is important to note that residential densities referred to herein are "net residential densities," meaning exclusive of land to be used for streets and alley rights-of-way and other non-residential uses (e.g., land for schools/parks/necessary utility pump stations and other essential service facilities that use land). It is not the intention of this plan to automatically allow development to occur at the upper end of the density ranges. Rather, the density of development should be determined by the recommended density range and its interrelationship with the "Residential Development Concepts," the availability of recreational facilities, and other community facilities, and the transportation network.

It is important to emphasize that the land use categories used in this plan update are purposefully broad. The density ranges for residential development, are the same as in the 1993 plan. The plan's intent is to communicate that proposed development, within each density range, will be consistent with the plan's adopted Goals and Objectives and Development Concepts, and will be able to be appropriately served with existing and planned infrastructure and community facilities. The specific listing of what uses and densities shall be permitted in each of the zoning districts can be found within the Zoning Ordinance, which was last update in June 2003.

The density of development permitted within a given residential zoning district should be within the broad density ranges identified in this plan update, but clearly may be more restrictive than the plan's broad categories. For example, one category of residential land use is a range of 7.1 to 14.0 dwelling units per net acre. At any given specific location the appropriate density may be only approximately 7.1 to 10.0 dwelling units per net acre. As a result a zone district designation that permits this density is appropriate because it both meets the specific criteria of the location and the broad land use designation of the comprehensive plan.

"Density" is the major determinant of residential development as described in the development concepts. A listing of the five residential density categories is as follows:

2.0 and under dwelling units per net acre	Single-Family
2.1 - 4.0 dwelling units per net acre	Single-Family
4.1 - 7.0 dwelling units per net acre	Single-Family
7.1 - 14.0 dwelling units per net acre	Single/Multi-Family

14.1 - 30.0 dwelling units per net acre

Multi-Family

The vast majority of residential land use in the City of Bellevue is within the 7.1 to 14.0 dwelling units per net acre. In most cases this also closely coincides with the existing residential densities. Residential density of 4.1 to 7.0 is found in the southern portion of the city where physical characteristics have dictated less dense development. Most new residential development is projected to occur in a piecemeal manner on individual lots, as opposed to multiple lot subdivisions. However, it is anticipated that a portion of the riverfront near Lafayette and Fairfield Avenues will be developed as a multi-unit residential project of a higher dwelling unit per net acre classification.

The conversion of single-family homes to multiple units is discouraged. A large portion of the land designated for a density of 7.1 to 14.0 dwelling units per net acre is no longer zoned for multiple units. Historically, this area was developed as single-family homes on small lots. Typically, these homes are large two or three story structures with short setbacks and minimum open space. Since these homes are located on small lots, little if any area is available for off-street parking. As a result, public streets provide a vast majority of parking for area residents. When conversions did occur, problems of parking space availability increased.

## COMMERCIAL

This category of land uses has been divided into two (2) subcategories, Retail/Service and Office. Following is a description of each of these land uses.

### Retail/Service

Land areas classified in this category identify commercial concentrations which provide a wide range of retail sales and service activities, including convenience type goods and services. Areas designated in this land use category are concentrated in the vicinity of Fairfield Avenue from Hallam Avenue to O'Fallon Avenue. During this planning period it is projected that most new retail and service uses will locate within existing structures or in areas redeveloped within these designated areas. The area encompassing Riviera and Donnemeyer Drive near I-471 was designated as Commercial in the 2000 Plan Update. It is now designated as a Special Development Area. The Taylor Avenue Corridor is now classified as Commercial. It was previously designated as a Special Development Area.

The Fairfield Avenue area is critical to the city. It is comprised of a number of historically significant buildings and is currently the primary transportation corridor for city residents and for residents of the City of Dayton. Many issues need to be addressed in this area ranging from redevelopment and preservation of buildings and traffic control issues to the provision of off-street parking. The city conducted a streetscape and parking study of the Fairfield Avenue and Taylor Avenue corridors. This study presented a strategy for addressing these issues. The success of redevelopment/renovation of the Fairfield Avenue area lies in part to the implementation of the strategy to address traffic and parking issues. Further goals and objectives for transportation in these areas are further discussed in the Transportation chapter of the Comprehensive Plan.

## Office

Land classified for office use is so located as to be easily accessible to major transportation corridors and in close proximity to other similar land uses. It is recognized that office type development is minimally affected by noise associated with major thoroughfares, often has the potential for interesting architectural treatment, and can provide a transition between more intense and less intense land use activities.

The areas designated for office land use within the land use plan are on Landmark Drive off Riviera Drive and in the "Special Development Area" along the riverfront between Patchen and Hallam Avenues. Offices are also appropriate land uses under the Retail/Service land use category.

## SPECIAL DEVELOPMENT AREA

Land areas so designated are intended to identify locations for specialized activities that are designed to achieve specific objectives of the plan. Generally, specific land uses as described in this section do not adequately describe the activities envisioned in these areas. As a result, this plan utilizes the category "SPECIAL DEVELOPMENT AREA" to identify these "special activity areas" in the land use plan. The land use plan designates two areas in the city for such purposes and describes the land uses that are envisioned for the area as follows:

1. This land use plan element designates two areas as Special Development Areas in the City of Bellevue. One area is located along the Ohio River on the west side of the city and north of Fairfield Avenue. This is an area that the city's Urban Renewal Board has been working to redevelop for several years. Land uses in this area are intended to range from office to river oriented uses such as restaurants and marinas. Residential uses, such as condominiums would also be appropriate in this mixed-use environment.
2. The second area includes Donnermeyer Drive from Riviera Drive and I-471 to the west to Covert Run Pike to the east. This area is located along the southwest border of the city. The density and architectural characteristics are different than those of the other commercial areas. Building and lot sizes are larger and there is a significant amount of off-street parking for businesses along Riviera Dr. and Donnermeyer Dr. Access and traffic flow are of high concern, with special attention made to limiting the number curb cuts and providing for a cohesive flow of traffic throughout the large parking areas. The streetscape will be a factor in the development of the area. Attention should be given to pedestrian access and comfort including street trees and benches.

## INDUSTRIAL

Industrial land uses as designated in the land use plan lie north of the CSX railroad and generally along the railroad from I-471 to Taylor Avenue. For the most part this area is developed with minimal vacant area for expansion of existing industry. Industrial land

use in this area should continue to be in the light industrial classification (i.e. those types of industrial establishments that generally produce no air, water or noise pollution).

### OTHER LAND USE CATEGORIES

Land uses under this heading include “Physically Restrictive Development Areas”, water and flood prone areas. Following is a description of each of the categories:

#### Physically Restrictive Development Areas

Land in this category is generally characterized by physical conditions which would be severely restrictive to any intensive urban type development (usually those areas subject to periodic flooding or areas containing severe sloping conditions of 20 percent slopes or greater). Of particular importance are those areas identified that contain slopes of 20 percent or greater coupled with the "Kope" geologic formation. Such areas are particularly susceptible to hillside slippage.

Plan recommendations for areas so designated are not intended to imply that such areas should not be developed, but rather that most of these areas will remain undeveloped and, thus, would become an integral part of the natural open landscape of the planning area. Where development is proposed in such areas, this land use category should alert the developer and the City to a potential problem that must be solved prior to any construction. Any development of areas designated "Physically Restrictive Development Area" should be a type of use that is compatible with the recommended land use of adjacent areas. It is further recommended that development of these areas be adequately controlled through city land use regulations.

Areas identified in this category include all land subject to a 100 year flooding condition. In most cases this land lies along the Ohio River and Covert Run Creek. Land development in these areas is generally feasible, however, flood damage protection and prevention measures are required as part of the development process.

#### Water

Land in this category includes all lands covered by water in the planning area.

### COMMUNITY FACILITIES

Land in this classification has been subcategorized into three classifications. Following is a brief description of these classifications.

#### School Parks

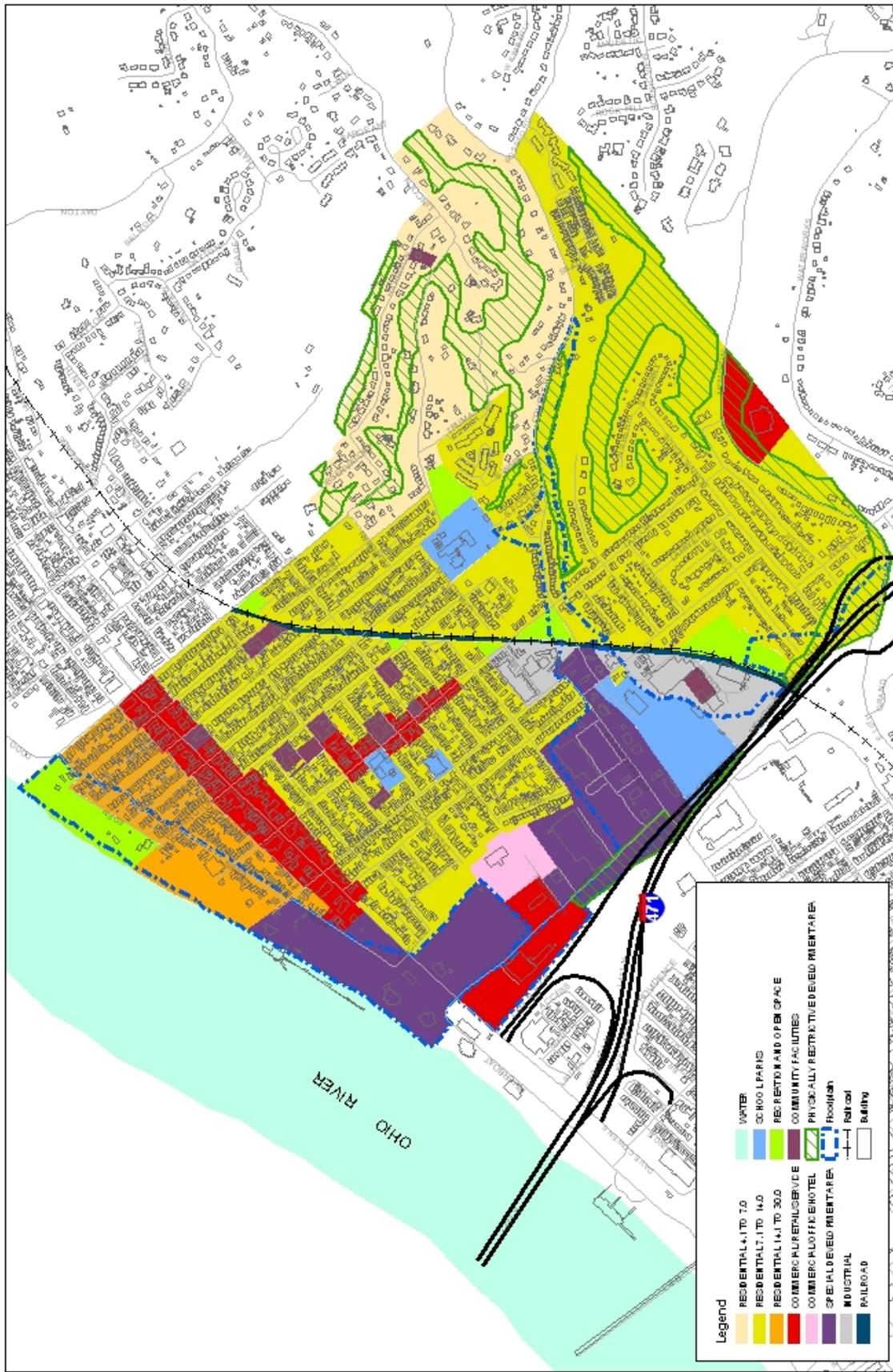
Land in this classification is either used, or is recommended to be used, for public school facilities and coordinated recreational facilities to serve both the school and recreation needs of the community. This category is used only to identify those schools that are a part of the recommended public school system for grades kindergarten through twelve.

### Other Community Facilities

This category is intended to be inclusive of such facilities as fire and police protection facilities, city and county administration and public works facilities, public and private utility buildings and structures, and all other major types of facilities which involve provision of a public service or interest function to the area (e.g., federal and state offices, and other facilities such as post offices, cemeteries and museums). In some cases the development and use of these facilities may involve provision of recreation and open space that is also specifically covered in a separate category.

### Recreation and Open Space

This category is intended to locate those areas of existing or proposed public outdoor recreation and open space. Other areas for recreation may exist as in school park sites or in privately developed areas. The 1993 plan update recommended a significant area along the Ohio River north of Eden Avenue, between Taylor Avenue and the eastern city boundary, for recreation and open space. In 1999 the Bellevue Beach Park consisting of a bicycle path, basketball courts, volleyball courts, age appropriate playground equipment and an open air amphitheater, was completed. Another park is Swope Park which is located near Taylor Avenue and Covert Run Pike. The park includes a basketball court and playground equipment.



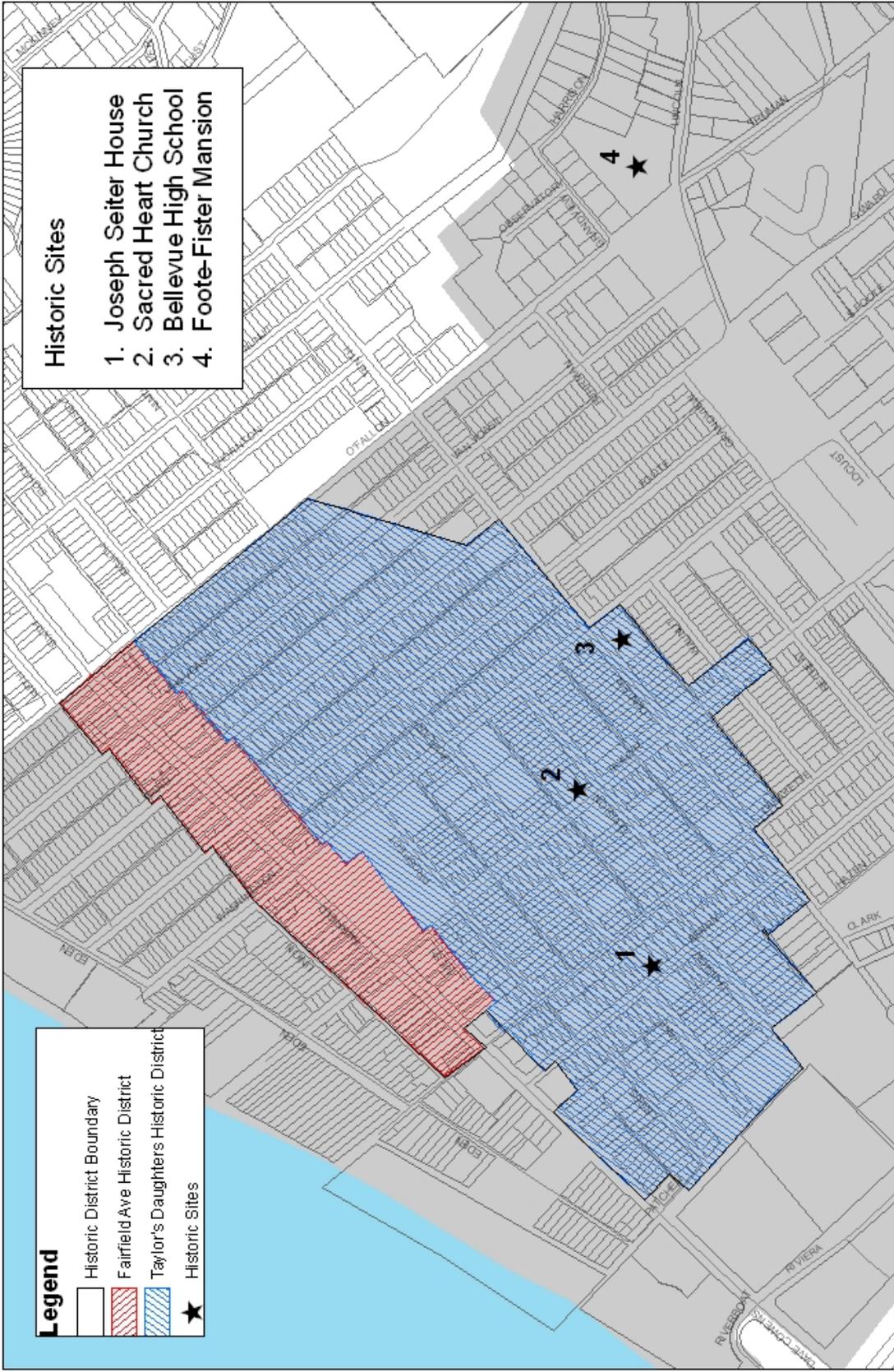
LEGEND OF SYMBOLS: THE NORTHERN KENTUCKY AREA DEVELOPMENT DISTRICT HAS NO PRESENT OR PROPOSED PLANS FOR ANY UNDESIRABLE OR EXCESSIVE INDUSTRIAL DEVELOPMENT IN THE DISTRICT. THE DISTRICT'S POLICY IS TO ENCOURAGE A PORTFOLIO OF USES AND TO MAINTAIN A PORTFOLIO OF DEVELOPMENT TO REMAIN IN THE DISTRICT.



Prepared by the Northern Kentucky Area  
Development District  
4/1/08



# City of Bellevue Proposed Land Use



- Historic Sites**
1. Joseph Seiter House
  2. Sacred Heart Church
  3. Bellevue High School
  4. Foote-Fister Mansion

- Legend**
- Historic District Boundary
  - Fairfield Ave Historic District
  - Taylor's Daughters Historic District
  - Historic Sites



Prepared by the Northern Kentucky Area  
Development District  
3/6/08



**City of Bellevue**  
**Historic Districts**

# **CHAPTER VI**

## **COMMUNITY FACILITIES**

### **GENERAL**

Community facilities addressed within the previous Plan Update were: schools, recreation and open space, fire protection, police protection, library facilities, and other public service community facilities. This chapter identifies facilities that have been built, closed, or expanded since the 2000 Plan Update and a recommended "Plan" for each type of community facility. Tables and maps, providing updated information and plan recommendations, are also included. Existing and proposed community facilities are shown on Plate 6 - A.

Community Facilities, as discussed in this chapter, differ from other land uses in that those persons using the publicly provided services oftentimes cross-jurisdictional boundaries and may not directly pay for installation, maintenance and other upkeep. For example, Recreational uses typically draw residents from other jurisdictions. This is particularly true for field sports that require large tracts of land. One of the most accessible hospitals for Bellevue residents is St. Luke Hospital in the City of Fort Thomas. The community facilities element of this plan update recognizes the use characteristics as described above. Furthermore, small cities such as Bellevue cannot easily provide the broad range of community facility services to residents. As a result, the city must continue to share facilities with other jurisdictions and support, whenever feasible, other efforts to provide services of benefit to residents of Bellevue that may be provided outside the jurisdictional boundaries of the city.

### **SCHOOL - PARK PLAN**

The school - park concept envisions the joint use of school facilities for other public activities, including recreation, meetings, and community education programs. Generally, school space is available for other public activities that do not conflict with school related activities. Such joint use provides for maximum utilization of public facilities by a wider range of the population.

The Bellevue Independent School System includes Grandview Elementary and Bellevue High School. The parochial system includes Holy Trinity Elementary (formerly known as St. Michael Elementary). Parochial students can attend one of several parochial high schools in the Campbell County area. In addition, students from Bellevue can attend vocational schools in Campbell County. Tables 6 - 1 and 6 - 2 contain information on schools available for Bellevue elementary and high school students.

Information on school enrollment and capacity found in Tables 6 - 1 and 6 - 2 indicate that significant capacity exists in existing facilities. Comparison of this information with population growth information in Chapter 4, which shows a decreasing school age population (see Table 4-5(B)), indicates that school capacity should not be an issue of

immediate concern. Due to the constraints on availability of land for any expansion, the trend in population growth should be closely monitored. Adequate advance planning will be necessary to handle any new school construction or programmatic changes to handle increased population growth.

## **RECREATION AND OPEN SPACE**

Existing public and private recreation areas that serve the City of Bellevue are listed on Table 6 - 3. Plate 6 - A shows the location of these recreation areas. In addition, to these facilities the A.J. Jolly Park in southern Campbell County, which is maintained and operated by the county government, is a county- wide park serving all residents of the county:

### **RECOMMENDED PARK AND RECREATION STANDARDS**

Table 6 - 4 provides a description of accepted park and recreation standards. Existing public parks in the city, according to these standards, qualify as neighborhood parks. In this table the description of a metropolitan park coincides with the A. J. Jolly Park. These standards should be used as a guide to prepare the plans for recreation and open space.

### **RECOMMENDED RECREATION AND OPEN SPACE PLAN**

The 1993 Land Use Plan update identified the three areas below for new recreation and open space land:

1. On the west side, adjacent to the railroad on the north - approximately 5 - 6 acres.
2. Lincoln Avenue, near Ward Avenue and Van Voast - approximately 3 acres.
3. Along the riverfront from the Dayton city limits to Taylor Avenue and bounded on the south by Eden Avenue and Frank Benke Way - approximately 15 acres.

The city has a long-range plan to acquire additional property from the railroad to create a recreation and open space corridor linking the eastern and western portions of the city and to buffer adjoining residential properties. The 1981 area wide comprehensive plan recommended a connecting park "link" system concept along the Ohio River. This concept envisions the use of "links" which primarily follow stream valleys, shorelines of the Ohio River, or natural wooded areas to connect park facilities. This plan recommends a similar concept for the railroad, as previously described, and along the riverfront to connect with the cities of Dayton and Newport. As envisioned in this plan update, this connecting system would consist of such uses as bicycle and pedestrian paths. Along the riverfront this system should utilize the flood prone area of the river which cannot be readily used for other types of development and existing public sidewalks along Eden Avenue.

In addition to the areas previously described for recreation and open space this plan

update strongly encourages the appropriate preservation of areas with steep hillside slopes as private open space areas or dedicated to the public to be kept in some form of open space use.

## **FIRE SERVICE PLAN**

### **EXISTING FIRE PROTECTION**

Table 6 - 5 provides information on the Fire Department of Bellevue-Dayton (FDBD). The FDBD was established in June of 2003 through an interlocal agreement. The fire department is located in the City of Dayton, at 514 6<sup>th</sup> Avenue. Currently, the FDBD consists of 16 full time emergency personnel, 3 part time personnel, and 23 volunteer firefighters. The FDBD is administered by a 6 person Fire Board. The Mayor of both cities appoints 3 people to the Board, including 2 council members and a citizen at large. The FDBD is financed through equal contributions from each city and proceeds from EMS billing.

### **RECOMMENDED FIRE PROTECTION STANDARDS**

Recommended standards for distribution of fire companies are shown in Table 6 - 6. These standards are from the Fire Suppression Rating Schedule of ISO Commercial Risk Services. The standards listed in Table 6 - 6 for distribution of fire companies are based on fire flows ranging from 500 to 3500 gallons per minute and fire flow durations of 2 to 3 hours.

### **RECOMMENDED FIRE PROTECTION PLAN**

The previous Plan Update included recommendations for the Bellevue Fire Department to continue discussions, with adjoining and nearby jurisdictions, into possibilities of consolidating fire services and/or joint purchase of major equipment. As previously mentioned, action has been taken to form the Fire Department of Bellevue-Dayton.

## **POLICE PROTECTION PLAN**

An inventory of existing police facilities/services that serve the City of Bellevue is shown on Table 6-7. This plan recommends no changes from the existing activities currently undertaken by the Bellevue Police Department. The department should, however, stay abreast of new development activity in the city and plan according for police protection services.

## **PUBLIC WORKS PLAN**

An inventory of existing public works facilities and equipment is shown on Table 6-8. The Public Works building and grounds should continue to be upgraded through building improvements and property maintenance. Equipment should be upgraded in order to

function appropriately in everyday and emergency situations.

## **LIBRARY FACILITIES**

### **EXISTING LIBRARY FACILITIES**

Residents of the City of Bellevue are served by the Campbell County Public Library. An updated inventory of library facilities is presented in Table 6-9. While there is no permanent public library facility within Bellevue, a library for senior citizens has been established in the Bellevue Senior Center. The city is served by bookmobile service. Branches of the Campbell County Public Library, located in Newport, Fort Thomas and Cold Spring are easily accessible to residents of the city.

In addition to the library facilities available to residents from the previously described sources, the Northern Kentucky University Library also permits the use of its facilities by the general public. Staff of the NKU facility includes 16 librarians and 22 support staff. The book collection includes approximately 307,000 volumes and over 7 million microfiche. This library is a government depository and receives selected government publications. Databases are automated, which enables cataloging and searching for data by computer.

### **RECOMMENDED LIBRARY PLAN**

Due to the location of the Newport branch of the Campbell County Library, near the City of Bellevue, this plan does not specifically recommend library system improvements within the city. As part of the countywide system, city residents will benefit from improvements to the system, regardless of location.

Recommended library standards and plans for the countywide system can be found in the 1992 Campbell County Comprehensive Plan update.

## **HEALTH CARE FACILITIES**

There are four general medical/surgical acute care hospitals (licensed facilities which provide medical and/or surgical care and treatment of physical illness or injury, usually for 30 days or less per illness or injury), and two other special purpose hospitals serving Northern Kentucky. The Greater Cincinnati Hospital Council publishes an annual directory that contains more detailed hospital information. The hospitals are listed below:

- St. Elizabeth Medical Center North is located at 401 East 20th Street, in Covington, and was founded in 1861 by the Sisters of St. Francis.
- St. Elizabeth Medical Center South is located at One Medical Village, Edgewood, KY and was founded in 1978.
- St. Luke Hospital East is located at 85 North Grand Avenue, Fort Thomas, KY and was founded in 1954.

- St. Luke Hospital West, the smallest of the four major hospitals, is located at 7380 Turfway Road, Florence, KY.
- HEALTHSOUTH, a freestanding comprehensive physical rehabilitation hospital, is located at 201 Medical Village, Edgewood, KY.
- Children's Psychiatric Hospital of Northern Kentucky, is located at 502 Farrell Drive, Covington, KY. It is operated by the Kenton County Board of Education.
- Veterans Hospitals in Bellevue and Ft. Thomas.

#### Hospitals Used by Northern Kentucky Residents in Cincinnati

In addition to the Northern Kentucky hospitals, residents in Northern Kentucky may also use the following hospitals that are located in Cincinnati:

- Bethesda North Hospital
- Care Unit Hospital of Cincinnati
- Children's Hospital Medical Center
- Christ Hospital
- Deaconess Hospital of Cincinnati
- Drake Center, Inc.
- Good Samaritan Hospital
- Jewish Hospital
- Jewish Hospital North
- Mercy Hospital Anderson
- Pauline Warfield Lewis Center
- Providence Hospital
- St. Francis-St. George Hospital
- Shriner Burns Institute
- University of Cincinnati Hospital
- Veterans Affairs Medical Center
- West Chester Medical Center

#### OTHER HEALTH CARE FACILITIES

- Healthpoint Family Care (formerly known as Northern Kentucky Family Health Care) is a nonprofit organization that has several full service medical facilities. In addition to primary medical care, they provide dental care, some social services, immunizations, and health education. They serve predominantly low-income people from the Northern Kentucky basin area. Offices are located in Covington, Bellevue, and Bracken County, Kentucky.

## Long Term Care Facilities

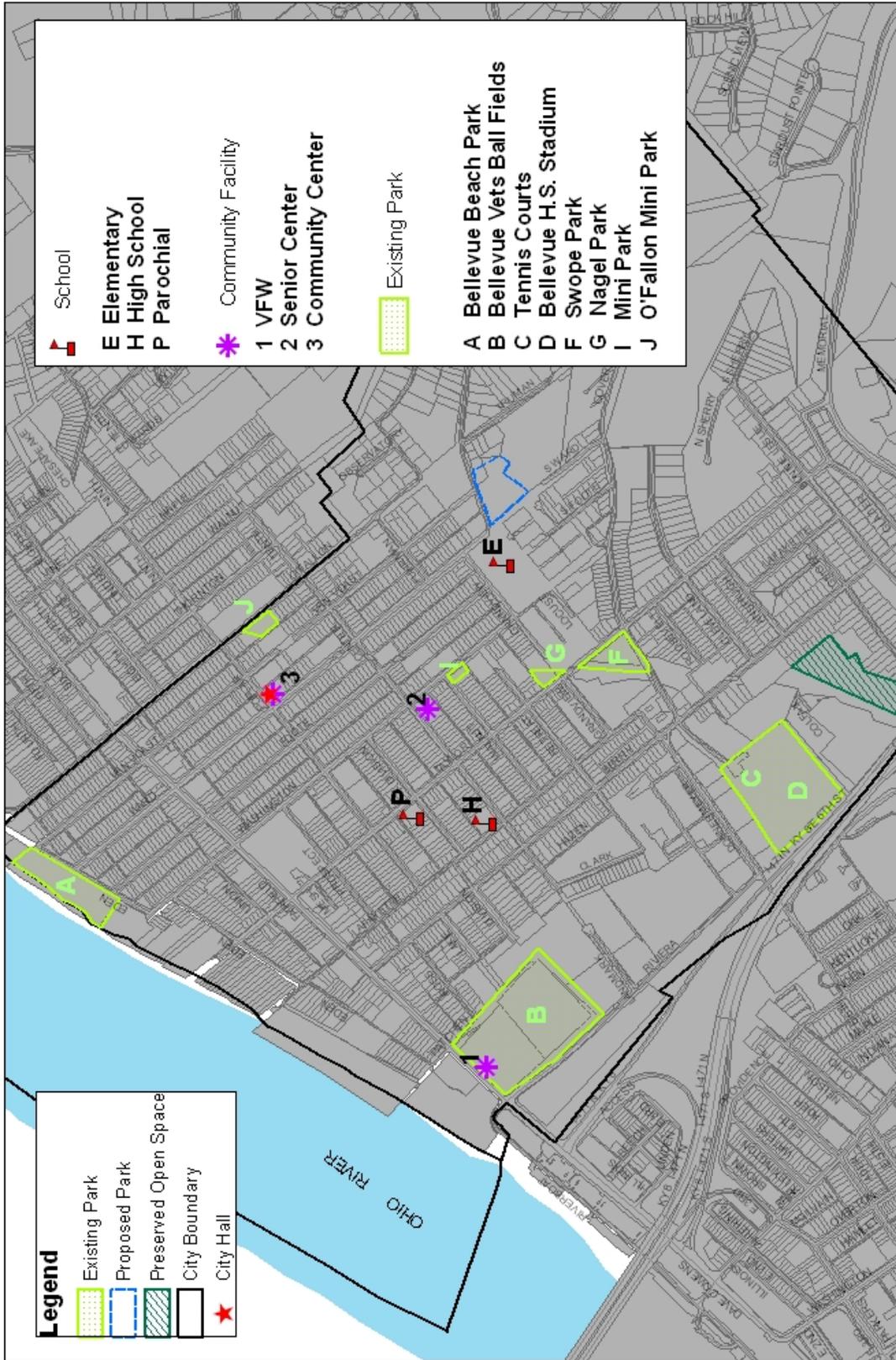
Long Term Care is defined as medical, social and personal care services on a continuous or intermittent basis to persons with chronic physical or mental conditions. Some facilities offer "personal care" beds only, which includes help with bathing, dressing, and dispensing of medications for those who are able to walk, while others offer more intensive nursing care for the bedridden ("nursing beds"). A listing of long term care facilities in Northern Kentucky is provided in Table 6-11.

The need for long term care is increasing because of advances in health care which have allowed people to live longer with chronic illnesses, and because the elderly, who are most likely to have a long term illness, are the fastest growing segment of the population. Many long-term facilities have high occupancy rates, and waiting lists, particularly those that offer more intense levels of nursing care.

## Northern Kentucky Independent District Health Department

The Northern Kentucky Independent District Health Department is run by the District Board of Health. The Board is authorized under Kentucky Revised Statutes, Chapter 212, to establish health policy, and enforce regulations on issues of public health for Kenton, Campbell, Boone and Grant counties. The District Board is responsible for overseeing the local Boards of Health for each of these counties. Funding for services comes from several sources including federal and state funds; real estate and personal property taxes from Kenton, Campbell, Boone, and Grant counties; Medicaid/Medicare; service fees; and public and private grants.

The District has several offices. The main office is located in Edgewood, Kentucky. The six health centers are located in Florence, Newport, Fort Mitchell, Covington, and Williamstown, Kentucky. The District provides services through three divisions: Environmental Health and Safety, Community Health Promotion and Clinical Services. The District also provides services such as human resources, public information and community health planning.



# City of Bellevue Community Facilities



Prepared by the Northern Kentucky Area  
Development District  
36/08



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# **CHAPTER VII**

## **WATER SUPPLY AND WASTE MANAGEMENT**

### **GENERAL**

Water supply in Bellevue is provided by the Northern Kentucky Water Service District and serves the majority of the urban area within the Dayton-Bellevue water service area as well as other cities and portions of Unincorporated Campbell County.

Sanitation District No. 1 serves nearly all of Bellevue with centralized treatment provided at the Dry Creek Wastewater Treatment Plant in Kenton County. This wastewater treatment plant serves large areas within Boone, Kenton and Campbell Counties including the City of Bellevue.

Solid Waste Management in Campbell County and Bellevue has changed significantly from previous plan updates, and, with the closing of the Fort Thomas Landfill is totally dependent upon private contracts with the city for collection and disposal of solid wastes. Currently, privately owned landfills near Butler within Pendleton County, Kentucky and north Cincinnati within Hamilton County, Ohio are available for disposal of solid wastes generated within Bellevue. Solid Waste Management in Kentucky has been further impacted by amendments to federal and state laws result of Senate Bill 2 in the 1990 session.

Stormwater management within municipalities and industrial point discharges county-wide is affected by recent amendments to the federal Clean Water Act of 1972 as amended by the Water Quality Act of 1987. Municipalities having a population over 100,000 and separate sewer systems were required to satisfy all application requirements by May 17, 1993. While municipal separate storm sewer systems serving incorporated areas of less than 100,000 people are not at this time covered by the separate storm sewer permit requirements, decisions for identifying a jurisdictional unit in Northern Kentucky subject to same federal requirements are being considered by Federal and State agencies.

Previous Water Supply and Waste Management Plans included recommendations concerning major water treatment plants, primary transmission mains, pumping and storage facilities, wastewater treatment plants, sewage lift stations, major interceptors and outfalls, solid waste management facilities and measures to improve stormwater management practices. This update has been coordinated with other elements of the Comprehensive Plan in combination with master plans by other governmental agencies, engineering consultants, etc. relating to hydraulic analyses of water supply, pipe systems, wastewater treatment, solid waste and stormwater, where applicable, to ensure an adequate and consistent measure of needs without duplication to handle anticipated growth and minimize pollution within the planning period.

# WATER SYSTEMS

## EXISTING WATER SYSTEMS

### Northern Kentucky Water Service District

At the time of the last Comprehensive Plan, water was provided by both Newport Water Works and the Northern Kentucky Water Service District. Since this past Plan, the Northern Kentucky Water Service District has bought Newport Water Works and is now the sole provider of water to the City. The source water is the Ohio River, which is rated as being not susceptible to droughts. Water quality information can be found in the 2006 Water Quality Report published by the Northern Kentucky Water Service District. Current and projected figures for water supply are provided below:

<b>Northern Kentucky Water Service District- Water Use in Million Gallons/Day</b>					
	<b>2000</b>	<b>2005</b>	<b>2010</b>	<b>2015</b>	<b>2020</b>
<b>Residential</b>	12.5	13.6	14.3	15.1	15.6
<b>Nonresidential</b>	15.7	17.2	18.9	20.2	21.1
<b>Other</b>	5.4	5.8	6.1	6.4	6.4
<b>Avg Daily Demand</b>	33.6	36.6	39.3	41.7	43.1

## RECOMMENDED WATER SYSTEM PLAN

Recommended improvements within this plan update are based on a twenty-year planning period. Planned improvements by the Northern Kentucky Water Service District have been incorporated within this plan update. General recommendations within previous Water System Plans, were listed under sections entitled: Urban Development and Water System Expansion; Pumping Stations and Distribution Systems; and Recommended Improvements for Water Treatment Plants, Raw Water Supply, and Distribution Systems, within the Dayton-Bellevue Water Service Area in Campbell County. All recommendations made at that time (except for those improvements completed) within previous plan updates are still valid for implementation within a twenty year planning period, except as modified, added and/or changed, within the following sections.

### 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 before being encouraged to develop at urban densities. At the same time, improvement and expansion of water systems, particularly the staging of construction, should be designed to encourage planned and orderly growth and to discourage undesirable development patterns.

1. It is recommended that design criteria for water 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 new developing areas do not reduce current fire protection class and levels which Bellevue is currently rated.
2. It is recommended that water distribution systems within existing and new developments be interconnected or looped wherever feasible to improve circulation of potable water supply. Recent 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, etc. to further ensure against stagnated areas causing lower levels of chlorine residual associated with health problems.

#### Recommended Improvements - Distribution Systems

1. It is recommended that a rehabilitation program be initiated for the replacement of undersized (i.e., less than 8-inch and 6-inch diameters existing water distribution systems within the Bellevue Water Service Area. Previous fire hydrant flow tests conducted by the fire department and water district, have indicated deficiencies in certain areas in the availability of water supply for fire protection. These flow tests provide documentation that certain areas of existing development may have inadequate water supply (less than 500 gallons per minute at residual pressures of less than 20 pounds per square inch) to afford adequate fire protection in accord with guidelines published by the Insurance Services Office and National Fire Protection Association. Further evaluation and analyses of water supply systems must be made before such systems are expanded to serve new developments. Several water systems were undersized, when constructed, without a planned program for growth.
2. All existing development within the planning area should be provided with needed fire flows for adequate fire protection. Needed fire flow is the quantity of flow in gallons per minute at 20 psi pressure for fire fighting purposes to confine a major fire to the building or buildings within a block or other group complex. Quantity of needed fire flow can be determined by the ISO's Fire Suppression Rating Schedule, considering construction class, occupancy, exposure, and communication.
3. Water systems reflect a compromise on the question of water pressures, due to topographic changes in the land and location of major water supply facilities, including water treatment plants, pumping stations, and elevated storage tanks. Pressures in the range of 65 to 75 psi are best in most water systems. This range is adequate for domestic consumption in buildings up to ten stories in intensively developed urban areas. These pressures also provide sufficient water for internal

sprinkler systems in buildings of four or five stories and suitable external fire protection for a variety of industrial, commercial, and residential land uses. Both the Insurance Services Office and National Fire Protection Association recommend a minimum residual pressure of 20 psi be maintained at fire hydrants when delivering needed fire flow. Fire pumpers can be operated where hydrant pressures are less, but with difficulty.

4. Sufficient suction pressures should be maintained to prevent developing negative pressure in street mains, which may result in the collapse of mains or other components.
5. In order to strengthen water distribution systems, an evaluation of fire hydrant flow tests is necessary. Such tests should be performed by the fire department and the water district and frequently updated in a data base for analyses. Improvements within problem areas should then be planned and prioritized to ensure adequate pressure and fire flows are provided within all areas in accord with guidelines of the Insurance Services Office and National Fire Protection Association.

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, have been considered and summarized as follows.

The existing amount of available elevated water storage within the Dayton-Bellevue Water Service Area is adequate to meet existing Water Storage Requirements. If and when other higher demands result from significant commercial, industrial or riverfront development within the planning period, then such demands must again be reevaluated in the next five-year plan update process. Total storage requirements do not include an amount for Emergency Storage purposes since there are at least two separate sources of supply to the Dayton-Bellevue Water Service Area. In addition should current criteria for evaluating fire flow demands (e.g., an increase from the current 3,000 gpm for 3 hours) be upgraded by the Insurance Services Office, total storage will also be further impacted. These demands must again be reevaluated in the next five year plan update process.

## **SEWER SYSTEMS**

### **SEWER AGENCIES AND WASTEWATER TREATMENT**

Sanitation District No.1 serves the majority of the urban area of Bellevue with treatment provided at the Dry Creek Wastewater Treatment Plant. This wastewater treatment plant serves large areas within both Kenton and Campbell Counties including the City of Bellevue.

Wastewater treatment for residential, commercial and industrial users is accomplished by

Direct Billing based on water meter readings made by the Northern Kentucky Water Service District. The City of Bellevue has recently established a user fee which upon payment to Sanitation District No. 1 is returned to the city for operation and maintenance of the city's municipal sewer system.

## EXISTING SEWER SYSTEM

Since the last plan update in 1993, no major sanitary sewerage system improvements within the City of Bellevue have been constructed. However, periodic cleaning and flushing of the Ohio River Collector Sewer and improvements to the Dry Creek Wastewater Treatment have been made. The wastewater treatment project is generally described as follows:

- Modifications at Dry Creek Wastewater Treatment Plant in Kenton County increasing average daily flow (ADF) plant capacity from 38 MGD (million gallons per day) to 46 MGD and a maximum peak daily flow (MPDF) to 70-75 MGD.
- New Dechlorination Facility constructed at the intersection of Amsterdam and River Roads (SR 8) adjacent to the Dry Creek Plant in 1994. Chlorine added at the plant disinfects released water. Unfortunately, the chemical is harmful to plant and animal life. Thus, a dechlorination process has been completed. Such facility adheres to new EPA regulations.
- Modifications at the Dry Creek Plant regarding Odor Control. Methods to treat recycled water were redesigned. The neutralizing agent Bioscent added as odorous fumes passes through the scrubber systems reduces offensive odors.
- The Ohio River Interceptor Collector sewer (ranging in size from 60 inch down to 21 inch) has been repaired including pipe sections, joint and manholes in Covington, Ludlow, Bromley, Newport, Bellevue, and Dayton.
- Municipal Subdistrict Sanitary Sewer Inspection Program. Inspection on sewer mains in eleven (11) cities in Campbell County including the City of Dayton have been completed.
- Plant effluent testing in compliance with EPA's Water Quality Standards was conducted. One key test is fecal coliform. EPA allows a monthly average of up to 200 parts per 100 milliliters. Such testing has not exceeded 10 parts per 100 ml. for several years. Thus, when the plant releases over 30 MOD of water each day into the Ohio River, treated water is 92 percent pollution free or actually cleaner than the existing river water. The District's testing lab has also received the Silver Award from a national association. During 1994, the Dry Creek Plant remained under the EPA limits in all thirteen (13) categories of tests each day with only two exceptions.
- An interstate partnership was formed between the Sanitation District No.1 and the

Metropolitan Sewer District in Cincinnati, Ohio. With an EPA grant and matching funds, a study to focus on the efforts of Combined Sewer Overflows (CSOs) in the Ohio River was initiated - an issue that has been a major problem at the local and national level for many years. A short term plan regarding a CSO strategy was required to be put in place in January 1997.

## RECOMMENDED SEWER 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 within this plan update. General recommendations within previous Sewer System Plans were listed under sections entitled: Urban Development and Sewerage System Expansion, Water Quality and Sewage Treatment, Pumping Stations, Sanitary Sewer Systems, and, Recommended Improvements within the "Metropolitan Drainage Area" in Campbell County. All recommendations made at that time, (except for those improvements completed), are still valid for implementation within a twenty year planning period, except as modified, added, and/or changed within the following sections.

### Consolidation of Sewerage Systems - Organization and Financing

In response to public concern about deteriorated sanitary sewer systems and public health problems, studies have been on-going regarding the need for consolidation of sanitary sewer systems and services in Northern Kentucky. These efforts have focused on legislative changes to make the Sanitation District No.1 totally responsible for operation and maintenance for all sewerage systems in a three - county area. Later amendments to the law enabled cities to join the District at their own discretion as a Municipal Subdistrict(s), providing operation and maintenance of their respective municipal systems. Efforts in this area are ongoing and valid and will be monitored as part of this plan update.

Conditions of existing sewer systems within Bellevue have been evaluated. It is recommended that Operation and Maintenance of all sanitary sewer systems be provided on a county - wide basis by Sanitation District No.1. Result of a Sanitary Sewer Task Force appointed by the Kenton County Judge/Executive in 1984, and study entitled "A Summary Report of Existing Conditions" was completed by the NKAPC prior to the last update. In that report, a survey questionnaire of present conditions and sewer systems concluded that operation and maintenance of sewer systems was not being handled on a uniform basis. The questionnaire identified deficiencies in areas of sewer mapping, scope of infiltration, inspections, public works, sewer cleaning operations, restorations, removal of inflow, sewer user ordinance, and lack of acceptance, ownership and maintenance responsibilities and other financial information.

A later report entitled "Organization and Financing of a Municipal Sanitary Sewer System" was completed in 1986 by the NKAPC. This report included recommendations for creating a new organization regarding operation and maintenance of sanitary sewer services, computer base mapping and financing via service charges for such an organization.

A report entitled "Consolidation of Sewerage Systems in Northern Kentucky Phase I" completed by Burgess and Niple, Limited in 1986, for the Sanitation District No.1 of Campbell and Kenton Counties, identified a number of questions intended to help assess the pros and cons of consolidation of municipal sewerage systems in Northern Kentucky.

A report entitled "Consolidation of Sewerage Systems in Northern Kentucky Phase II" completed by Burgess and Niple, Limited in 1987, identified: (1) the extent and condition of systems within the three county area included in the consolidation; and (2) preliminary revenue requirements and sewer service charges for operation and maintenance. In this latest report, the total projected uniform users charge on a quarterly basis would include the basic Sanitation District Wastewater Treatment and Collection charge of \$27.05, Collection System Maintenance charges of \$6.70, Repair and Replacement charges of \$3.35 and a Consolidation Administration charge of \$3.05. These charges amount to \$40.15 per quarter based upon an average water usage of 2,500 cubic feet (18,700 gallons) per month. This would amount to \$160.60 annually based upon a three county area. For only Campbell County, or municipal sub-districts within the District, including Bellevue, the rates would vary depending on the condition of sewers and what repair and improvements are desired.

Under the current law, a city or combination of cities, could become a Municipal Sub-district after an engineering study determines the condition of their systems. This study would then be utilized by the District to set a rate to charge the subdistrict for the following services: (a) wastewater treatment and trunk sewers; (b) collection system maintenance; (c) sewer repair and replacement; (d) existing debt service; (e) collection system expansion; and (f) consolidation costs. As subdistricts, cities would decide what services they need. Naturally, limited or fewer services would be less costly. At the present time, as of October 1993, the cities of Bellevue, Crestview, Fort Thomas, Highland Heights, Newport, Southgate and Wilder have contracted with engineering consultants for upgrading deficiencies. The total cost for rehabilitating sewers in Bellevue amounts to \$318,933 and costs in other cities amounts to approximately \$5.5 million. Those cities and Sanitation District No.1 are currently in the process of deciding how much it will cost the district to bring the sewers up to standard and maintain them over the next twenty years. At the present time only the City of Southgate in Campbell County has agreed to form a municipal subdistrict thereby resulting after a six month transition period to have Sanitation District No. 1 upgrade deficiencies and maintain such systems based upon a uniform user rate schedule.

#### Urban Development and Sewerage System Expansion

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

The predominant reliance upon centralized sewerage systems within the City of Bellevue indicates that sewerage system and extension policies can be very effective in controlling

the location and type of new development. Discussion throughout this plan have indicated that control over the location and type of new development is essential if public services are to be provided in a logical and economical fashion. One of these public services is, of course, sanitary sewerage facilities, and they represent a public service that can benefit most from planned orderly growth. At the same time, expansion of the sewer system can be effective in combination with other development controls in providing direction to future urban development or redevelopment of the riverfront area.

### Water Quality and Sewage Treatment

The quality of water within our streams and rivers is directly related to point and non-point discharges dumping into these waterways.

A report entitled "Assessment of Nonpoint Source Pollution" was released by the Ohio River Valley Water Sanitation Commission (ORSANCO). This report concluded that a combination of the effects from resource extraction and agricultural runoff activities have great impact on water quality of the Ohio River. In addition, urban runoff contributes to the loadings of metals and chlordane and PCB's in fish tissue, a basin wide problem.

The Dry Creek Wastewater Treatment Plant was constructed in 1979 to serve a population of approximately 270,000 people, having an average design hydraulic loading capacity of 30 MGD (dry weather flow) and maximum hydraulic loading of 72 MGD (wet weather flow). Since the plan update in 1987 and with sewer extensions to the Taylorsport and Richwood areas in Boone County, and Wilder, Cold Spring, and Highland Heights, via new river crossing north of 1-275 in Campbell County, the Dry Creek Wastewater Treatment Plant has been expanded to 46 MGD. This expansion, completed in 1993, also provides sufficient capacity to treat wet weather flows to approximately 57 MGD. This will enable increased wastewater flows (dry and wet weather) to be treated in combination with improved measures for handling increased ammonia limits. Wastewater return to the Dry Creek Wastewater Treatment Plant in 1993 averaged to be slightly more than 30 MGD compared to 22.4 MGD in 1985.

Combined sewer systems that serve over 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 the Banklick, 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.

An economical solution to the problem of combined sewers is non-existent. Existing combined sewers often cannot be used for storm sewers, because of inadequate size, and cannot be used as separate sanitary sewers because pipe slopes are too flat to maintain self-cleaning velocities. Separation of the combined sewer systems in Northern Kentucky, including Bellevue, would require construction of two new and separate sewer systems. Previous estimates indicated that complete separation of all combined sewers in

Northern Kentucky would be cost prohibitive. Flood proofing or raising manholes, inlets or bypasses, for the Ohio River Collector, to 15 feet above normal pool elevation (or 470 feet) has reduced river water intrusion to significantly less than the average of 90 days per year occurring in the late 1970's. This improvement has undoubtedly improved water quality in the Ohio River Basin area.

It is evident that alternatives for separating combined sewer systems would not constitute a reasonable or short-term solution. Considerable research has been conducted in an effort to find more economical means of achieving an improvement in water quality during wet weather equivalent to separating combined sewer systems. Previous research has studied methods of storing and treatment combined wastewaters.

In early 1993, the Natural Resources and Environmental Protection Cabinet/Division of Water developed a Kentucky Inter-Municipal Operation Permit application process specific to cities with sewer systems in Northern Kentucky including Bellevue in Campbell County. EPA's main concerns include mapping of sewage collection systems, location of transfer points from one system to another system and treatment industrial contributors and overflows/bypasses during wet weather as part of a combined sewer overflows (QSO) or sanitary sewer overflow (SSO) system. Deadline for submitting applications for a permit was May 1, 1993. The state has set new deadlines for issuance of the KPDES, as required.

Since state and federal regulations necessitate documentation and/or elimination of all bypassing of untreated sewage for combined and separate sanitary sewer systems, any alternatives considered should provide for full treatment of the total flow in the sanitary collection and treatment system.

1. It is recommended that Short and Long Term Plans for Combined Sewer Overflows (CSOs) 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 by January 1, 1997, where the 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. Combined sanitary and storm sewers are more than 75 years old. Severe rainfall results in interior flooding, mixed with sewage and by-passing constitutes a health hazard and water quality problem.
2. It is recommended that further modifications to the Dry Creek Wastewater Treatment Plant [i.e., present capacity is 46 MGD (average dry weather flow) and 70-75 MGD (peak wet weather flow)] be made for improved wastewater 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 followed.
3. It is recommended that further modifications to the Dry Creek Wastewater Treatment Plant (i.e.. increasing capacity, etc.) be made for improved wastewater treatment of dry weather flows and wet weather flows as a result of infiltration

and inflow problems associated with combined sewer systems and river water intrusion in accord with state and federal regulations.

4. It is recommended that improved regulations mandating tie-ins to new centralized sewer systems be initiated, thereby eliminating individual on-site sewage systems via Sanitation District No.1 Rules and Regulations, Board of Health regulations and/or city and county ordinances. Mandates are needed to require owners of on-site systems to connect to new centralized systems to prevent further sickness and disease, resulting from improperly working on-site sewage disposal systems.

### Recommended Improvements

The Sewerage System Plan recommends expansion of existing systems to provide adequate centralized systems to all area of proposed urban development.

## **SOLID WASTE SYSTEMS**

### CURRENT SOLID WASTE MANAGEMENT PLAN

Solid waste management, as it is known today, began to change significantly with enactment of the Federal Resource Conservation and Recovery Act (RCRA) of 1981. New emphasis was placed on organizational structure, resource conservation, recycling, upgrading landfills, and resolving the open dumping problem. Numerous amendments have been made to the Kentucky Revised Statutes (KRS) 109 and 224, as a result of Senate Bill 2 (1990). These statutes placed primary responsibility for solid waste management on Kentucky's 120 counties and fiscal courts to prepare plans, identify existing systems, make projections, and ensure adequate disposal of solid waste materials within a twenty (20) year planning period. These same statutes delegate administrative authority to cities to contract with private haulers for collection and disposal of non-hazardous solid wastes.

A detailed Solid Waste Management Plan for Campbell and Kenton Counties was prepared by the NKAPC in 1972. In fact, some of the original work was used by consultants and state personnel when the first Kentucky Solid Waste Plan was prepared in the early 1980's. In 1985, the NKAPC prepared a detailed Solid Waste Management Plan for Kenton County, Kentucky, while the Northern Kentucky Area Development District (NKADD) prepared plans for the remaining seven (7) counties including Campbell County and Bellevue within the NKADD. The main points of Senate Bill 2 (1990) impacting solid wastes in counties are as follows:

- Encouraged regional approval of solid waste planning and management.
- Established a goal of reducing solid wastes land filled by a minimum of 25 percent

per person between a base year 1993 and July 1,1997.

- Required the EPA Division of Waste Management to update plans and report to the General Assembly and Governor.
- Authorized Area Development Districts to prepare plans for local governments.
- Created a conflict resolution process within the Department for Local government associated with siting multi-jurisdictional facilities.
- Created the Kentucky Recycling Brokerage to create reliable markets for recyclables.
- Required each county to enable citizens to use a universal collection system.

In 1991, inter-local agreements were signed by the Judge/Executives of Boone, Campbell, and Kenton Counties creating the Northern Kentucky Solid Waste Management Area (NKSWMMA), a multi-county solid waste management area. The NKSWMMA is administered by a Governing Board, a Technical Advisory Committee (TAC), and various sub-committees operating with a staff including a Solid Waste Coordinator located in offices of the NKADD.

#### EXISTING SOLID WASTE SYSTEMS

Solid waste services are currently provided via contractual agreement under joint governmental authority between the cities of Bellevue and Dayton and a private hauler. This contract includes collection, storage, transportation, and disposal of solid wastes generated from primarily residential and commercial uses, including all city and school facilities. Private or open competition contracts with other individuals (i.e., commercial, institutional and industrial generators, etc.) also exist within the City of Bellevue. Currently, privately owned landfills near Butler within Pendleton County, Kentucky, Williamstown, within Grant County, Kentucky, and Hamilton County, Ohio are available for disposal of solid wastes generated within the planning area. For more specific details regarding solid waste services within the City of Bellevue, reference to the city's current contract with C.S.I. of Northern Kentucky, Inc. is necessary.

#### RECOMMENDED SOLID WASTE PLAN

Recommended measures within this Plan Update are based on a twenty (20) year planning period. Specific recommendations are as follows:

1. It is recommended that the mission, goals, objectives, and tasks within the multi-county plan for the Northern Kentucky Solid Waste Management Area (NKSWMMA) be implemented. Input from Campbell County, having the second largest population and number of cities, has 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 sixteen (16) separate jurisdictions in Campbell County demands improved measures to coordinate all solid waste functions

to ensure adequate protection of the environment, and avoid duplication of services as an integral part of the NKSWMA.

2. It is recommended that a uniform comprehensive model ordinance 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 model 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.
3. It is recommended that solid waste services be provided under government authority to all areas of the county. Mandatory universal contract collection is not yet provided to all residents under governmental authority, which is an environmental concern.
4. 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 distant landfill sites and create revenue via tipping fees for capital projects for funding the Northern Kentucky Solid Waste Management Area (NKSWMA) for Campbell County.
5. It is recommended that emphasis on voluntary and mandatory recycling programs which involve materials separation and reduction be continued. Improved resource conservation and recycling methods reduce landfill space and further provide for materials recovery to enhance the supply of goods and services.

## **STORMWATER SYSTEMS**

### **STORMWATER REGULATIONS**

With the passage of amendments to the Federal Clean Water Act in 1987, the U.S. EPA was required to implement a program to regulate the discharge of stormwater from industrial and construction sites under the National Pollutant Discharge Elimination System (NPDES). In Kentucky, EPA's regulations imposed deadlines for filing applications for the Kentucky Pollutant Discharge Elimination System (KPDES). Since publication of these regulations in 1990, many public officials and other professionals have strived to understand and comply with the EPA requirements. As stated at the beginning of this chapter, municipalities which had a population over 100,000, and separate storm and sanitary sewer systems, had to satisfy the requirements by May 17, 1993. Municipalities with a population of less than 100,000, with separate storm and sanitary sewer systems are not currently covered by the act, but identification of a jurisdictional unit in Northern Kentucky to cover these areas, so that they will be subject to the same requirements, is under consideration.

In Campbell County, examples of those impacted by the regulations include the following: (1) city street and county road department garages and refueling areas; (2) municipalities operating sewer systems forced to identify transfer points/flow measurements regarding Infiltration and Inflow (I/I) including Separate Sewer Overflows (SSOs); (3) manufacturing, processing, or raw material storage areas at industrial plants; and (4) private developers, professionals, and contractors regarding Notice of Intent (NOI) applications for land development construction sites greater than five acres.

Information available from various sources indicated that further legal interpretation of the law compelled EPA to also enforce discharge permits for light industry as well as construction sites under five acres in size. Thus, the intent of the Stormwater Program may reach further, and include all industry and any construction site emitting Non-Point Source Pollution. Public agencies and the private sector should seek the guidance of qualified legal counsel regarding future requirements.

## EXISTING STORMWATER SYSTEMS

Numerous types of storm drainage systems exist within the City of Bellevue and Campbell County. These stormwater conveyance systems range in scope from the largest (i.e., Ohio and Licking Rivers, various bridge and culvert structures, enclosed storm sewers and open channels, etc.) to the smallest (i.e., street catch basins, road side ditches, etc. and yard inlets. Ownership and maintenance of such systems include the US Army Corps of Engineers, Kentucky Department of Transportation, sixteen (16) legislative bodies or public works departments, numerous homeowner associations and property owners having non-public systems on private lands.

Since the 1993 Plan Update, a number of stormwater issues impacting various jurisdictions including public and private sectors within the entire county, have been addressed. Statutes and/or regulations have also been amended. Such issues and regulations have been summarized as follows:

- Amendments to KRS 224 and Administrative Regulations: Kentucky Division of Water (DOW) regulations pertaining to Stormwater/Erosion Control Stream Construction (401/404) and Flood Plains. These regulations include the following programs: (1) General permit for stormwater point sources for sites greater than five acres; (2) EPA baseline construction general permit requirements for preconstruction checklist; (3) Best Management Practices (BMP's) for construction activities; (4) DOW approval required for dams greater than 25 feet or impoundments greater than 50 acre-feet; (5) DOW approval required for construction or filling in a stream having drainage areas greater than one square mile (640 acres); (6) DOW approval required for construction activity adjacent to or in streams that involve greater than 200 linear feet (cumulatively) or wetlands exceeding one acre in size; and, (7) US Army Corps of Engineers approval required for construction in streams where base flows are 5 cfs

(cubic feet per second) or greater - 1992.

- Keeping Soil on Construction Sites: Best Management Practices (BMPs) – A Video Training Program sponsored by the Department for National Resources and Home Builders Associations - 1994.
- Senate Bill/Kentucky Revised Statutes 220 relates to Sanitation Districts whereby effective July 1, 1995, the operational sewer and drainage system of each city (except for Independence and Alexandria which chose to opt out September 1, 1994) became a part of the Sanitation District No.1 renamed this year. It has been noted that the Independence System will become a part of the District on January 1,1999. KRS 220.030(6) under Purposes for which a sanitation district may be established reads "To develop and implement plans for the collection and disposal of storm drainage to the extent that collection and disposal of storm drainage is required by applicable federal and state regulations." KRS 220.135 (2) (a) reads "Effective July 1, 1995, the operational sewer drainage systems of each city located within the jurisdiction boundaries of the district . . . including but not limited to sewers, easements, manholes, pumping stations, force mains and real property shall become the property, personal and real of the Sanitation District." Further discussion with Sanitation District officials indicated that acceptance of all storm drainage systems is further regulated by KRS 220.030(6) and, as such, additional federal and state regulations are necessary to develop and implement plans for such systems prior to acceptance. Therefore, maintenance of such systems still must be assured by the applicable legislative bodies (i.e., cities/county) and/or private property owners.
- US Army Corps of Engineers - Louisville District Interim Letter Report - Local Flood Protection Reconnaissance Study - Metropolitan Region of Cincinnati, Ohio - Northern Kentucky Area, February 1995. That study indicated that the Campbell County Public Works Department reported a total of 20 roads and/or bridges within Campbell County resulted in road blockage causing maintenance problems in lengthy detours for traffic and emergency vehicles during flood conditions. Based upon findings and conclusions in the report and the U.S. President's Fiscal Year 1996 proposed budget, sufficient funds were available to complete the recommended remaining reconnaissance level studies - 1995.
- Four (4) Non-Point pollution workshops sponsored by Natural Resources (formerly SCS) Conservation Service were held within Boone, Campbell and Kenton Counties - 1995. Topics included: (1) Planning for Pollution Control; (2) Urban Land and Water Management; (3) Involving the Community in Pollution Prevention; and, (4) How Non-Point Source Prevention Can Benefit You. These workshops were well attended. Much of the information is used and emphasized in day-to-day construction inspection activities.
- Kenton County Fiscal Court Resolution No. 94-37 petitioned the Northern Kentucky Area Planning Commission and Kenton County and Municipal Planning and Zoning Commission to amend county-wide Subdivision Regulations to improve design

criteria for Stormwater Runoff Control facilities for all developments including single - family residential uses. Amendments adopted in August of 1995 in Kenton County also applicable to Campbell County and Bellevue are as follows:

1. Limit and specify runoff methods to be used to estimate quantities of discharge and sizing pipe(s) and conduit(s);
  2. Allow design engineers to utilize Geographic Information Systems (GIS) mapping and soils data, where applicable;
  3. Eliminate credits previously built into the numbers/calculations by providing values for hard surface and a specific range of runoff coefficients for lot sizes/widths to be used in calculations;
  4. Require and/or upgrade Stormwater Runoff Control Facilities for all developments including single-family residential; and
  5. Require runoff control at discharge from storage basins to be regulated using the 2,10 and 50 year storm frequencies.
- Stormwater Inlet Standards for Kenton County, Kentucky - A Final Report to determine recommendations for amending current regulations regarding stormwater inlets. This report studied and made recommendations to require alternatives including enclosures and/or metal grid guards over public and private drainage systems to improve safety especially for small children during intense storm events - 1996. This report may be used for future amendments to the Campbell County and Bellevue Subdivision Regulations.

## RECOMMENDED STORMWATER PLAN

Recommended measures within this plan update are based on a twenty (20)-year planning period. Specific recommendations are as follows:

1. It is recommended that efforts be pursued to improve coordination with the enforcement branch of EPA/Kentucky Division of Water regarding amendments to KRS 224 and Administrative Regulations pertaining to Stormwater and Erosion Control Measures, and such regulations be rigidly 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.
2. It is recommended that Best Management Practices (BMPs) for all construction activities including Non-Point source pollution, be implemented in concert with state

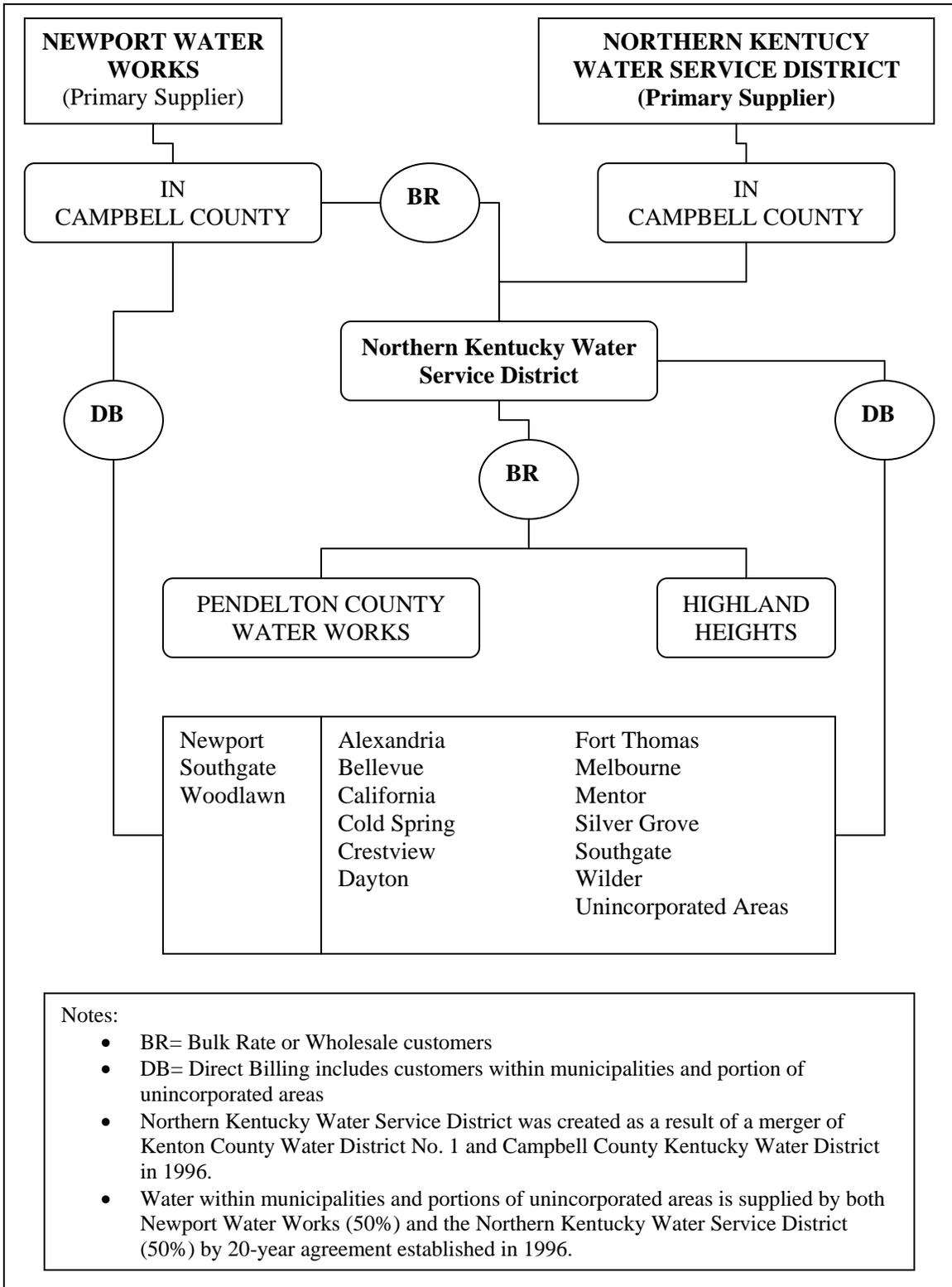
and local regulatory agencies. Documented practices and preventative measures to control on-site erosion, if implemented properly, have been successful in preserving top soil and improving water quality.

3. It is recommended that plans for the collection and disposal of storm drainage be prepared to the extent that collection and disposal of storm drainage is required by applicable federal and state regulations. Point and Non-Point source pollution should be controlled by a regional entity or district in accord with federal and state regulations for the public's health. Sanitation District No. 1 agreed, in late 1996, to begin a study on the feasibility of starting such a stormwater management plan. Later phases of study with a focus on the eventual creation of a stormwater utility have been completed or are in the process of being studied in more detail. Such efforts should include that all natural means be encouraged to contain stormwater.
4. It is recommended that maintenance responsibilities for Stormwater Runoff Control Facilities, now recommended 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 public works personnel are better trained and more qualified.
5. It is recommended that location and extent of all storm sewer systems be mapped with the PlaNet GIS computer system. Mapping of storm sewer systems is the first critical step for inventory and preparing and updating more detailed Stormwater Management Plans.
6. It is recommended that efforts be pursued to study feasibility of a Stormwater Utility for funding revenue for lessening stormwater problems including rehabilitation of substandard systems and capital improvements on a system -wide basis, where practicable. A Stormwater Utility generating revenue is critical for maintenance, upgrading and expanding storm drainage systems. As a result of the Federal Clean Water Act as amended in 1987, future stormwater management programs will be dependent upon the EPA for establishing a regional unit to require municipalities or another unit of 100,000 population or more to develop such programs. The trend of responsibility is that a community cannot allow post-development runoff to be greater than pre-development runoff. Public demand for improved water quality and environmental protection is the key. Many rate structures use calculated user fees by utilizing factors that include impervious areas (hard surfaces such as parking lots, driveways, rooftops, etc.), property classifications and land use. Subdivision Regulations should be put in place for municipalities in Campbell County to establish a Regional Facility Fee based upon the equivalent cost of requirements for on-site storage facilities to be substituted/escrowed toward future regional facilities by a regional entity or district. Such funding mechanism could also be used to maintain

such existing facilities.

7. It is recommended that GIS capabilities, including updated soils information, be utilized for stormwater hydraulic modeling watershed stream analyses. Watershed modeling using GIS and other software programs can identify stormwater problem areas for remediation and other new capital projects.
8. It is recommended that minimum standards and criteria regarding the design of stormwater inlets, increased safety measures for children, be studied and amendments made, where required. Certain stormwater inlets deemed to be dangerous or attractive nuisances should be prohibited and/or modified via new standards and regulations to improve safety. Recommendations from a recently completed Final Report Study by the NKAPC should be reviewed and acted upon.

**Figure 7A**  
**Water Distribution by Supplier**  
**PROCESS FLOW CHART**



# **CHAPTER VIII TRANSPORTATION**

## **GENERAL**

The Transportation Plan Element includes recommendations concerning highways, mass transit, water, rail and air facilities. The City of Bellevue benefits from the service of regionally provided mass transit service, provided by the Transit Authority of Northern Kentucky (TANK), and other services provided by other public agencies such as the Cincinnati/Northern Kentucky International Airport and various water related services provided along the Ohio and Licking River. The city has a line of the CSX railroad, which practically divides the city in half, but there is no direct access or spurs from this line currently serving the city. The City of Bellevue enjoys excellent access to the interstate highway system provided by a full interchange on Fairfield Avenue (KY 8), on the city's western border with the City of Newport, and on Memorial Parkway to I-471.

## **HIGHWAY**

### **GENERAL**

The Transportation Plan has substantial impact on Land Use Planning with the major emphasis on this element being the Highway Plan. The primary changes in the Highway Plan, which caused differences in previous transportation plans, are generally still true. These are:

1. Decrease in funds available for new highway construction; and
2. Environmental impacts (e.g., noise, pollution, land use, etc.).

During the last twelve to twenty years, vehicle use in most cities has doubled. The growth of vehicle miles traveled (VMT) is continuing at 3.5% to 6% per year in most cities.\*

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\* The Amendment to Reform Transportation Planning in the Clean Air Amendment of 1990, by Robert E. Yuhnke, Senior Attorney, Environmental Defense Fund, Dec.1990.

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The Clean Air Act was adopted in the early 1970's. The purpose of this Act was to identify and require attainment of the National Ambient Air Quality Standards (NAAQAS). Amendment to the Act occurred in 1975, 1977, 1982 and most recently in 1990. The Clean Air Act Amendments of 1990 are the most sweeping and will require the most dramatic reform of transportation planning in our history. For the first time, the object of attaining federal air quality standards will become the critical, and in some cases, the controlling factor in making transportation investment decisions.

The Clean Air Act Amendments of 1990 identify the Cincinnati Metropolitan Area as a non-attainment area for ozone. The Act further classifies this area as a moderate non-attainment area and requires a fifteen percent reduction in emissions within six years.

If attainment is not reached within the six year limit, the Environmental Protection Agency could place a prohibition on highway funds, except for safety or certain projects which would improve air quality and discourage single-occupancy driving.

The 1990 Amendments place reliance on the adoption and implementation of transportation control measures (TCM's). A number of TCM's are identified in the Act, including expanded public transit, high occupancy vehicle lanes, employer - based transportation management plans, trip reduction ordinances, programs to provide high occupancy shared - ride services, limiting sections of metropolitan areas to pedestrian or non-motorized vehicle use, providing secure bicycle storage and bicycle lanes, and the construction of paths exclusively for the use of pedestrians and non - motorized vehicles.

The TCM's are consistent with the Transportation Systems Management (TSM) approach included in the previous Transportation Plan. This approach places emphasis on making the most effective use of existing transportation corridors and systems, as follows:

1. Major widening and realignment of existing roadways rather than new construction;
2. Operational improvements to existing facilities; and
3. Encouraging transit, car-pooling, van pooling, and shifting peak hour work trips to non- - peak hour periods.

The use of Operational Improvements are key recommendations and include the following:

1. Widening intersection approaches;
2. Provision of reversible lanes;
3. Provision of left - turn storage lanes; right - turn storage lanes; deceleration or acceleration lanes;
4. Prohibition of turning movements;
5. Prohibition of on - street parking;
6. Synchronized signalization, etc.

Since the adoption of the 2000 Bellevue Comprehensive Plan Update, OKI adopted in 2004, an update to the 2030 Regional Transportation Plan for the tri-state region of

Southwest Ohio, Northern Kentucky, and Southeastern Indiana. This update is in accordance with the Federal Highway Administration and the Clean Air Act Amendments (CAAA).

Under the Clean Air Act Amendments (CAAA) of 1990, air quality attainment became a central objective of transportation policy, planning and program development. Within the OKI region, air quality plans must specify transportation control measures (TCM) to help meet ozone standards. Therefore, transportation projects must be consistent with air quality goals and the long-range transportation plan must ultimately conform to the air quality plan. The CAAA of 1990 is complemented by the ISTEA, passed in 1991 and the reauthorization of ISTEA, now known as TEA-21, The Transportation Equity Act for the 21st Century, adopted earlier this year.

The Transportation Equity Act for the 21st Century (TEA-21) provides 198 billion dollars for Fiscal Years 1998 through 2003, in surface transportation improvements, which includes investments in highway and bridge programs, transit programs, intermodal projects, and intelligent transportation systems such as ARTIMIS. The act emphasizes protecting the environment through congestion mitigation and air quality improvements, clean fuels, sustainable communities, and bicycle and pedestrian paths. Improving safety is a key feature of TEA-21, through promoting seatbelt and child safety seat use, fighting drunk driving, and improving railroad crossing safety. Another goal of the act is to strengthen the role of local officials and improving public involvement in the transportation planning process. In 2005, TEA-21 was reauthorized for the five year time period of 2005-2009.

The OKI long-range transportation plan, in addition to enhancing mobility, must also insure that the growth of future travel does not reverse the air quality improvements at were attained through ISTEA regulations. The OKI regional transportation plan takes into consideration the following issues:

- Travel demand management is to be applied to balance the need for new transportation facilities with demand (i.e., alternatives to driving alone are to be promoted in order to reduce the need for expanding transportation facilities);
- Transportation demand is to be accommodated by a multi-modal system that includes, in addition to highways, transit, ride share programs, and bicycling and pedestrian facilities;
- Transportation projects that involve capacity expansion will not be permitted to advance in planning unless they are in conformity with provisions in the air quality plan;
- Congestion is to be mitigated; and
- The cost of operating and maintaining the region's transportation system and implementing recommended improvements through the planning period is

balanced with expected funding sources.

The emphasis of these new federal acts on air quality in the OKI region creates new requirements for transportation planning, because federal funding for roadway construction or expansion will only be available for those projects that accompany improvements in air quality. In addition, the OKI transportation plan lays the groundwork for increasing travel by transit and other drive-alone alternatives for using roadways more efficiently and for balancing travel supply and demand. Specifically, the OKI Transportation Plan covers the following areas:

- Recommended transportation measures for improving air quality;
- Recommended transit improvements, including expansion of existing transit service; development of rail transit system and additional improvements to transit service;
- Recommended highway improvements, including discussion of committed projects;
- Development of an intelligent transportation system for the region (ARTIMIS);
- Traffic operation improvements including access management plans for developing areas, traffic signal integration, and intersection widening;
- Recommendations concerning the need for bicycle and pedestrian travel improvements;
- Rideshare service for the region; and
- Recommended improvements for freight movement which is important to the region's economy;
- Recommendations for the preparation of an Ohio River Corridor Plan and a plan for developing a scenic highway network;
- Recommended major travel corridor studies, followed by creation of a land use committee, transportation financing committee, and a commission on transit institutional restructuring.

#### RECOMMENDED HIGHWAY IMPROVEMENTS

Issues of importance included: the need for more off-street parking in commercial areas and construction of a local street to connect the north side of the city with Covert Run Pike.

The Land Use Plan Element, Chapter V, identifies the need to establish off-street parking along Fairfield and Taylor Avenues. This is a key part of both the Transportation Plan and the Land Use Plan Elements. Such improvements will not only aid in land use and redevelopment, but also in the daily flow of traffic within the City of Bellevue. As previously noted the city has completed a study of parking issues. This plan fully supports this study and recommends appropriate action be taken to implement findings of the study.

To address the issue of north - south access this plan recommends a new road connection between Lincoln Road and Covert Run Pike. Bridges over the CSX railroad were replaced between 1995 and 1998.

Plate 8-A, the Transportation Plan Map, designates Taylor Avenue and Covert Run Pike as Urban Collector routes. Fairfield Avenue is designated as an Urban Minor Arterial route. Improvements should be made to these routes to accommodate increased traffic. This plan recommends that improvements be made to Donnermeyer Drive and Riviera Drive to accommodate increased traffic and allow for redevelopment of this area. Any widening and/or reconstruction should result in improved traffic flow conditions.

This plan also recommends that further study be conducted along Donnermeyer Drive to determine the need and feasibility for a reorientation of this road.

## **BICYCLE AND PEDESTRIAN**

The streetscape and parking study, previously discussed, includes recommendations for improvements to sidewalks along Fairfield Avenue and Taylor Avenue. The OKI Regional Bicycle Plan identifies Kentucky 8 (Fairfield Avenue), which passes through the urban areas of Kenton and Campbell counties, as potentially serving bicyclist travelling through the area.

In November 1993, the city received funding for a pedestrian/bicycle path along the riverfront. Funding for this project came from the Transportation Enhancement Program, which is a part of the Intermodal Surface Transportation Efficiency Act (ISTEA). This project, known as the "Bellevue Bathing Beaches and Historic Cycling Trail," helps to provide an important link by connecting riverfront attractions from Covington Landing in the City of Covington and Riverboat Row in the City of Newport with the Watertown Marina in the City of Dayton. In Bellevue, the focal point of this project is the Bellevue Beach Park, which serves as a rest area for bicyclists and pedestrians. The park area is located in the area delineated on the Land Use Plan Map for recreation and open space.

## **TRANSIT**

Public transportation in northern Kentucky is provided by the Transit Authority of Northern Kentucky (TANK). Since 1985, TANK has provided transit service into the downtown area of Cincinnati. TANK collects data on ridership frequency by route stops every two (2) years. According to TANK personnel, the current demand for bus service in Bellevue is fairly high. The routes within the city have been modified since the

construction of the new Central Bridge in Newport.

Although bus service is currently the only public transportation available in Bellevue, it is important for the city to support efforts that would expand this current system to include light rail, streetcars, or shuttles.

## **AIR TRANSPORTATION**

The Cincinnati/Northern Kentucky International Airport is the primary air carrier airport serving all of Northern Kentucky and the Cincinnati Metropolitan area. Accessible primarily via US 27, AA Highway, 1-275, the airport is located in northeastern Boone County.

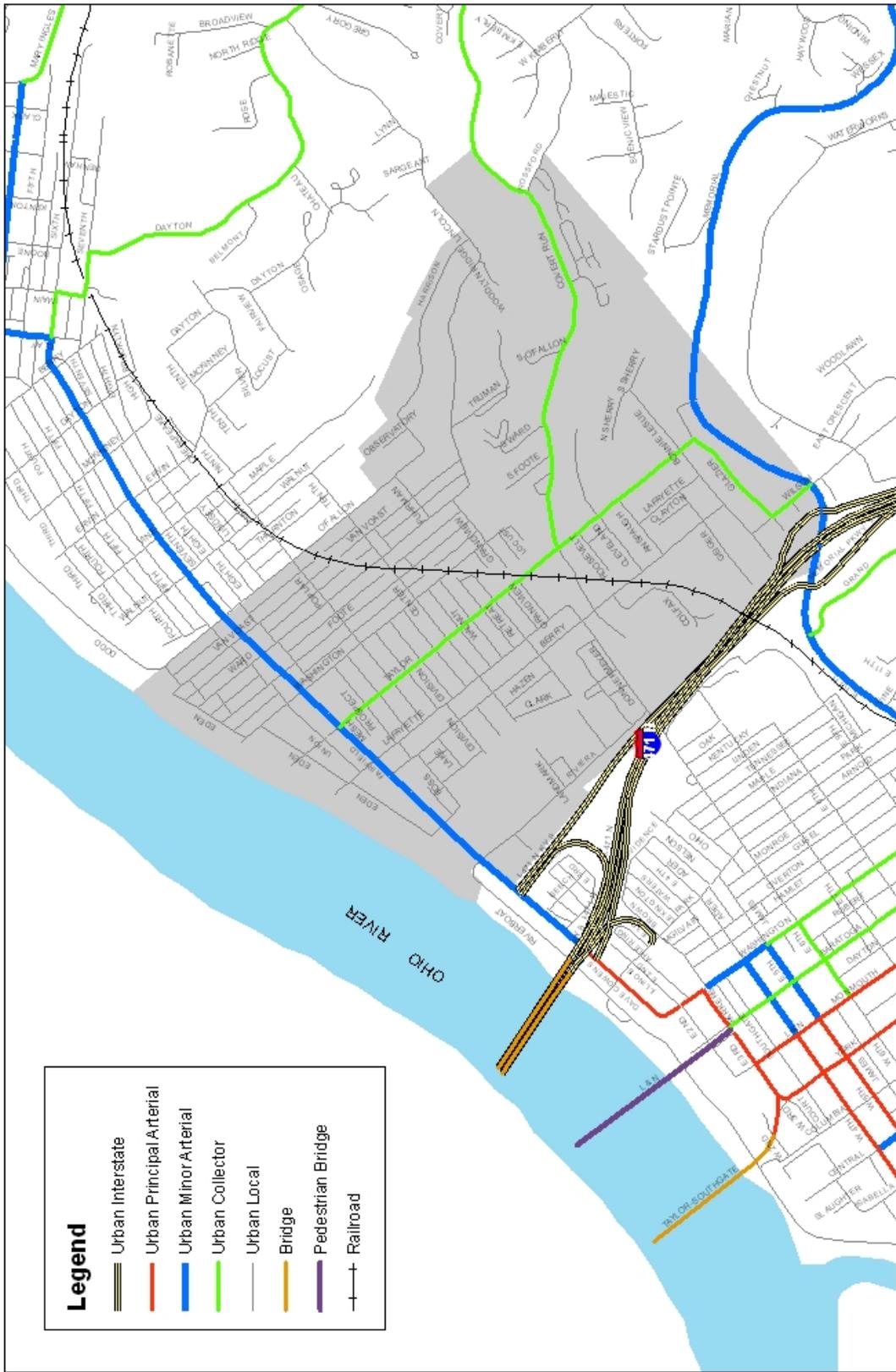
The largest general aviation airport in the metropolitan area, Lunken Municipal (City of Cincinnati) Airport, is also accessible to Campbell County via 1-275 from Campbell County. Lunken Airport is located in Hamilton County, Ohio, across from the city of Fort Thomas.

Other general aviation airports within approximately ten miles of Northern Kentucky are Cincinnati-Blue Ash Airport, in northeastern Hamilton County; and Clermont County Airport, near Batavia, Ohio.

The Federal Aviation Administration is seeking a site for a "reliever airport" for the Cincinnati/Northern Kentucky International Airport. Such a facility is needed in order to take small planes out of the traffic using the International Airport. This would allow the jets and other large planes to land without delay and with greater safety.

## **WATER TRANSPORTATION**

A water shuttle has been proposed by Southbank Partners. The shuttle will eventually link together venues on the riverfronts of Bellevue, Newport, Covington and Cincinnati.



DATE: 08/14/2008  
 PREPARED BY: NKA  
 PROJECT: TRANSPORTATION SYSTEM MAP  
 SHEET: 1 OF 1



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# City of Bellevue Transportation System

# **CHAPTER IX**

## **INFORMATION TECHNOLOGY AND INFRASTRUCTURE**

### **GENERAL**

The purpose of this chapter is to provide information and insight into the issues concerning the use and development of a significant new topic of importance for the Northern Kentucky Area, including the City of Bellevue, and for other communities across the nation: the rapidly developing field of information technology and its accompanying infrastructure. The potential impact on communities, such as Bellevue and other Northern Kentucky communities is tremendous in scope, and it appears that much education and planning is necessary in order to be prepared to address these new issues. This chapter will present some basic background information about the most significant issues at present and will make recommendations for addressing them and other rapidly developing technologies both now and in the future.

### **A NEW INFRASTRUCTURE**

Although many people initially regard new technologies as intimidating, impersonal and intrusive, there has been a great change in attitudes toward such common technologies such as "voice mail", electronic or "e-mail", facsimile ("FAX") machines, computers, answering machines, and other technologies when they are well-designed and easy to use. As cutting edge information technologies continue to be developed, they too will be regarded in the future as commonplace and essential, and will be expected by citizens.

The importance of making these tools convenient to use cannot be underestimated. It has been said that when the telephone was first introduced, the growth in its use was so explosive that a telephone industry executive predicted that everyone would have to become a telephone operator in order to handle the demand for service. That is, of course, exactly what happened. The technology developed to a level that was easy to use, permitting average citizens to make their own calls. The same will be true of the technologies under development today.

Information technology already plays a significant role in public safety, economic development, entertainment, work, communication, and education, and will continue to expand its presence in the public areas of the daily lives of our citizenry. But, the coincident increase in use of computers by average citizens from their homes, along with the enormous growth in the use of the "Internet" has fueled the engine of one of the most substantial infrastructure development periods in decades.

*We must realize that we are witnessing the leading edge of a new infrastructure much like the railroads, the interstate highway system, and the water, sewer, telephone, and gas and electric utilities.*

As Northern Kentucky looks toward the future and the quickly approaching 21st Century, it is crucial that the community develop and have in place the knowledge and guidelines necessary for the process of planning for the expanding use of these technologies.

Recent federal and state legislation have already impacted the ability of local authorities to address these issues. The potential impact of ignoring these developments will be costly and will only further delay the necessity to plan for the future. This Comprehensive Plan Update for Bellevue is an appropriate avenue to address these issues and to develop recommendations for the future.

## **TWO GUIDING THEMES**

Two guiding themes seem to have arisen regarding information technology. These themes are:

- The desire for "Universal Access" to the various information technologies; and
- The linking of information technology and infrastructure to the four essential elements of the Comprehensive Plan:
  - Transportation
  - Community facilities
  - Utilities
  - Land use

### **UNIVERSAL ACCESS**

The concept of "Universal Access" is defined as *"the ability of every citizen to have access to information technology and infrastructure developments."* This does not necessarily mean a computer or Internet access in every home, but the ability for every citizen to have such access if so desired. This ability might be made available through facilities located in public libraries, city halls, schools, or kiosks in shopping malls. It could also be provided in the home through any number of service providers. Many people already take advantage of this capability through modems and telephone lines.

### **LINKING TO THE COMPREHENSIVE PLAN**

Initially, the best way to incorporate these issues and concerns into the Comprehensive Plan Update is to begin by relating them to the plan's Goals and Objectives and the required elements of the Comprehensive Plan. The following paragraphs are meant to describe some potential benefits that could be realized through the implementation of information technologies.

Transportation - Information technology has the potential to alleviate dependency on

vehicular trips to accomplish many tasks. For example, with a home computer one can now search for books at the Campbell County Public Library and at other libraries in Greater Cincinnati/Northern Kentucky area. In many cases it is now possible to perform other tasks such as shopping and product ordering from home even without a home computer. Generally, this convenience has only been available from large mail order firms. However, with increased awareness and interest, these services could potentially be made available by local businesses. Home delivery of products ordered from local businesses such as groceries, drug stores, and hardware stores, once a common occurrence, is again being implemented in many areas of the country. Trends such as these have the potential to reduce short trips, with a corresponding benefit in air quality improvement.

"Telecommuting" can especially reduce commuting to and from work as people are increasingly able to work from their homes through the use of computers, modems and fax machines. The potential impact of increased telecommuting must also be examined in light of present and future zoning ordinances. Increased numbers of people working from their homes will raise questions and concerns about business activities in residential areas that were more clear-cut in the past, but will require further examination and planning in the future.

The advent of "smart highway systems" such as ARTIMIS, the Advanced Regional Traffic Interactive Management and Information System, has been implemented in the Cincinnati Metropolitan Area. ARTIMIS is also a good example of the use of information technology in the area of transportation. This system monitors traffic conditions on the region's major thoroughfares, via an Operations Control Center (located in downtown Cincinnati), through the use of sensors installed in the roadways and remote control video cameras. When traffic delays or bottlenecks are detected, overhead changeable message signs or Highway Advisory Radio (HAR) provides alert messages sent by operators to warn drivers of potential problems ahead and to suggest possible alternate routes.

These and other transportation related developments offer great promise and should be recognized, discussed, and encouraged where appropriate.

Community Facilities - Information technology can assist in providing access to information, materials and services typically found at city buildings, schools, libraries and other public agencies. The following examples for information technology and infrastructure related to community facilities should be examined:

- Electronic linking of community facilities such as schools, libraries, city and county buildings and other facilities holds potential for improving access to information by the public. This would include the availability of public information on-line where practical. For example, documents can be published electronically for reduced cost of distribution while also making the information more accessible.
- Potential improvements in public safety that could be realized by installing

smoke, fire and burglary detection systems that could automatically link to emergency dispatch services when activated. Although such systems are not yet perfected, their availability and usability will improve in the future.

- New developments in information technologies and infrastructure will have an impact on physical design and capacity of public facilities as well, perhaps affecting building and parking capacities as well as building code and design features. For example, new city/county/public office facilities being built should be designed to accommodate computer networking/video-conferencing networking capabilities in the design stage rather than as an afterthought.

Proximity to information technology access locations may become a factor in determining where people choose to live in the same way proximity to parks, schools, shopping, and churches plays a role now.

Sites for cellular phone towers, Personal Communication Services (PCS) equipment and other facilities could be evaluated through the use of Geographic Information Systems (GIS) technology. In particular, the concept of sharing facility sites among various cellular and PCS providers, where possible, has great potential for reducing the number of towers necessary to serve the area's communication needs. It is important for the City of Bellevue, due to its central location with several potential hilltop locations, to strongly encourage sharing or co-location of these facilities to minimize their proliferation within the city.

Water/Sewer/Solid Waste - Technologies are now available which make it possible to read utility meters electronically and have the monthly readings sent to the utility headquarters. In some areas these Systems are already in use. Utility service providers should be encouraged to examine such developments when installing new service capabilities.

If electronic meter reading is implemented, it may be feasible to implement other capabilities through the same system, or to install multiple systems so that if one fails, the other will back it up. With more immediate feedback of utility service usage, the utility service providers may be able to use this information to better design their systems to handle peak loads/capacities and better balance service demands. The feasibility of these suggestions is unknown at this time, but the potential benefits are significant, and the decision-makers must become aware of the many new possibilities on the horizon.

Maintenance of facilities can be aided through the use of GIS and Automated Mapping/Facilities Management Systems (AM/FM.) Such systems are designed to store highly accurate base maps of a region and any related information about the maps in a computer database. These maps are separated into "layers" such as roads, buildings, property lines, and so on. In this way, it is possible to deal with a single layer or with multiple layers of information.

Utilities can also map their facilities as individual layers on top of the common "master

base map" in order to organize and use their information in a method that is consistent with other uses. For example, when planning to repair a sewer line, a simple search could show the location of any water or gas lines that may be present. When repairing, replacing or maintaining existing facilities or installing new facilities, consideration should be given to these new capabilities. The Northern Kentucky Area Planning Commission, the Kenton County Fiscal Court, the Kenton County Property Valuation Administrator (PVA), Sanitation District #1 of Northern Kentucky, and the Northern Kentucky Water Service District, have cooperated to develop such a system known as the *PlaNet GIS System*, which covers much of Campbell County and all of the City of Bellevue, because the city is within the service area of the Sanitation District and the Water Service District. In fact, the preparation of this plan update for Bellevue has employed most of these services from the NKAPC GIS program (e.g. incorporation of base mapping and other computerized information).

The use of GIS to help site facilities such as landfills, or to optimize school bus, public transit or solid waste pickup routes, must be more fully explored and encouraged. Use of this technology can provide a more tangible basis for decision making which otherwise can appear arbitrary if not properly explained.

Land Use - Identification of the best sites for recreational facilities, agricultural and/or preservation areas, and industrial parks should be done before land available for such uses becomes scarce. Again, GIS technology could be used in this effort by tracking land consumption over time and by use. Trends in development and demographics can also be more accurately tracked using GIS capabilities.

## **SIGNIFICANT TRENDS AND EXAMPLES**

Why then is it necessary to plan for something that in many cases is already available through existing facilities? The answer is, that while today's facilities are generally adequate for the uses being made of them, the increasing growth in the use of these technologies and the demand for faster and more reliable capabilities will increase dramatically in the coming years. Listed below are some examples of the services and capabilities that will be dependent on developments in the information technology field:

Economic Development - Businesses will demand greater access to an information infrastructure that is flexible and capable of handling their diverse needs. This is especially true when firms are looking to expand their operations. Communities that are not prepared to accommodate such needs may be passed over in the process.

Electronic Commerce - Closely related to economic development issues, electronic commerce deals with the exchange of purchase orders, invoices, and payments using an electronic standard. Another concept being developed - electronic, or "e-cash" -will permit the purchase of goods and services electronically without the tracking of purchases for marketing purposes, by associating sales records to a person's bank or credit card account. This capability will help address privacy issues.

News Media - News organizations will take advantage of the capabilities in reporting news as it happens and as a means of distribution. Already several major news organizations and newspapers, including *The Cincinnati Post*; *The Cincinnati Enquirer* and local television stations, have begun to explore this new electronic publishing frontier.

Education - Schools are teaching our children how to use these technologies. As the workers of the future, they will expect these capabilities to be available. Distance learning via video-conferencing/interactive television, as well as career training and other educational offerings, will be offered through current and developing technologies. Those not prepared risk being left behind as the information revolution juggernaut proceeds.

Medical - The medical professions already rely heavily on available information technologies and will increasingly require reliable, fast, and accurate exchange of information. Video-conferencing capabilities, in particular, hold great promise in extending the reach of the latest advances in health care from research hospitals to remote locations.

Telecommuting - Working from remote locations or from home will become more commonplace resulting in increasing demands for adequate information technology infrastructure. Banking, shopping, paying bills, submitting tax returns, performing research and using e-mail are among many of the activities and services that will be feasible. Many of these have the potential to reduce short trips and save considerable time.

Government Organizations - Government agencies can take advantage of many capabilities to improve the delivery of services to the public. Publication and distribution of public records in electronic format, where practical, can help make information more accessible to the general public. "One-Stop Kiosks" can be designed to handle applications for permits and/or other necessary paperwork rather than forcing the citizen to visit several different locations.

Emergency Services - The Global Positioning System (GPS) is a system of satellites and equipment designed by the U. S. Department of Defense to permit personnel to determine their location anywhere on the face of the earth, 24 hours a day. In combination with GIS capabilities, emergency dispatchers can take advantage of GPS technology to more effectively dispatch police, fire, and ambulances to call locations. Emergency vehicles equipped with appropriate equipment can broadcast their locations to the central dispatching office every few seconds. In this way, they can be tracked in real time should further assistance or backup be required.

Another area that should be examined for its potential in emergency situations is the 800-megahertz radio system. This system is designed to permit either addressable communication from one station to another, or when necessary, to permit communication within or among groups of radios. In this way, emergency service providers could communicate individually and within their own organization under normal conditions, or

in the case of a natural disaster or other emergency situation, could easily switch to a cooperative mode for coordinated response.

Kentucky Information Highway - The "Kentucky Information Highway" is a statewide initiative to make the latest advances in information technologies available to all public agencies in the state at a uniform rate. Many of the examples listed herein are part of this initiative. The goals and objectives of the "Kentucky Information Highway" initiative should be examined for a greater understanding of its potential benefits to local government organizations.

Kentucky Statewide Base Map - The "Kentucky Statewide Base Map" is an initiative of Kentucky's "GIS Advisory Council", in cooperation with the United States Geological Survey (USGS), the Natural Resources Conservation Service (NRCS) - formerly the Soil Conservation Service - and the U. S. Forest Service (USFS), to map the entire commonwealth at a uniform scale for the purpose of making up-to-date mapping available for use by all state and local government agencies. This mapping will be sufficiently accurate to be used as a base for property mapping in all but the most urbanized areas of the state. The potential benefit of such a product to the state in the areas of economic development, transportation, tourism, environmental and natural resources, and conservation efforts is tremendous.

## **GUIDING THEME SUMMARY**

Although incomplete, this list gives some idea of the scope and significance of the developments in the information technology arena. Since this is the first time these issues have been addressed in the Comprehensive Plan Update for Bellevue, by necessity the fundamental and most immediately applicable issues may take precedence over less obvious applications. However, it is important to recognize and acknowledge the dynamic nature of the field of information technology. One only has to examine the decisions, both good and bad, made by some communities during the eras of railroad and interstate highway system expansion and development, to understand the potential impact.

## **DECISION MAKING**

The use and development of information technology and its accompanying infrastructure is inevitable, and is therefore something for which planning is required, for both the potential uses and for orderly and coordinated development.

It is critically important that citizens not be divided into the technology "*haves and have-nots.*" Accordingly, as infrastructure developments occur, care must be exercised to ensure that providers are not allowed to "cherry pick" the areas that they will or will not serve. Decision-makers must not inadvertently create situations that prevent citizens from having the ability to take advantage of these developments. In other words, Universal Access needs to be a guiding principle in decision-making.

## RECOMMENDATIONS

Community Plan - A unified county/region-wide plan needs to be 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 should be to be able to offer everyone in Bellevue and 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.

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.

Prior to July 15, 1998, cellular towers and their facilities were only subject to local review and control when located in Jefferson County, KY. Presumably this will also be the case with the new PCS facilities that will require much higher densities to provide for adequate coverage. Effective July 15, 1998, local review and control authority has been extended statewide under the jurisdiction of local planning commissions, where

applicable, per H.B. 168.

Infrastructure within the public right-of-way is still subject to local control. However, under current state and federal restrictions regarding cellular, 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, Personal Communication Services (PCS), satellite dishes, and other similar technologies that 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 and site facilities in order to minimize their proliferation. Aesthetic issues are prominent and will need to be addressed at the local level. It will be important also, as new technologies make such towers or other facilities unnecessary to assure their removal and disposal.

This plan update recommends that city officials and the planning commission work cooperatively with the service providers and use the following list of recommended criteria when evaluating the siting of such facilities.

- 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 that 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.
- Potential sites that should be considered (in order from most preferred to least preferred) include: Street rights-of-ways, existing utility towers, industrial zones, commercial zones, government buildings.
- As required in the zoning ordinance, 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 as required per the local zoning ordinance.

- 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, the owner should remove it and the land restored to its natural state.

Employment and Economic Development - In order to provide for a stable and diversified employment capability (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 city's present and future zoning ordinances 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 reviewed in accordance with the city's zoning ordinance.

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 that 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 semipublic 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 that 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 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 city 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 city council members, mayors, or other officials.

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 are recommended to be established with 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 - Submissions 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.

Although simple "ID plats" or "plats of convenience" are submitted in a manually drawn format, most major subdivision plats are now created on computers in a "Computer Aided Drafting" or "CAD" format and submitted as a computer drawing on Mylar film. Since the original work is already in a computer format, it makes sense that the submission should be submitted, where feasible, in such format for improved record-keeping and reduction in the chance for error when entered into the Property Valuation Administrator's (PVA) Land Records System.

Implementation - A countywide 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.

# **CHAPTER X**

## **IMPLEMENTATION**

### **GENERAL**

This chapter describes various implementation measures that may be used to accomplish the goals, objectives, and specific recommendations described in this plan. With completion of this plan update, a necessary continuing step in the planning process has been accomplished. "Implementation", however, is likely the most important and never-ending step in this process. Both the public and private sector has a role in the implementation of this plan. The public sector will assist in guiding development by reasonable and prudent application of various land regulatory measures, as well as, through financing of public works projects. Private sector businesses and individuals will plan and complete land development projects.

### **ZONING REGULATIONS**

State legislation permits the legislative bodies of cities and counties to adopt zoning regulations which may be used to divide the territory within their jurisdiction into zones so as to promote public health, safety, and general welfare of the area of jurisdiction, to facilitate orderly and harmonious development and visual or historical character of the area, and to regulate the density of population and intensity of land use in order to provide for adequate light and air. In addition, zoning may be employed to provide for vehicular parking and loading space, as well as to facilitate fire and police protection and to prevent the overcrowding of land, blight, danger, and congestion in the circulation of people and commodities and the loss of life, health, or property from fire, flood, and other dangers. Zoning may also be employed to promote and protect airports, highways, and other transportation facilities, public facilities, including schools and public grounds, historical districts, central business districts, prime agricultural land, natural resources, the use of sludge from water and waste water treatment facilities in projects to improve soil quality, and other specific areas which need special protection.

### **SUBDIVISION REGULATIONS**

Kentucky State legislation permits local planning commissions to prepare and adopt regulations for the subdivision of land within its boundaries after all elements of the Comprehensive Plan have been adopted by the commission. This legislation requires that, if such regulations are adopted, all subdivision of land shall (mandatory) receive planning commission approval before subdivision plats may be recorded at the county level. It further states that any street or public ground that has been dedicated shall not be accepted by the legislative body in question until it has received final plat approval by the planning commission. Additionally, any street that has been built in accordance with specific standards set forth in the subdivision regulations shall be automatically accepted by a legislative body forty - five days after inspection and final approval.

## **CAPITAL IMPROVEMENTS PROGRAM**

A capital improvements program is developed only after completion and adoption of the Comprehensive Plan. Such a program is an effort to identify, from a detailed review of the recommendations included in the Comprehensive Plan, public improvement priorities, and then to schedule these priorities on the bases of the city's financial ability to accomplish them. Such a program is usually short - term in nature -- normally a five or six year program, with the first year being incorporated as the current year operating budget.

More specifically, a capital improvements program is either preceded by, or includes, a complete review of the financial condition of the city for a number of past years, so that a complete understanding of those financial operations is available prior to the time any recommendations for future expenditures are made. After completion of this detailed financial analysis, projections of budgets for future years are made. Detailed review of the recommendations set forth in the Comprehensive Plan allows development of a set of priorities, identifying which public improvements will be necessary in the early years of the plan's long - range program. Cost estimates for each of these priority items are then made and a schedule of capital improvement projects is developed.

The program further recommends appropriate sources of funds to finance such improvements as they are required (e.g., current revenues, special funds, bond issues, etc.). Effort is then directed toward coordinating scheduled capital improvements projects with the city's ability to finance such improvements over the period covered by the capital improvements program.

A well designed capital improvements program is kept current by re-evaluating each year, the priorities assigned to each project, and by adding another year to the end of the program -- each time the first year is incorporated into the current operating budget. Preparation of a capital improvement program is an important component in any comprehensive planning process.

## **OFFICIAL MAP REGULATION**

When all required components of the Comprehensive Plan and a capital improvements program have been prepared and adopted, the planning commission and city council have the authority to prepare and adopt an official map regulation. This regulation incorporates a map of the entire area of jurisdiction and may show, without being limited to, the location and extent of existing and proposed public streets, including rights-of-way, water courses, parks and playgrounds, public schools and building sites, and public facilities needs.

State statutes require that, prior to the adoption or amendment of the official map regulation, the local planning commission review the official map or changes to it in light of the Comprehensive Plan, hold a public hearing on the map, or proposed changes, and recommend its approval or disapproval to the city council.

After passage of the official map regulation for all or part of the city, all streets, water

courses, parks and playgrounds, public buildings, public school sites, or other public facilities which have been approved under subdivision regulations, as provided in the Kentucky Revised Statutes, shall be posted to the official map. No public hearing needs to be held for such additions to the official map.

Kentucky Revised Statutes further note that the passage of the official map regulation shall not be deemed as opening or establishing of any street, or as a taking, or as an acceptance of any land for a street, water course, or public grounds; nor shall it obligate the city or county to improve or maintain any such street or facility.

State statutes also note that, for the purpose of preserving the integrity of the official map regulation of the city, no permit shall be issued for the construction or material alteration of any building within the lines of any street, including rights-of-way, water courses, parks and playgrounds, public schools, or other public building sites, shown on the official map. The official map of a city may include an area outside the city limits over which the approval of subdivision plats is required. State statutes note that any person desiring to construct or materially alter a building in the lines of any proposed facility shown on the official map shall apply to the administrative official of the city for a building permit. Unless such application is made and the permit is granted, no person shall recover any damages for the taking for public use of any structure or improvement structured within the lines shown on the map, and any such structure or improvement shall be removed at the expense of the owner when the land is acquired for public use.

Statutes also indicate that, if the land shown on the official map is not yielding a fair return, the board of adjustment shall have the power to grant a permit for the building which will, as little as practicable, increase the cost of future acquisition, and the board may impose reasonable requirements as a condition for granting such permits. Such a permit shall not be granted when the applicant will not be substantially damaged by placing his building outside the boundary lines of the proposed facility.

The official map regulation is a land regulatory tool permissible in the state of Kentucky, which has not been used to date in Northern Kentucky. It appears to be a valuable tool for local government to use in planning for the acquisition and development of land for public purposes. Its obvious intent is to assure that the cost of such lands, if they can be reasonably anticipated to be acquired and coordinated with the five-year capital improvements program, will not significantly escalate, so that the end result will not be much higher costs, to the public for purchase and development of such properties. The regulation is written in a fashion which attempts to insure fairness to property owners in question, while assuring that the entire taxpaying public will be benefited by such long - range financial planning coordinated with long - range physical planning.

## **BUILDING CODES**

A building code establishes standards for design, construction, alteration, repair, equipment, use and occupancy, maintenance, removal, and demolition of every building, structure, or appurtenance connected or attached to such buildings or structures. This type of code also establishes procedures for amendments and appeals to the code and provides for its administration and enforcement.

In 1980, the state of Kentucky enacted a state wide building code. Prior to that time, each individual community could select whichever national building code it wished to use or it could develop its own building code. In an effort to assure uniformity of application of building regulations, the state of Kentucky adopted the Kentucky Building Code. That same state law, however; requires that local governments must enforce that building code with building officials qualified by examination which is administered by BOCA (Building Officials and Code Administrators International, Inc.), a national professional association for construction code officials.

## **HOUSING CODES**

A housing code establishes minimum standards necessary to make dwellings fit for human habitation, regulates the size of rooms, light, ventilation, heating, and the number of persons permitted per room, the types of sanitary facilities required for all dwellings; establishes conditions which constitute hazards and which, if found to exist, warrant findings that the building is unsafe for human habitation. The code also provides for amendments and appeals and establishes procedures for administration and enforcement of its regulations.

## **ADDITIONAL IMPLEMENTATION MEASURES**

- Various additional means of implementing the goals and objectives and the more specific recommendations of the Plan Update, are available. Federal assistance programs, in past years for example, have contributed significantly to achieving many of the objectives and specific plans prepared and adopted by local governments in Northern Kentucky. Funding for various urban renewal/community development/rehabilitation/conservation type efforts have been applied for and received by the City of Bellevue, resulting in elimination of blighted conditions and construction of new development in conformity with long-range comprehensive planning.
- A method which can, and has been used, to some degree, to guide and regulate development, is an area's ability to extend (or conversely, not to extend) utilities into areas which are primarily undeveloped. Existence of utility systems in any area enhances the potential for additional development of all types without the pre-required necessity of costly private utility extensions. Conversely, unbridled utility extension can encourage new development, which requires the paralleling provision of a higher level of all other public services (e.g., police and fire protection, schools, parks, street lighting, street maintenance, solid waste collection, library services, etc.). If not developed in line with a predetermined plan of action, such utility extensions will out - run the area's ability to finance and provide these other necessary public services and the entire base of taxpayers will be required to support a very expensive and over -extended system of public facilities serving a small and scattered population. A much more prudent use of such tax monies would be to rehabilitate the infrastructure/public services in intensively developed areas. A well planned and programmed system of utility extensions, while permitting development in designated areas at a pace desired by public officials, also permits private developers to recognize the aims and objectives of local government. Private interest decisions,

thus, can be guided by these same objectives.

- In the early part of 1991, the Hillside Trust published a report entitled, "A Hillside Protection Strategy For Greater Cincinnati". This study covered areas within Kenton County, Kentucky and Hamilton County, Ohio. Participants in this study included the Hamilton County Regional Planning Commission, the Northern Kentucky Area Planning Commission, the University of Cincinnati, Kentucky Division of Soil Conservation, U.S. Soil Conservation Service, and the U.S. Forest Service. The study documents the critical need to protect the forested hillsides that, along with the rivers, provide much of our region's distinctive beauty. It outlines a broad strategy by which local governments can ensure both the visual and the geotechnical integrity of these beautiful and fragile hillsides. Because of similarities in topography, soil types, and geologic formations information in this study is also appropriate for the City of Bellevue. This study provides an excellent reference, with suggested guidelines, which can be used to develop regulations for the protection and utilization of hillside areas in Bellevue.

## **SPECIFIC IMPLEMENTATION MEASURES**

During the process of preparing this plan update several specific implementation measures were discussed with the Comprehensive Plan Task Force. These were discussed as means by which specific issues could be addressed. Following is a brief discussion of these measures.

### **SINGLE-FAMILY CONVERSIONS**

Additional dwelling units resulting from single-family conversions increase the demand for on-street parking. On some streets in the city parking spaces may be available, while on others current demand already limits the availability of on-street parking. Therefore, efforts should be made to enforce regulations prohibiting illegal conversions. The emphasis of this suggested alternative is to effectively deal with enforcement. Existing illegal conversions should be identified and available legal remedies used to bring about compliance. Also, other administrative mechanisms should be put into place to track illegal conversions. Assuming that the building permit process does not catch all attempts to convert, the city should develop a communication network with all utility companies that serve the city (telephone, cable TV, gas, electric, water and sewer). The purpose of this network is to gather information on new service hook-ups, particularly additional hook-ups for addresses that already have service. This information will allow city officials to investigate and determine if illegal conversions are in progress. Only those conversions that meet all criteria in the city's zoning ordinance would be permitted.

### **SPECIAL DEVELOPMENT AREAS**

Two areas within the city were designated on the Land Use Plan Map and described in Chapter 5 as Special Development Areas. To effectively implement the plan in regards to these areas the Bellevue Planning Commission and the City Council should review and revise as necessary the zoning regulations and other development policies. The Special

Development Areas are located along two corridors: the Ohio River on the west side of the city and north of Fairfield Avenue; and along Donnermeyer Drive from Riviera Drive and I-471 to the west to Covert Run Pike to the east. An area previously designated as a Special Development Area is the Taylor Avenue corridor, which is now designated as Commercial in the Land Use chapter as part of the 2008 Update.

## HISTORIC DISTRICTS

The City of Bellevue has successfully implemented an historic preservation program, which has proven to be a key to the revitalization of the city. This plan update encourages continuation and expansion of this program. Three issues should be considered by the city. First, the National Register Districts in the city are not completely included within the historic zoning district areas. Consideration should be given to expanding the coverage and protection of the local historic district to include the National Register Districts. Second, it is recommended that the city continue its efforts to work with the City of Dayton to adopt historic zoning regulations that would complement the efforts in Bellevue. Third, it is recommended that the city seek designation as a “Renaissance Kentucky” community and thereby avail itself to the financial and aesthetic benefits of the program.