

Chapter II. Community Background

2.1 GEOGRAPHICAL FEATURES

2.1.1 Landscape

The City of Urbana and its outlying Extra Territorial Jurisdiction (ETJ), with the exception of the minor slopes along the Yankee Ridge Moraine and the rolling countryside along the Saline Branch, is very flat. The average elevation is 730 feet above sea level according to the Illinois State Water Survey. The majority of the undeveloped and cultivated area is classified as prime farmland. The area's flat landscape allows straight-line winds to move at high speeds, making Urbana prone to wind hazards.

2.1.2 Waterways

The major waterways are the Saline Branch Drainage Ditch, Boneyard Creek, and McCullough Creek. The Saline Branch crosses the area north of Interstate 74. Boneyard Creek runs downstream through the heart of the community touching residential, commercial, industrial properties and land uses. McCullough Creek is the smallest waterway in the community and is concentrated within mainly agricultural area in southwest Urbana. A portion of the Embarrass River Basin is located in the southwestern portion of the one-and-one-half mile ETJ. Developed areas of the community that fall in the floodplain of these waterways are thus exposed to floods.

2.1.3 Hydrology

The flat landscape and poorly drained soil types that characterize the area do not facilitate proper surface drainage and puts the City at a higher risk of flooding. The hydrologic network within and around the City of Urbana consists of the several river basins mentioned above, including the Saline Drainage Ditch and Boneyard and McCullough Creeks.

2.1.4 Soil

Urbana soils are mainly upland prairie of the Drummer-Flanagan (Boneyard Basin), Drummer-Xenia (Saline Branch), and Dana-Parr-Drummer (McCullough Basin) groups. The glacial drifts consist of a heterogeneous mixture of clay, silt, sand, and gravel, with a thickness of 250 feet near Urbana. Soils found near the Saline Drainage Ditch basin and other water resources are considered low in crop production potential and severe in potential building site limitations. Maps by the Association of Central United States Earthquake Consortium (CUSEC) State Geologists illustrate that Urbana soils (upper 50 feet) have a high potential for amplifying earthquake ground motions or liquefaction.

2.1.5 Precipitation

The average yearly precipitation is 35.9 inches. The temperature ranges from an average of 26° Fahrenheit in January to 75° in July. The land surface of the area has a level or gently rolling topography, which again, generally provides inadequate drainage for storm runoff.

2.2 LAND USE PATTERN

As seen in *Figure 2.1*, Urbana can be characterized as a predominantly residential community with many neighborhoods of single-family and multi-family housing. As a highly urbanized community, Urbana has a large number of people and properties that are exposed to natural hazards. *Figures 2.2 and 2.3* show the City's 2003 Existing Land Use and Future Land Use maps. These maps can be used to help identify vulnerable properties, as well as what land use types are planned for the future.

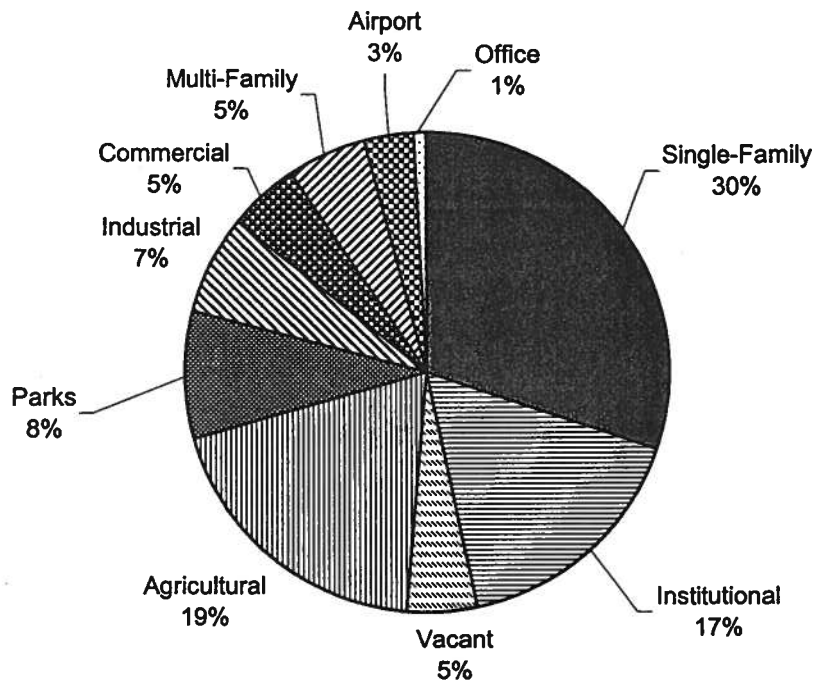


Figure 2.1 Distribution of Land Uses, City of Urbana, 2001

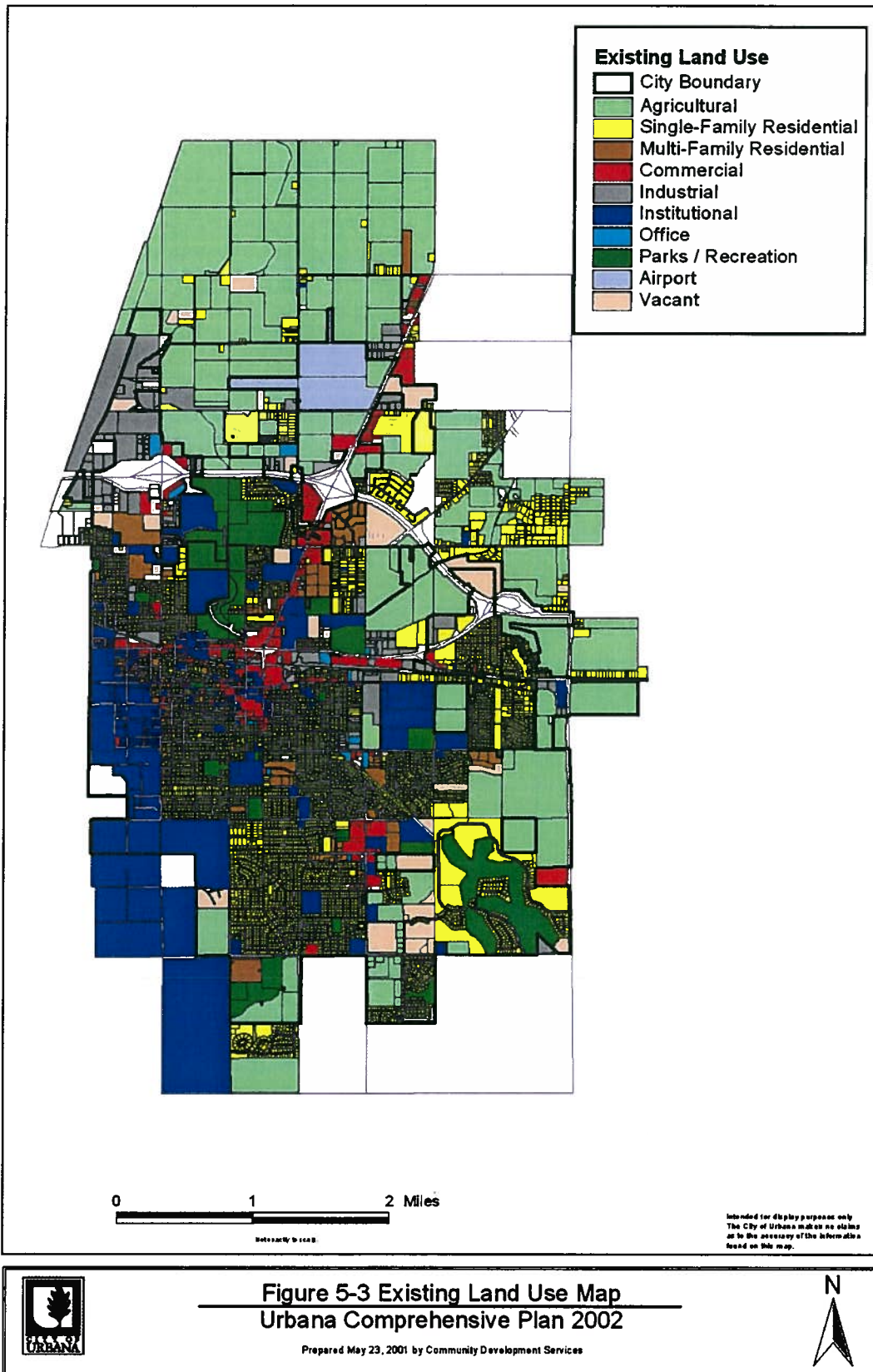


Figure 2.2 City of Urbana Land Use Map

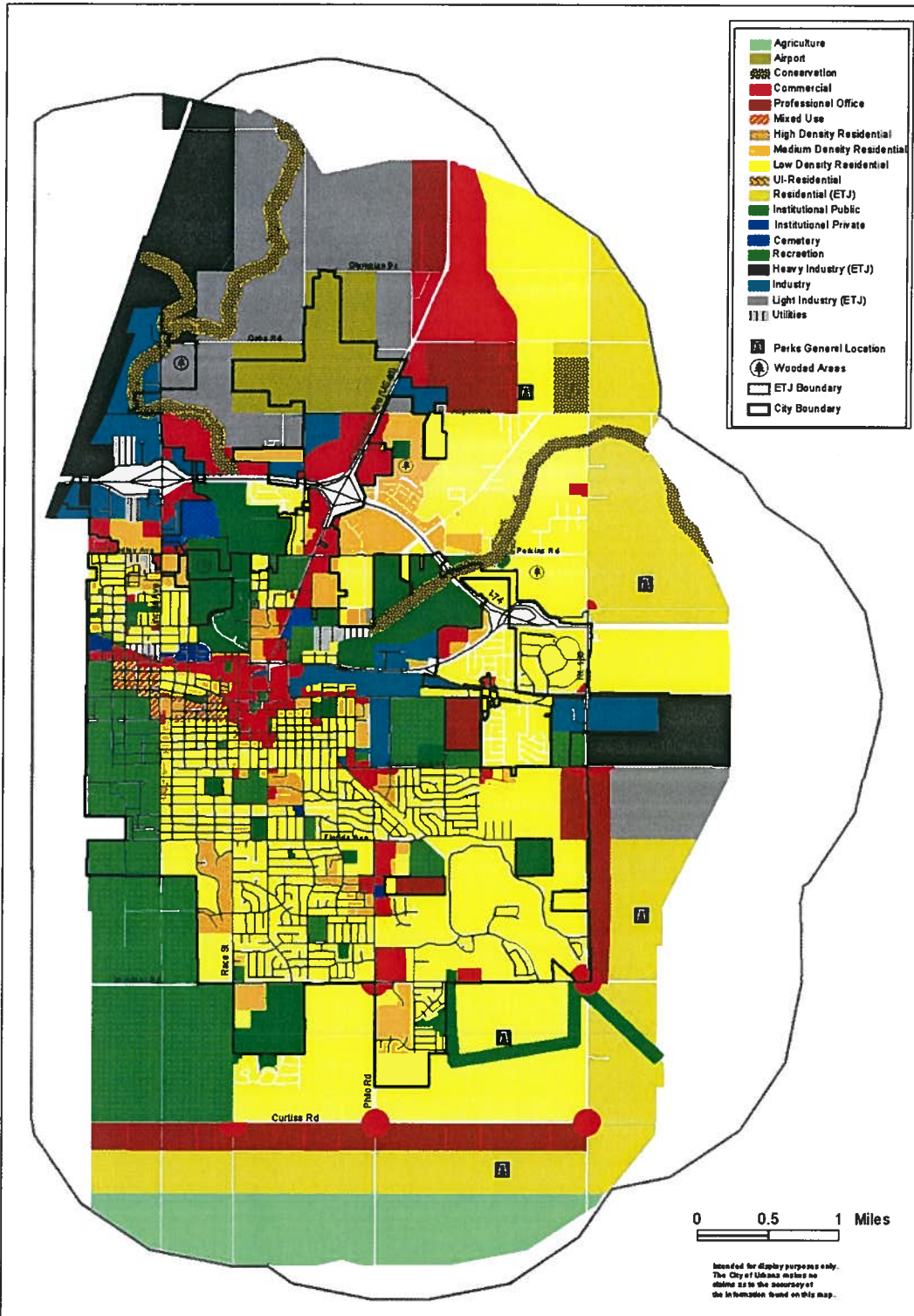


Figure 2-1 Future Land Use Plan Map
Urbana Comprehensive Plan 2002

Prepared April 10, 2002 by Community Development Services



2.3 CRITICAL COMMUNITY SERVICES

Certain parts of the community require special protection from hazards. These are called critical community services, as identified by the City, and are of the following kinds:

- Those services that can create secondary disasters (e.g. chemical plants, gas stations, storage of toxic or flammable materials).
- Transportation and utility networks (e.g. roads, airport, electric power, water supply, sewage treatment).
- Facilities that are important to the community as a whole (e.g. important businesses, schools).
- Emergency services (e.g. fire services, police services, hospitals).

2.3.1 Transportation

Interstate access to Urbana is provided by Interstate 74, which extends east to Danville and Indianapolis and west to Bloomington/Normal, Peoria, and the Quad Cities. Interstate 74 interchanges with Interstates 72 and 57 five miles west of Urbana, providing access to Chicago, Springfield, southern Illinois, and Missouri. The Champaign-Urbana Mass Transit District (C-U MTD) operates five types of transit service in the Urbana area, including fixed route bus service, demand response service, paratransit, subsidized taxis, and charter service. Three railroad lines operated by Norfolk Southern, Canadian National, and Amtrak serve the Urbana-Champaign area. Two airports provide air service for Urbana-Champaign. As of 2001, there were 4.67 miles of roadway within Urbana's 100-year floodplain that may be vulnerable to being closed due to flooding, as well as twenty-six bridges and culverts.

2.3.2 Utilities

There are approximately 40 utility facilities in Urbana. The Urbana-Champaign Sanitary District provides sanitary sewer service. The District maintains two treatment facilities, one in Urbana and the other in Champaign. The Northeast Plant, is located in Urbana along east University Avenue. A private company, Illinois-American Water, provides municipal water treatment and distribution. They have a treatment facility located on Lincoln Avenue. Also at this location are large capacity Illinois-American wells that are used to supply Urbana and Champaign with their municipal water supply. Illinois Power, a private utility company that is regulated by the Illinois Commerce Commission, provides gas and electricity. Illinois Power has a number of substations and other facilities and roughly fifty miles of electrical distribution lines located in Urbana. Other utilities including telephone, cable television, internet access, cellular telephone, and fiber optic lines are provided by a number of private carriers. Most of these utilities have overhead lines, which exposes them to wind and ice storm hazards.

2.3.3 Community Facilities

Urbana has six neighborhood elementary schools, one middle school, one high school, an early childhood center, and a special education program. There are ten public buildings in the city, including the City Hall, police and fire stations, and County Courthouse. The elementary schools are located close to residential areas and the high school and middle school are centrally located near downtown Urbana. Schools not only require protection, but can also serve as shelters in times of emergency.

Urbana has six different business neighborhoods: Downtown, North Cunningham, North Lincoln, East Urbana, Southeast Urbana, and the University of Illinois/Medical business neighborhood. In 2001, an estimated 2,520 businesses were considered at risk to damage from natural hazards. This does not include public buildings, schools, or hospitals.

The downtown business neighborhood consists of a nine-block area in the central business district. It includes the Champaign County Courthouse, the Federal District Courthouse, City of Urbana offices, Busey Bank headquarters, and many professional offices, as well as many unique small businesses. The County Courthouse and the Urbana Free Library are some of the community's oldest landmarks. Since many of the top ten private and public employers have their offices in this area, it is one of the most valuable assets to the community and thus needs special protection from hazards.

2.3.4 Emergency Services

Fire and rescue services are available from the City of Urbana Fire and Rescue Services Department and five neighboring township volunteer fire departments. The city is served by four fire stations.

Metropolitan Computer Aided Dispatch (METCAD) is a consolidated dispatch center located on east Main Street in Urbana. It answers emergency 9-1-1 calls for all of Champaign County. It also provides direct dispatch service for law enforcement agencies and fire agencies throughout the county. It has the facilities to provide for continuous operation through the most adverse of conditions.

Champaign County Emergency Services Disaster Agency (ESDA) and the City of Urbana operate Emergency Operations Centers (EOC) by which they respond to emergency situations as either a coordinating agency or a support agency. ESDA has deployed a network of Storm Spotters who provide advance warning of severe weather. EOC staff monitors the weather radar and the national Weather Service weather wire. They disseminate the information to ESDA storm spotters, amateur radio storm spotters, and other public safety agencies.

Medical services are provided by Carle Foundation Hospital and Provena Covenant Medical Center. Carle Clinic Association works in collaboration with Carle Foundation hospital and has a network of clinics serving east central Illinois. Christie Clinic Association is a multi-specialty medical group practice based in Champaign with five clinics in the area.

2.4 DEVELOPMENT TRENDS

2.4.1 Population

The 2000 Census reported a population of 37,362 for the City of Urbana. This was a gain of 1,018 persons over the 1990 count of 36,344, for a 2.8% increase in population over the last decade. Projected population for the City of Urbana is expected to steadily increase over the next three decades to 45,646 persons, according to projections generated by the C-U 2030 Plan (Figure 2.4). The population has grown steadily since 1970 and this trend is expected to continue in coming years. This growing population adds to the number of persons exposed to hazards in Urbana.

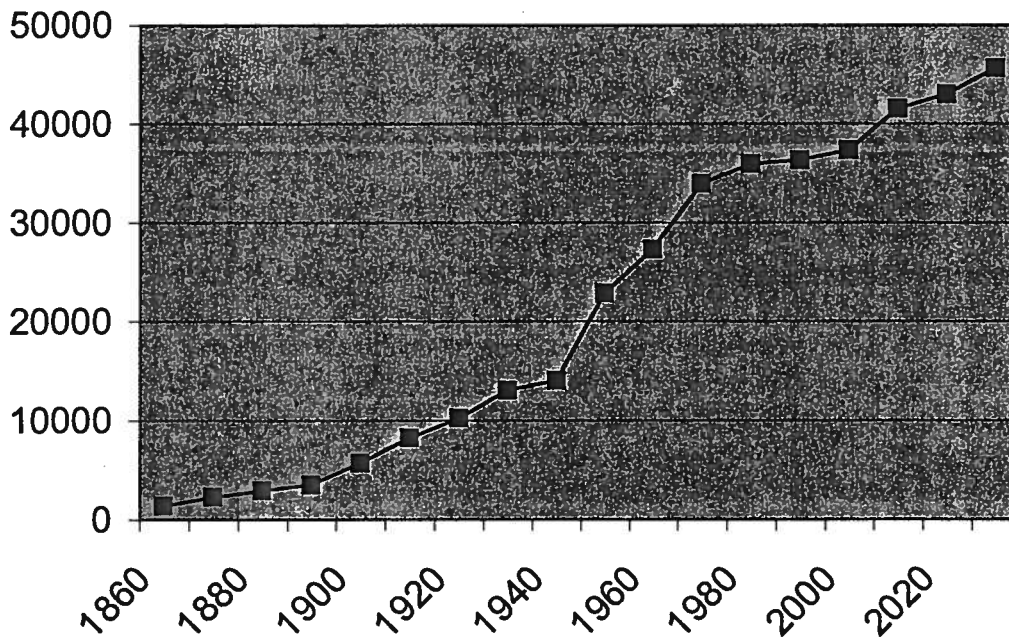


Figure 2.4 Population by Decade and Projected Population, 1860-2030

2.4.2 Housing

Housing units increased by 9% from 1990 to 2000 (13,982 units to 15,243 units) and are projected to increase an additional 19% to 18,161 units by 2030. Eight new housing subdivisions have been recently or are currently being constructed. These include Stone Creek, Eagle Ridge, South Ridge, Beringer Commons, Lincolnwood, Savannah Green, Landis Farms, and Fairway Estates. Major existing multi-family developments include Town and Country Apartment, Amber Pointe Apartments, Melrose Apartments, University Commons, and University Housing at Orchard Downs. In 2001, 8,213 homes were identified as representing buildings that may experience damage from windstorms, earthquakes, ice storms, or floods.

In 2002, the City's Building Safety Division issued 181 permits for a total of 240 new residential units, including single-family, multi-family, and duplexes (*Figure 2.5*). In the same year, one new recreational and eleven new business permits were also granted. In 2003, a total of 167 permits were issued for 159 new single-family, 164 multi-family, and 6 duplex units. Also in 2003, there were three new industrial permits, six new commercial permits, and one new recreational permit. Similar figures are projected for 2004. New development, depending on the quality of its design, construction, and location can increase the number of Urbana residents exposed to natural hazards.

Figure 2.5 New Construction Permits in Urbana

Construction Type	Year 2002	Year 2003
Residential	181	167
Industrial	0	3
Institutional	0	0
Business	11	6
Recreational	1	1