

3. Land Use Plan

The vision and goals in the preceding chapter are the foundation for the Land Use Plan, which is the central element of this Comprehensive Plan. The designation of each parcel within unincorporated Polk County into a specific land use category, as expressed on the Future Land Use Plan map (Figure 3.2) is intended to provide the framework for the continuing development and redevelopment of the community, and for the coordination between the County and its cities.

Historical Development Patterns

Polk County's landscape has been shaped not only by natural processes such as glaciation and flooding but by successive waves of settlement and development. Transportation technologies, from steamboats to railroads, did much to determine the location of early settlements. Railroad towns like Altoona, Ankeny, Bondurant and Grimes became thriving incorporated cities, while others such as Santiago, Commerce, Farrar and Crocker dwindled in size. The coal-mining era of the late 19th century created many of the villages that remain in unincorporated Polk County, such as Marquisville, Norwoodville and Oralabor (now surrounded by Ankeny).

Agriculture brought prosperity to the region in the early 20th century, helping to support the rapid growth of Des Moines and the growth of agriculturally related industry. In the 20th century, major public works such as the Saylorville and Red Rock Dams brought flood control measures and recreational facilities to the region. The creation and expansion of the interstate highway system fueled the massive suburban growth of the post-World War II era, channeling much of this development to the western suburbs.

This highway-oriented pattern still remains as perhaps the greatest influence on land use today, although increasing highway congestion is contributing to a renewed interest in transit. The trend towards suburban living is beginning to reverse itself, with new mixed use and multi-family developments springing up in downtown Des Moines, appealing to empty-nesters and young professionals. Meanwhile, the presence of highly productive agricultural soils in Polk County, as well as ready access to markets and supplies, supports the continuation of farming and a rural lifestyle across much of the northern and eastern portions of the County.

Current Land Use

The current land use pattern in Polk County reflects historical development patterns and the effects of previous plans – both the County's 1990 Comprehensive Plan and the plans of the

cities within the County. Polk County contains a remarkable diversity of land uses, from the highly urban environment of downtown Des Moines to rural farmsteads and natural areas, seemingly remote from any urban influence. Even unincorporated Polk County has its share of diversity, with intense industrial uses and historic village centers north of I-80 as well as a variety of small settlements in the rural areas. (See Chapter 1, Lifestyles, for more on this topic.)

Figure 3.1 provides a generalized picture of current land use in the unincorporated area. The categories shown on the map and the acreage of each are as shown in Table 3-1.

Table 3-1. Land Use Categories and Acreage, 2002

	Acres	Percent
Agriculture	185,421	77.08%
Estate Residential (> 3 acres)	7,429	3.09%
Rural Residential (1-3 acres)	4,325	1.80%
Low Density Residential (1-6 units/ acre)	2,852	1.19%
Medium Density Residential (6-10 units/acre)	202	0.08%
High Density Residential (>10 units/acre)	2	0.00%
Commercial	1,139	0.47%
Light Industrial	808	0.34%
Heavy Industrial	2,465	1.02%
Public/Institutional	5,003	2.08%
Parks, Open Space, Floodway	30,745	12.78%
Unidentified	158	0.07%
TOTAL	240,549	100.00%

Source: Des Moines Area MPO, Polk County, URS Corporation

Land Use Issues

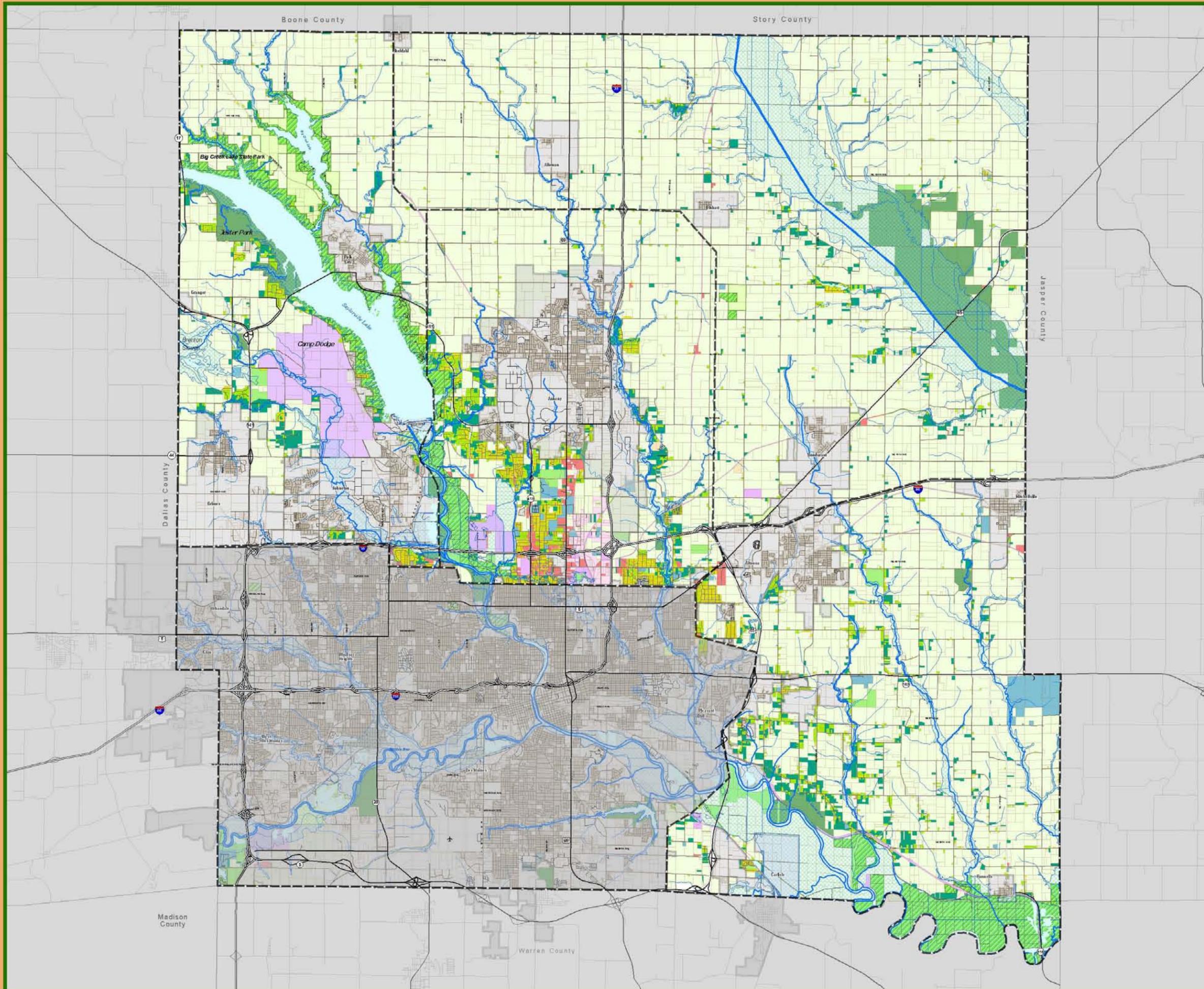
Urban expansion: The greater Des Moines region is a mosaic of growing cities and unincorporated land within counties. Cities are typically driven to expand outwards, annexing land at their edges, while county residents tend to oppose this expansion, in the interest of preserving their farms or rural lifestyle. Coordination among city and county plans, or between the plans of adjoining cities, is often lacking. The tension between urban/suburban expansion and rural preservation is a major issue this plan must address. This issue plays out in each of the four planning areas in different ways, but remains a common theme. For example:

- Northwest: Area committee members were divided on whether the undeveloped land north and west of Camp Dodge should be retained as future urban expansion area for the cities of Johnston, Grimes and Granger, or whether the current low-density estate pattern should continue. Management of increasing traffic congestion along Highway 141 was also a concern, in relation to

Polk County 2030 Comprehensive Plan

Existing Land Use

- Agriculture
- Estate Residential (>3 ac.)
- Rural Residential (1-3 ac.)
- Low Density Residential (<1 ac.)
- Medium Density Residential
- High Density Residential
- Public Space/Institutional
- Park/Open Space/Floodway
- Community Commercial
- Light Industrial
- Heavy Industrial
- Planning Regions
- Property Boundary
- Federal Lands
- DNR Lands
- Conservation Board Lands
- 100 Year Flood Zone
- River
- Creek



Data Sources: DMA MPO, Polk County, IDOT, DNR, Polk Co Conservation Board



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Figure 3.1

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municipal plans for highway-oriented commercial development.

- Northeast: As the most rural and agricultural part of the County, concerns in this area focus on the desire to protect farmland and the rural lifestyle, the potential impacts of the proposed Northeast Beltway, and the outward growth of cities such as Ankeny and Bondurant.
- North Central: Residents of the rural areas are concerned about the growth of the City of Ankeny and the role of the proposed Northeast Beltway as a driver of development. Ankeny residents and officials are concerned about setting aside enough developable land to allow the market to function freely, and ensuring continued growth of the city's tax base. The area committee did not reach a consensus on the extent of new development the number of new households that this area should support.
- Southeast: The prevalent zoning pattern of one-acre lots has created problems with future utility extensions and access points onto rural roads. Committee members were concerned about orderly growth, farmland protection, and the rapid expansion of cities such as Pleasant Hill, but were also concerned about preserving existing development potential.

Infrastructure: It is widely recognized that infrastructure, in the form of roads and municipal services, drives development. Three major infrastructure issues have been discussed during the planning process. The proposed Northeast Beltway would be a new link in the metropolitan circumferential system, extending north from I-80/US 65 to just north of Ankeny, then west to I-35 and IA 141, crossing Saylorville Lake on the Mile Long Bridge. Planning for the highway began prior to the Comprehensive Plan, and will continue, as environmental studies are undertaken. However, the beltway concept has both support and opposition among residents, and has remained a controversial issue throughout the planning process in the Northwest, North Central and Northeast planning areas. (See Chapter 4, Infrastructure, for a more detailed discussion.)

Trunk sewer extensions by the Wastewater Reclamation Authority and by Polk County are also major determinants of urban-density development. These extensions, as well as the service areas of municipal sewer systems, are recognized in the Land Use Plan.

Improvements to the rural water system have also been controversial, especially in the areas served by the Southeast Polk Rural Water District. Most rural water systems provide only drinking water supplies; pipes are too small to support

fire protection or industrial processes. Polk County has 20 public and private water systems. In 2005 a change in Iowa law allowed the Southeast Polk Rural Water District Board to sell the system to the Des Moines Water Works. Polk County created an Urban Renewal Plan to allow for bonds to assist in the purchase (see Chapter 4 for details).

Land Use Plan and Policies

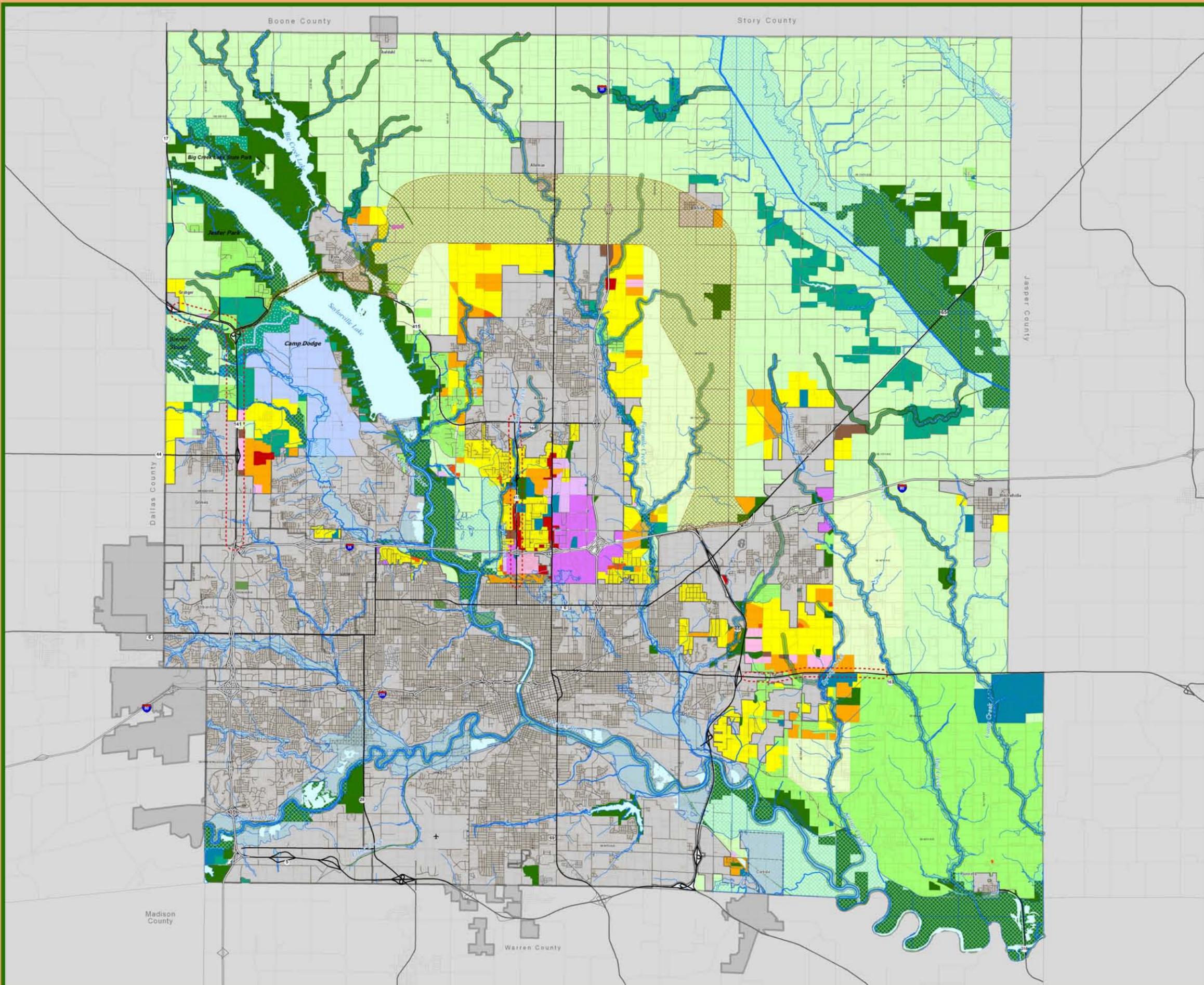
The Land Use Plan can be viewed at both the countywide “macro” level and the planning area “micro” level. Figure 3-2, Future Land Use Plan, shows unincorporated Polk County in its entirety. Each area plan, with a discussion of area-specific policies, is included at the end of this chapter.

Land use categories are as follows:

- Agriculture
- Agricultural Transition
- Estate Residential
- Rural Residential
- Low-Density Residential
- Medium-Density Residential
- High-Density Residential
- Mixed Use
- Neighborhood Commercial
- Highway Commercial
- Light Industrial
- Heavy Industrial
- Institutional
- Open Space

Table 3-2 provides a description of each category, along with general guidelines regarding its density or intensity. It is important to remember that land use plan categories are not zoning districts; although in some cases they will correspond to existing County zoning districts (i.e., Estate, Agriculture). Rather, one of the key techniques for implementing the land use plan will be through revisions to the Zoning Ordinance and Map. Some land use plan categories may correspond to more than one zoning district, or to new zoning districts that will be developed. Proposed zoning changes are discussed in greater detail in Chapter 9, Implementation.

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Polk County 2030 Comprehensive Plan

Polk County Future Land Use

- Agricultural
- Agricultural Transition
- Estate
- Rural Residential
- Low Density Residential
- Medium Density Residential
- High Density Residential
- Mixed Use
- Neighborhood Commercial
- Highway Commercial
- Light Industrial
- Heavy Industrial
- Institutional
- Open Space
- Conservation Design
- Camp Dodge
- 100 Year Flood Zone
- Transit/Access Management Corridor
- NE Beltway Corridor
- River
- Creek
- Property Boundary
- Municipal Boundary

Data Sources: DMA MPO, Polk County, IDOT, DNR, Polk Co Conservation Board



Figure 3.2

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Table 3-2 Land Use Plan Categories

Land Use Categories and Intent/Description	Density / Intensity / Design	Illustration Example
Agriculture		
<p>The large area of the County that remains as active farmland. Includes agricultural and rural activities, farmsteads, home occupations, scattered ag-related facilities or businesses. Little new residential development is anticipated in this area, although small residential clusters may be allowed under some circumstances in areas not well-suited for farming.</p>	<p>1 unit per 35 acres (gross)</p>	
Agricultural Transition		
<p>The Agricultural Transition area is intended to avoid premature subdivision of areas contiguous to growing cities. The land use pattern is therefore identical to that of the Agricultural district, but the ultimate development of the area involves extension of urban services and likely annexation.</p> <p>It is anticipated that most Agricultural Transition areas will <u>not</u> be annexed and developed at urban densities during the time frame of this plan. However, many of these areas will be <u>sewered</u> within this time frame, and the Agricultural Transition district is needed to prevent leapfrog development.</p>	<p>1 unit per 35 acres (gross)</p>	
Estate Residential		
<p>This district is intended to provide for very low-density residential development, with on-site septic systems. There is an emphasis on retaining natural features and creating a connected network of open space. The district retains the existing residential estate zoning pattern, but with an increased emphasis on conservation (cluster) development, which may be required in some areas.</p>	<p>1 unit per 3 acres (gross); incentives for preservation of natural features, stormwater management.</p>	

Land Use Categories and Intent/Description	Density / Intensity / Design	Illustration Example
Rural Residential		
<p>This district retains the existing Suburban Estate density pattern of low-density residential development with on-site septic systems. It is located in areas already developed at these densities, where public sewer service is impractical, and in parts of the Southeast area, where it has been a dominant pattern for decades. Conservation development may be feasible in some areas where soils can support community wastewater systems.</p>	<p>1 unit per acre (gross)</p> <p>Actual density will be limited by the presence of natural features and the requirement that major subdivisions be designed with internal roads.</p>	
Low Density Residential		
<p>This district is intended to accommodate urban density housing that will be served by public utilities. It is located primarily around the edges of the growing cities, and indicates areas that are likely to be annexed during the time period of this plan.</p> <p>Development at these densities will not occur until public sewer is available. In the interim, these areas will remain in agricultural or other low-intensity use.</p>	<p>3 units per acre (gross)</p>	
Medium Density Residential		
<p>This district is intended to accommodate medium-density housing that will be served by public utilities. It is located around the edges of the growing cities, where it recognizes this development type within municipal land use plans. It also is planned for locations in the North Central unincorporated areas where neighborhood infill and revitalization is recommended.</p>	<p>5 units per acre (gross). Includes both small-lot single-family development and attached housing types.</p>	

Land Use Categories and Intent/Description	Density / Intensity / Design	Illustration Example
Medium Density Residential (cont.)		
	Single-family attached housing will typically range from 8 to 15 units per acre.	
High Density Residential		
This district is intended to accommodate high-density housing that will be served by public utilities. It is located around the edges of the growing cities, where it recognizes this development type within municipal land use plans.	15 units per acre (gross)	
Mixed Use		
This district is intended to accommodate a mix of medium- and high-density housing and complementary office and commercial uses that will be served by public utilities. It is located around the edges of the growing cities, where it recognizes this development type within municipal land use plans. It also is planned for locations in the North Central unincorporated areas where neighborhood infill and revitalization is recommended.	5 units per acre (gross) for housing. Typical building intensity measure is floor-to-area ratio, ranging from 0.5 - 1.0 (average)	
Neighborhood Commercial		
<p>Commercial, office, service development, at a scale that serves the immediate neighborhood rather than a highway corridor or larger region.</p> <p>This category encompasses older commercial nodes and new areas that may be developed to serve new residential development.</p>	Typical intensity measure is floor-to-area ratio, typically ranging from 0.3 to 0.5. Design guidelines may be considered for access management, internal circulation, and aesthetics.	

Land Use Categories and Intent/Description	Density / Intensity / Design	Illustration Example
Highway Commercial		
<p>Commercial, office, service development, along with limited production in some settings. This category will apply primarily to existing commercial corridors along major highways or new commercial nodes proposed around the edges of cities in municipal land use plans.</p>	<p>Typical intensity measure is floor-to-area ratio, typically around 0.3</p> <p>Design guidelines may be considered for access management, internal circulation, improved aesthetics and buffering.</p>	
Light Industrial		
<p>Manufacturing, transportation and wholesale uses; office and research facilities, limited retail and services. Most activities (except for limited outdoor display and storage) take place within enclosed buildings. This category will apply to 'business parks' and 'industrial parks,' as proposed in municipal land use plans, as well as existing industrial areas in unincorporated Polk County that have developed in close proximity to residential neighborhoods.</p>	<p>Performance standards; restrictions on outdoor activities, limited buffering from less intense land uses.</p>	

Land Use Categories and Intent/Description	Density / Intensity / Design	Illustration Example
Heavy Industrial		
<p>Manufacturing, transportation and wholesale uses; limited office, research, retail and services. This category encompasses a broad range of intensities and activities, including uses with outdoor activities and potential for external impacts such as odors and noise. It will apply primarily to existing industrial sites and districts within unincorporated Polk County.</p>	<p>Varied intensities, performance standards, greatest degree of separation and buffering from less intense uses</p>	
Open Space		
<p>Public parks, private recreational facilities such as golf courses, other protected open space.</p>	<p>Intensities range from very low to intensive recreation. (Zoning should ultimately distinguish between recreation and resource protection areas)</p>	
Institutional		
<p>Applicable to schools, camps, cemeteries, larger religious or governmental facilities, etc.</p> <p>Will apply primarily to existing facilities and their planned expansions.</p>	<p>Variable densities</p>	

The Low, Medium and High Density Residential land use categories, as well as the Mixed Use category, are intended to correspond to generalized city land use categories. The densities for these areas are approximate, since actual zoning for these areas will differ from one jurisdiction to another.

Table 3-3 shows the acreage and percentage of the County's unincorporated land area within each land use category. Although some of the land use categories differ, it can be compared to Table 3-1, which shows existing land use categories in 2002 (the County appears to have lost almost 10,000 acres to annexation since that time). The largest land areas are designated as Agricultural (about 54%) and Open Space (12.5%), which encompasses County parks and preserves, State parks and wildlife areas, and federally-protected floodplain.

Table 3-3: Acreage by Category, Future Land Use Plan

Land Use	Acreage	Percent
Agricultural	122,209	53.8%
Agricultural Transition	14,773	6.5%
Estate	8,268	3.6%
Rural Residential	25,288	11.1%
Low Density Residential	15,579	6.9%
Medium Density Residential	5,144	2.3%
High Density Residential	432	0.2%
Mixed Use	970	0.4%
Neighborhood Commercial	194	0.1%
Highway Commercial	526	0.2%
Light Industrial	654	0.3%
Heavy Industrial	2,191	1.0%
Institutional	2,627	1.2%
Open Space	28,445	12.5%
TOTAL	227,300	100.0%

Land Use Policies

The two overarching concepts or principles that form the basis for the land use plan are 1) City-County coordination, and 2) compact and orderly growth. As part of the planning process, each city's plan was reviewed and considered, especially as it extended into unincorporated Polk County. Every effort was made to 'edge-match' – that is, to create a consistent pattern that blended city and County land uses – wherever this pattern was consistent with the other goals and policies of this plan.

Most of the goals and policies outlined in Chapter 2 apply to the land use plan. Of these, the following are the most central:

Character of Development Goal

Polk County will promote development and development patterns that maintain neighborhood, community, and landscape character, including both agricultural and natural landscapes.

Policy 1 - Preserve Rural Character

The land use plan continues and expands the policy of protecting large contiguous areas of prime farmland, primarily in the upper Northwest and Northeast planning areas. The increased use of conservation development will help maintain the rural character of non-urbanized areas in the Northwest and Southeast planning areas.

Policy 2 – Coordinated Growth Patterns

The land use plan recognizes City land use plans and encourages controlled, orderly growth of those cities by careful alignment of city and county land uses. Not all municipal plans are incorporated in their entirety, however; rather they are adjusted to recognize other County goals and the limits of municipal utilities.

Policy 3 – Integrated Development

County land use regulations will be revised to emphasize interconnections between new development and existing land uses, as well as protection of natural features and common open space that can help foster a sense of community.

Policy 4 – High-Quality Design

County land use regulations will be revised to emphasize high-quality visual and functional design of new housing and commercial and industrial development.

Environmental Quality Goal

Polk County will conserve unique natural areas and wildlife habitat, air and water quality, and will work to expand and enhance trails, greenways, and park resources throughout the County.

Policy 1 – Protect Natural and Recreational Areas

The land use plan recognizes and protects existing natural areas, including County and State parks and preserves, by providing for very low-density development around (and in some cases within) these areas. (Future expansion of County parkland and new

park facilities are discussed in Chapter 5, Environmental Quality.)

Policy 2 – Protect Green Infrastructure

The plan shows a system of buffers – protected natural areas – along all major waterways. It is understood that most of these lands will remain in private ownership. Protection of riparian vegetation and wildlife habitat would be achieved through policies limiting clearing and grading within these buffers.

Policy 3 – Trails and Recreation Areas

Trails and greenways are discussed in Chapter 5, Environmental Quality.

Transportation and Development Goal

Polk County will manage both new private development and public investment in roads in order to maintain reasonable traffic patterns, protect inter-community traffic flow on regional highways, improve traffic safety, and promote multi-modal transportation options.

Policy 2 – Public Transit, and Policy 4 - Transportation Access

(Other transportation policies are addressed in Chapter 4, Infrastructure.)

The land use plan identifies three road corridors within the County as Transit/Access Management Corridors: IA Highway 141, IA Highway 163, and NW Second Street/Highway 415. Access management policies along these highways are controlled by the Iowa Department of Transportation, but land use policies should be focused on centralizing access points and coordinating land uses around them, to create better connections between uses and parcels for pedestrians as well as vehicles.

The concept of transit corridors is consistent with the strategic planning efforts of the Metropolitan Transit Agency (MTA). The MTA's Transit 2030 Vision planning process is proposing a series of transit corridors with more frequent, high-quality service and transit-supportive land uses. This topic is discussed in more detail in Chapter 4, Infrastructure. In terms of land use, the plan shows a concentration of mixed use, commercial, medium- and high-density housing and employment uses along these corridors. NW Second Street is a particularly appropriate transit corridor, since it leads directly to Prairie Trail, a major mixed-use development of over 1,000 acres, currently being planned by the City of Ankeny on the former Iowa State University Dairy Research Farm site.

Specific Policies

Following are more specific policies that apply to one or more planning areas.

Northeast Beltway

The Northeast Beltway has the potential for major changes to land use, especially around interchanges or intersections. However, the land use plan shows continued preservation of the highway corridor, but does not assign any additional development to the corridor or its interchanges. Essentially, this means that the corridor is shown as remaining in agricultural use. The County will undertake a more detailed planning study of the corridor as plans for the roadway are refined and interchange or intersection locations are determined.

Utilities – Trunk Sewer Extensions

The land use plan recognizes pending trunk sewer extensions, both by the WRA and by Polk County. These extensions, shown in Figure 4.3, will result in the addition of Ankeny, Altoona and Bondurant to the regional system. The land use plan shows development around these cities, generally in accordance with city land use plans, but does not propose urban-density development adjacent to the trunk sewers in unincorporated Polk County. Polk County is not an 'expansion community' within the WRA, and therefore County areas cannot be connected to trunk sewers without a separate agreement.

In general, this policy supports the goals of the Land Use Plan, in that it maintains rural character and densities in existing rural areas.

Polk County is currently extending the Saylor Creek Trunk Sewer north along Highway 415 to Ankeny and is negotiating with Ankeny and Polk City on the extension of the Rock Creek Trunk Sewer along the west side of Ankeny and west to Polk City. This extension would enable development to occur at urban densities, as shown in the land use plan west of Ankeny and east of Polk City.

The plan also recognizes municipal trunk sewer extensions, particularly those of cities such as Johnston (an extension along NW Beaver Drive) and Pleasant Hill (extensions to the east along SE 6th Avenue) as factors that influence the pattern of land use.

Economic Development

Locations for economic development, as described in Chapter 7, Economic Development Plan, are linked to the land use plan. Figure 7.1, Schematic Economic Development Plan, shows the general locations of various types of industrial, office and mixed use development for the targeted "focus

sectors" discussed in that plan. The three primary sectors that the County will focus on are Financial Services, Advanced Manufacturing, and Health Care. For the most part, financial services and health care sites and districts are located in the City of Des Moines. The land use plan shows the following types of land use that are linked directly to economic development policies:

- Continuation and growth of the primary industrial area of Polk County, along the I-80 corridor in Saylor and Delaware Townships. This area is envisioned as a Planned Manufacturing District, where zoning policies and public improvements will focus on protecting and expanding this use type.
- Business and industrial parks proposed in municipal land use plans, generally around the edges of expanding cities.
- Mixed use areas that have the potential for significant employment uses, generally as office space combined with or in proximity to housing and retail development. Some of these areas are located in the North Central planning area (see the related policies below) while others are within urban expansion areas.

Continuation and expansion of agriculturally-related businesses and industries is also anticipated in agricultural, as well as industrial, areas. Ag-related enterprises span a broad spectrum from elevator storage complexes to sophisticated research facilities, and therefore may be located in any of the above locations, as well as in agricultural areas.

Conservation Design

Conservation design, sometimes called 'cluster development' is a technique for open space preservation on a parcel-by-parcel basis. In a conservation subdivision, houses are clustered on relatively small lots, while the remainder of the site is protected as open space. Essentially, conservation design concentrates allowed density on the most suitable portions of a site, while protecting sensitive natural features and, in some cases, productive farmland. Advantages of conservation design include:

- Greater design flexibility in siting houses and other development features such as roads and utilities. Frequently the length of roads and utility runs can be reduced, and the amount of site clearance minimized.
- Preserving scenic views and reducing the visual impact of new development by maintaining landscaped buffer areas along roads.

- Providing housing units with direct visual and physical access to common open space.
- Creating environmental corridors by connecting open space between adjacent properties.
- Allowing for continuation of agricultural uses, where these can be adequately buffered from nearby residential uses.
- Allowing active and passive recreational use of common open space by residents and/or the public.

Polk County's zoning ordinance already allows "cluster" development in all residential and rural districts, with a small density bonus – that is, more residential units may be built using clustering. Cluster development has been most widely used in the Estate District, where several equestrian-type developments have been built. However, most subdivisions are developed using conventional development methods.

The land use plan identifies one area where conservation design should be mandatory for all development: the Estate area in the Northwest adjacent to the northwest boundary of Camp Dodge, where residential uses should be clustered away from the boundary to provide a buffer for military training exercises.

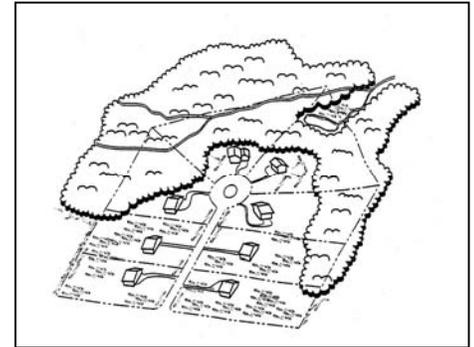
In other rural areas, conservation design will be encouraged by means of incentives such as density bonuses, in order to protect natural and scenic landscape features and allow the continuance of small-scale agriculture.

Targeted Housing and Mixed Use Redevelopment

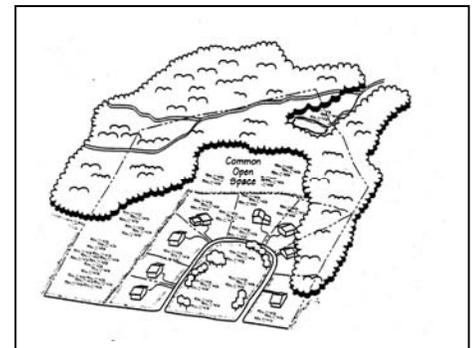
As discussed in Chapter 8, Housing Plan, many of the unincorporated villages in Delaware and Saylor Townships, including Marquisville, Norwoodville, Saylorville and Berwick, are in need of improved infrastructure and focused improvements. These villages differ in character and conditions, but share a pattern of small residential lots and narrow, sometimes unpaved streets. Much housing is in poor condition, although many lots are oversized for the small houses they contain. Many areas combine housing and small industrial enterprises. The strengths of these areas include the presence of historically significant buildings, natural and recreational amenities (i.e., as Four Mile Creek in Berwick), and an appealing small town environment.

A comprehensive revitalization program, including housing rehabilitation, infill, aggressive code enforcement and selective redevelopment, is recommended for these areas. Infrastructure improvements, from streets to improved public water and wastewater, are also needed.

The land use plan identifies a number of these revitalization areas, showing medium-density housing and mixed use in the



Conventional development, above, consumes the entire parcel with house lots, while conservation design, below, protects natural features and provides residents with common recreational areas.



Marquisville area and infill and extensions of existing housing in the Norwoodville and Berwick areas. These recommendations, however, are general in nature, and more specific area plans would be needed prior to implementation.

Land Use Planning Methodology

The land use plan must adequately accommodate the level of growth that is projected for Polk County, as a part of the Des Moines metropolitan region. The starting point for this process was the population projections developed by the State of Iowa and the MPO. The State Data Center projections for 2004 (developed by the firm of Woods & Poole Economics, Inc.) indicate that Polk County's population will increase by about 115,000 between 2000 and 2030, from 374,601 to 493,289.¹ The projections of the Des Moines Area Metropolitan Planning Organization (MPO) are higher: an increase of approximately 170,000 for Polk County, and about 250,000 for the metropolitan region. Based on input from the Steering Committee and County staff, a population estimate of 150,000 was selected as the "control total" for the County. Based on the 2004 population estimate of 395,843, this would result in a population of 545,000 by 2030.

The increase in population was then distributed by planning area. For the purpose of the Comprehensive Plan, the County has been divided into four planning areas, encompassing the unincorporated areas of the County and the cities within those areas. The fifth area consists of the City of Des Moines and the west/southwest suburban communities of Urbandale, Clive, Windsor Heights and West Des Moines, an area with almost no unincorporated land. Table 3-4 below shows the results of a straight-line allocation of population by area.²

The table shows more than half of the growth occurring in the Central/Southwest area, primarily in the western suburbs. However, this is based upon current development trends. The pace of growth can be expected to slow as these cities use up their land areas or run out of areas to annex. Those parts of Polk County beyond these urban expansion areas were assumed to have a net growth of zero after accounting for annexation by cities and new non-urban growth. This is consistent with historical trends, in which County population has remained fairly constant while the land area of the unincorporated County has decreased.

¹ Woods & Poole Economics, Inc. for the State Data Center of Iowa. For current population projections, see <http://data.iowadatacenter.org/browse/projections.html>

² The source for the straight-line forecasts is Claritas, which provided 5-year growth projections for the 2004-2009 period. See Table 3-6, Existing Conditions Report, pg. 3-7.

Table 3-4: Straight-Line Forecasts by Area, Based on City Forecasts

	<i>Increase</i>	<i>Tot. Pop.</i>	<i>% Increase</i>							
County 2030	150,000	545,000	27.5%							
Increase using straight-line projections by region							Share of 1st 5yrs	Annual Avg. Growth Rate		
Polk County Areas	2004	2009	2015	2020	2025	2030				
Northeast	3,001	60	138	207	281	360	0.2%	0.4%		
Northwest	18,936	3,275	7,512	11,300	15,340	19,647	13.1%	2.8%		
Southeast	22,559	2,076	4,762	7,163	9,724	12,454	8.3%	1.7%		
North Central	31,726	5,405	12,397	18,650	25,316	32,424	21.6%	2.7%		
Central/Southwest	302,710	14,162	32,483	48,865	66,333	84,957	56.7%	1.0%		
Totals	378,932	24,978	57,291	86,185	116,993	149,841	100.0%	1.3%		

Source: Claritas and URS Corp.

The second step was to re-allocate the population projections by area based on existing County and MPO policies. The following assumptions were used:

- Growth rate in all areas (except Central/SW) was increased to include the unincorporated areas not captured in the urban forecasts
- Central/Southwest was restricted to 35,000 increase in population (much lower than a straight-line projection) due to limited development opportunities in the largely built-out cities
- Northeast was increased assuming rapid growth in Bondurant and significant market pressure near existing and proposed sewer areas
- North Central was based on a slight increase in the straight-line projection of the 5-year (2004-2009) forecast for the City of Ankeny, recognizing the higher growth rate projected in Ankeny's Comprehensive Plan (a Special Census of Ankeny in July 2005 showed a population of 36,161, up from 27,117 in 2000).
- Southeast growth was increased to reflect Hwy 65/5 access and the 'balanced growth' policy expressed in the MPO's 2030 Long-Range Transportation Plan.
- Northwest was assigned a higher growth rate than the 5-year forecast for NW cities to reflect recent trends of accelerating growth in NW

Table 3-5: Population and Households Allocated to Planning Areas

	Increase	Total	Percent	2030 Hshld Size					
County 2030	150,000	545,000	27.5%	2.35					
		Increase by					% of County	Households/	Avg. Annual
Polk County Areas	2004	2010	2015	2020	2025	2030	Growth	Housing units	Growth Rt
Northeast	3,001	1,200	2,880	5,231	8,523	13,131	8.8%	5,588	6.7%
Northwest	18,936	3,900	8,603	14,275	21,115	29,364	19.6%	12,495	3.7%
Southeast	22,559	4,100	8,945	14,671	21,437	29,433	19.6%	12,525	3.3%
NorthCentral	31,726	5,900	12,897	21,196	31,037	42,709	28.5%	18,174	3.3%
Central/Southwest	302,710	7,740	14,342	21,083	27,969	35,000	23.3%	14,894	0.4%
Totals	378,932	22,840	47,667	76,457	110,082	149,638	99.8%	63,676	1.3%

Source: URS Corp.

The projected 150,000 increase in population was translated into numbers of households, and thus housing units, based on an average household size of 2.35 persons.³ As shown in the table, the 150,000 increase in population would yield almost 64,000 housing units, distributed among the planning areas.

The “target” housing units were then used in design exercises for each of the four planning areas. The results of these exercises were used to develop three planning scenarios and then refined into the Future Land Use Plan for each area.

The three planning scenarios (shown in Appendix B) were defined as:

1. Current Trends. This scenario took as its starting point existing County zoning and development policies, as well as city growth patterns. It assumed that the current pattern of urban expansion would continue at a moderate pace.
2. Compact Growth. This scenario attempted to create a more compact pattern within areas that are

³ Average household size was 2.45 in 2000, typical of the state (at 2.46), and is expected to continue to decline as the County and region become more urbanized. Household sizes remain higher in rural and suburban areas dominated by single-family housing. The MPO used an average household size that varies by housing type: 2.73 persons for single-family detached, 1.97 for single-family attached, and 1.81 for multi-family units. A generalized average household size of 2.35 was used in this analysis.

- supplied – or will be supplied – with adequate infrastructure in the form of roads, water and sewer, and that could be better served by transit. Higher densities and mixed-use development in these areas accommodated much of the projected population, allowing larger areas to remain agricultural or rural.
3. City-Driven. This scenario took the land use plans of each city, where available, and overlaid them on the base of County land use. In most cases, this resulted in much larger urban expansion areas, and sometimes in overlap or conflicts between city plans.

Each area plan evolved from different combinations of the three scenarios, using an iterative process of staff/consultant recommendations and committee review. The area plans were then combined into the countywide Land Use Plan, but are also detailed in Appendix A and in separate summary documents.

Housing Unit “Yield” of the Land Use Plan

It is important to note that the target housing units include development within existing city boundaries. The Future Land Use Plan (Figure 3.2), however, does not attempt to prescribe any development pattern within these current boundaries. Instead, it focuses on land use in two areas:

1. Areas adjacent or close to city boundaries, that are expected to be annexed and served by municipal utilities during the time frame of this plan;
2. Areas that are expected to remain unincorporated during the time frame of this plan.

Therefore, the housing units shown in Table 3-6 represent those that could potentially be developed outside the cities’ current boundaries. Comparing the totals to Table 3-5 above, it appears that within three of the four planning areas, proposed developed exceeds the ‘targets,’ by at least 50%. In the Northwest, larger amounts of developable land remain within the cities of Johnston and Grimes. Based on these totals, we believe that the Land Use Plan provides adequate amounts of land for urban expansion and additional growth in the unincorporated areas.

Table 3-6: Housing Unit Yield, Land Use Plan

Land Use Classification ¹	Average Net Housing Units Per Acre	North-west	North-east	North Central	South-east	County Total
Estate	0.3	727	917	0	0	1,644
Rural Residential ²	0.8	642	114	315	1,604	2,676
Low Density Residential	2.5	5,260	4,038	14,168	7,950	31,416
Medium Density Res.	4	2,664	2,968	6,733	6,247	18,612
Mixed Use ³	5	930	0	396	2,365	3,691
High Density Residential	12	612	2,316	2,580	504	6,012
Total		10,835	10,353	24,192	18,670	64,051

¹ Although Agriculture and Agricultural Transition areas could theoretically be developed at a density of one unit per 35 acres, the assumption is that very little residential development will occur in agriculturally-zoned areas during the time period of this plan.

² A large portion of the Southeast planning area is designated as Rural Residential, with a density of one unit per acre. Growth in this area is limited by the County's Subdivision Ordinance, which requires that major subdivisions (> 4 units) be served by internal roads. The assumption is that only 10% of the maximum potential number of lots in this area are likely to develop during the time period of this plan, and this number is shown in the table.

³ The largest mixed-use and medium-density areas in the North Central area are considered as redevelopment; which would involve no net gain of housing units.