City of Asbury Comprehensive Plan

August, 2013

CITY OF Asbury

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Public Participation

Chapter 1

One of the primary objectives of the Smart Plan is to develop goals, objectives, and policies that reflect attitudes and opinions of Asbury residents and businesses. To achieve this objective, the Smart Planning Committee worked to develop a transparent and inclusive public participation process that could provide diverse interests with the opportunity to develop a shared vision. Public participation was at the heart of the Smart Plan, and the Smart Planning Committee incorporated public feedback into every step of the planning process. The chapter will outline the public participation process used in the Smart Plan, and will summarize some of the input collected through the process.

Public Participation Process

The Committee developed a Public Participation Plan (PPP) that outlined the group's strategy for engaging the public and collecting their input. The PPP was adopted in June 2011. The PPP placed much of the responsibility for community engagement on the Committee. The Committee helped build public awareness of the project in their community by reporting committee activities to the city council.

Public Meetings and Forums

The Committee held meetings throughout the planning process. The goal of these meetings was to provide opportunities for open discussion of the issues facing the city. All meetings were open to the public and attendance was made part of the record. Committee meetings were held monthly for twenty two months to work on the fourteen planning elements.

Public input meetings were held in conjunction with regular meetings. A Smart Plan "Kickoff Meeting" was held in May 2011. The purpose of this meeting was to provide background on the Iowa Smart Planning Law and Smart Planning process, and to gather ideas from the public in attendance what their visions and ideas were for the future of the Asbury community.

In addition, public input meetings were held in November 2011 and September 2012. The purpose of these meetings was to present the results of the inventories and analyses conducted in support of the Smart Planning Process and to obtain public input on draft chapters of the plan and related issues.

A final Public Input meeting was held on September 10, 2013. The purpose of this meeting was to review the final draft of the Smart Plan and to solicit input on future implementation for the goals and objectives of the plan.

The Committee used several different public engagement methods in the public input meetings to gener-

ate discussion. In the "Kickoff" meeting and final input meeting participants discussed to discuss a variety of topics. At the meeting a sticky note activity was used to guide the discussion. Participants wrote down what they liked about their community and things that they would like to see changed on sticky notes. Participants shared their responses with the group and the sticky notes were collected, organized by topic and recorded for the record. The responses were used to develop a priority ranking that was distributed at a later meeting. The Committee used the public input survey to determine the top priorities for the community.

Engagement Efforts

The Committee employed several public engagement efforts throughout the planning process. The ongoing public participation efforts provided citizens with general education on the Smart Planning Process, information about upcoming participation sessions and updates on plan progress. On-going public engagement efforts include the following:

News releases and articles in the "City of Asbury – Home" quarterly newsletter were utilized to update residents on the Smart Planning Process.

The Committee actively solicited comments and suggestions at appropriate stages in the development of the Smart Plan from city residents, local business and civic organizations. Some of the organizations that provided input were conservancy and environmental organizations, state and federal agencies, school district, utility companies, boards and commissions and city council.

Outcomes of the Public Participation Process

The Committee learned a great deal about the community through discussion and public meetings. Many of these concerns and issues will be covered in depth in chapters of the Smart Plan and a couple of recurring themes will be highlighted as follows:

Individual Character – Throughout the planning process, Committee members heard that natural beauty and small town atmosphere are very important to citizens of Asbury. Many would like to see development happen in a balanced way that allows for new growth while protecting the small town feel of the City.

Volunteerism – City leaders expressed the importance of volunteer groups in the Community. The community will continue to engage and work with volunteers on future projects.

Recreation – Residents feel that recreation opportunities are very important for the future of the City. Residents listed several types of recreational facilities needed or wanted including parks, trails, swimming pool and community center. Most residents would like to see the community expand on existing recreational opportunities.

Jobs – Finding good quality jobs is a primary concern for all residents. Residents would like to see the community expand employment opportunities by working to grow existing businesses and to add new business.

Retail – Many residents desire to shop in the community. Residents have seen the positive impacts from downtowns in other cities and would like to develop plans to create a central retail district in Asbury.

Transportation – Residents in Asbury want City leaders to work to maintain quality roadways and to continue to expand opportunities for walking, biking and public transit. Traffic congestion and roadway safety are important issues for residents.

Issues and Opportunities

Chapter 2

The City held a series of twenty four public input meetings to collect information for the City of Asbury Smart Plan. The City hosted an initial planning kickoff meeting in May 2011. Additional public meetings were held in November 2011, August 2012, and September 2012. The City held a final wrap up meeting in May 2013. At the public meetings, community members were asked to describe things they liked about their community and things they would like to see changed in the future. The City used the information collected through the public input process to create a list of strengths, issues, and opportunities for the community. The City then refined the list of issues and opportunities down into one unified vision and created goals and objectives for each chapter based on that vision.

Vision

The City of Asbury is a growing residential suburban community. The city is the second largest city in Dubuque County. The goal of the City of Asbury's Smart Plan is to improve the quality of life for all residents by working together to identify community strengths, and employing those strengths to create a long-term plan for a more sustainable city.

The City of Asbury has formed a committee that will create a comprehensive plan for sustainable development. The City of Asbury Comprehensive Plan will guide future sustainable development in the city by incorporating the following sustainability elements and principles that are listed in Figure 2.1.

Goals and Objectives.

Each chapter of the Smart Plan is based on one of the Smart Planning Elements. Each chapter provides a discussion of the element followed by a list of goals and objectives that apply to the element. The City has produced a list of goals and objectives for each of the Smart Plan chapters based on input from the community's public participation process. In the final chapter, Implementation, the City provides a list of policies and projects that once implemented, will help the community achieve the goals and objectives set forth in this plan for sustainable development.

Community Character

Strengths - Residents who spoke at the public meetings listed the small town atmosphere and the closeness of the people in the community as one of the things they liked about their city. Residents described their fellow community members as friendly, caring, willing to lend a hand, and committed volunteers. Residents participating in the planning process placed a high value on maintaining the small community and family friendly environment.

Figure 2.1 - Smart Planning Elements and Principles

Elements	Principles
Public Participation	Collaboration
Issues and Opportunities	Efficiency, Transparency, and Consistency
Land Use	Clean, Renewable, and Efficient Energy
Housing	Occupational Diversity
Public Infrastructure and Utilities	Revitalization
Transportation	Housing Diversity
Economic Development	Community Character
Agricultural and Natural Resources	Natural Resources and Agricultural Protection
Community Facilities	Sustainable Design
Community Character	Transportation Diversity
Hazards	
Intergovernmental Collaboration	
Implementation	
Watershed Planning	

Issues - Some residents see new development as a threat to the character of their community. Development on agricultural land and forestland can alter the landscapes that are enjoyed by many. Residents wanted to see improvements to transportation systems for pedestrians and bicycles; additional shops and cafes convenient to neighborhoods and affordable housing.

Opportunities - Residents feel that preserving and enhancing the character of their community should be a top priority in the future. New development in the city should respect and preserve the existing community character. Many residents would like to see policies focused on enhancing local shopping, dining, and recreation. Residents would also like to see policies that preserve the natural and rural agricultural character of the region.

Community Facilities

Strengths – Asbury along with other communities in Dubuque County have a long history of collaborating to provide high quality community facilities to their residents. Local governments within the region have mutual aid agreements for fire and police services. The Dubuque Community School District serves the City of Asbury. Coordination between the public and private sector facility providers is also commonplace. Private entities in Dubuque County provide education, emergency medical services, hospital services, and childcare facilities.

Issues - Dubuque Community School District, law enforcement and fire protection agencies provide high quality opportunities and services to the community. As the City's population grows, maintaining adequate capacity will challenge providers of local facilities. The City should promote quality community facilities by coordinating development decisions and providing adequate facility capacity.

Opportunities – The City has the opportunity to provide high quality community facilities by maintaining the existing intergovernmental and public-private facilities relationships, and looking for areas to establish new relationships.

Public Infrastructure and Utilities

Strengths – The City of Asbury provides water distribution, wastewater collection and treatment, solid waste and recycling and stormwater management services to their residents. Telecommunications, natural gas and electrical services are provided by private utilities. Many of those who participated in the community workshops for the Smart Plan stated that they were satisfied with their utility services.

Issues – Growth over the past several years has caused some growing pains for the City's infrastructure and utility providers. Between 1990 and 2010, Asbury population grew by 435%. The low-density nature of new development has increased the cost of providing service to newly developed areas.

Opportunities - Effective land use and utility planning are especially important during uncertain

economic times. The City invests in many things, but utility infrastructure is one of the largest and most important investments a city will make. The City invests in the installation and maintenance of infrastructure to stimulate private sector investment and development, which creates value in the local economy. The value created is taxed and the tax revenue is used in part to pay for the maintenance of the infrastructure. The City may implement infrastructure and land use policies such as controlling urban sprawl and encouraging growth in or near the city to help them provide services efficiently, create economic value, and maximize the return on the community's investment.

Transportation

Strengths – Most city residents were happy with the conditions of their local streets. Several stated that they felt their city does a good job of performing routine street maintenance and keeping streets passable during the winter months. Meeting participants also listed the region's bicycle and pedestrian trails as a major asset for the area.

Issues - Transportation is a very important issue for many residents. Population growth in the City has resulted in increased vehicle traffic on city streets. Increasing traffic is projected to result in congestion and safety issues in the coming years. Safety issues were at the top of the list for future transportation projects. Changing demographics also present a transportation issue for the residents of the City. With an aging population, those who are unable to drive are expected to make up a larger percentage of the population in the future. The underlying challenge with all of these issues is funding. The City will need to find ways to make necessary improvements using available funding.

Opportunities – The City sees an opportunity to improve the transportation network to provide connectivity to more areas of the county and encourage more economic development opportunities. Residents would like a multi-modal transportation system where they are able to walk, ride their bike, or take public transit from their home to their destination without using a car. Communities along and near the Heritage Trail would like to expand on the trail's recreation and economic impact within the city. The City may implement policies that maximize the return on transportation funds. Mixed use development and complete streets are two of the tools that communities can use to help get the most out of their limited transportation funds.

Economic Development

Strengths – Manufacturing is a strong industry in the area employing 16% of the workforce. Dubuque County is home to several large manufacturers including John Deere. These companies employ thousands of workers and are an important part of the regional economy. Business services are also a strong employment sector in the area. The business and professional services sector provides needed services such as consulting, processing, legal, management support, etc. to all of the other industries in the area. Tourism has remained strong in the region and will continue to be a priority with the Meadows Golf Course, Sundown Mountain Resort, and Heritage Trail.

Issues - Many residents see a shortage of high quality jobs in the area. While the region's manufacturing base is strong it has declined significantly over the last 50 years. The Dubuque County regional economy faces a future shortage of skilled workers. As the baby boomer generation begins to retire, employers in Dubuque County will be forced to replace and train thousands of skilled workers. Finding new employees with the required education and training will be a top priority for the region's employers. Natural disasters have also been a major issue for the region's businesses. Flooding in 2008, 2010, and 2011, and a severe drought in 2012 have negatively impacted businesses in the region.

Opportunities – The Dubuque County area has the opportunity to implement programs and policies to attract new employers to the community. The city can invest in infrastructure, promote workforce education, and strengthen business development programs to stimulate expansion. The City has the opportunity to expand on a well established tourism industry. The City may work with other communities of Dubuque County to promote regional tourism which may bring more people and dollars into the area.

Housing

Strengths – Housing is an important asset for the

City of Asbury. The City housing market, like many in the Midwest, has remained relatively stable during the recession. The City was largely left out of the housing price boom of the 2000's, but it also did not experience a crash when prices adjusted during the recession. The area is also an affordable place to buy a home. The majority of homeowners in the City pay less than 30% of their income towards housing. The area has established programs to assist those who do not have affordable housing. The Eastern Iowa Regional Housing Authority manages public housing, rental assistance, and other housing programs within the city and in the region.

Issues – Owner occupied housing in the area is relatively affordable when compared to the rest of the United States, but housing affordability is an issue for those who rent in the city. 48% of renters pay more than 30% of their income towards housing. Combined transportation and housing costs are also an issue in the City.

Opportunities - The City of Asbury and Dubuque County may work together to address housing issues. Working together with the private sector, nonprofit, and other government agencies can ensure a diverse and affordable housing supply throughout the area. The City may update policies to allow for more affordable housing and reduce transportation costs. The City may also introduce programs that encourage improved relationships between tenants and landlords.

Agriculture and Natural Resources

Strengths – Asbury's location in the Driftless Area of the Mississippi River Basin provides a beautiful region of diverse topography, soils, and ecosystems. Through the public input process, many participants listed the natural beauty of the area as a primary reason for living in Asbury.

Issues – Asbury is home to a variety of natural features that make it unique in the State of Iowa. New development may put increased pressure on these valuable natural resources. In recent years, air quality has become a concern for Asbury and other Dubuque County communities. The region currently meets the Federal clean air criteria, but the region's air quality is approaching non-attainment levels. Water quality has also been a concern for Asbury and other areas in Dubuque County. Extensive monitoring in the Catfish Creek Watershed has shown elevated levels of bacteria, nitrates, and chloride. If practices are not implemented to improve air and water quality both could pose a serious threat to quality of life in the future.

Opportunities –The residents of the city have the opportunity to establish the policies that will insure that future generations will be able to enjoy the City's valuable natural features. The City should encourage the creation of a sustainable environment that balances growth and development with ecological constraints.

Hazard Mitigation

Strengths – In recent years the City of Asbury and Dubuque County have been impacted by several natural disasters. The area has used the lessons learned from its recent experiences to improve hazard mitigation and preparedness activities. Communities in the county have worked together to rebuild, recover, and plan for the future. The City and Dubuque County have adopted a multi-jurisdictional hazard mitigation plan that will guide future hazard mitigation activities in the coming years.

Issues - Over the past several years Asbury and areas of Dubuque County have sustained heavy damage from natural disasters. Flooding in 2008, 2010, and 2011 and a severe drought in 2012 disrupted everyday life and caused millions of dollars in damage to businesses, agricultural operations, and local infrastructure.

Opportunities – The City of Asbury and Dubuque County need to make use of the time between natural disasters to plan and be more resilient to hazards. Implementing building codes to prevent property damage from winter storms and severe storms, stormwater management practices to limit flooding, and improving buildings and infrastructure are examples of things the city can do to improve resiliency to hazards.

Watershed Planning

Strengths – The City of Asbury recently adopted erosion control, illicit discharge and stormwater management ordinances that aim to reduce flooding and protect water quality. The erosion ordinance requires developers to obtain a permit and install ero-

sion control practices on a jobsite during construction. The stormwater ordinance requires developers to install stormwater mitigation practices that will reduce the amount of runoff from the completed development. The idea behind the ordinance is to help reduce the impact of new development on flooding and water quality. Developers may choose from a variety of options to control storm water.

Issues – Flooding has occurred in the City of Asbury. Flash flooding events in 2008, 2010, and 2011 disrupted everyday life and caused damage to businesses, agricultural operations, and local infrastructure. Many community leaders and residents sought improvements to stormwater mitigation, water quality, and flood control.

Opportunities - Understanding the importance of land use planning, the impacts of infiltration based practices, and developing site specific boundaries of non-point source pollution within a watershed will lead to improvements in our local watersheds. The City may help improve local watersheds by implementing policies that identify and avoid sensitive areas, minimize impervious surfaces, and implement stormwater best management practices. The City needs to work with other communities to repair the damage done to in-stream habitat and reduce the rate and volume of stormwater flow using infiltration based practices.

Land Use

Strengths – The period following the 1980s recession was one of recovery and growth for the local economy. Between 1990 and 2012, the City saw a growing population. Beginning in 2007, the global economic recession slowed growth, but the local economy has remained relatively stable through the recession. Economic growth and investments in transportation infrastructure during this period lead to the physical expansion of the City.

Issues – The pattern in which new development has occurred has created new issues. For example, residential development has consumed valuable natural and agricultural land, increased traffic on roads, and increased demand for the municipal water and wastewater systems. It is important to work together to find an agreeable solution for all sides.

Opportunities – The City will need to continue to review and improve policies and ordinances to address land use issues while encouraging needed economic development. The City may use tools such as form-based codes, mixed use development, and conservation subdivisions to provide adequate land for new development while controlling sprawl, protecting the natural environment, and preserving the character of the city.

Intergovernmental Coordination

Strengths - Historically, the City of Asbury and communities in Dubuque County have a good working relationship. Dubuque County communities are able to cooperate to complete projects of mutual interest. Communities also work together to share information, resources, and are active in several regional organizations. The communities of Dubuque County have demonstrated a strong commitment to intergovernmental coordination by participating in the Smart Planning Consortium.

Issues – The City of Asbury, Dubuque County and local governments work together to provide the best services possible to their citizens; However, conflicts between communities have arisen in the past. Issues over land development and annexations have occurred. It is important to work together to find an agreeable solution for all sides.

Opportunities - Coordination between local governments is an important issue that was identified through the planning process. Community leaders have found that they can achieve their goals by cooperating instead of competing with their neighbors. Economic development, agricultural and natural resource protection, and hazard mitigation are some of the areas where communities can work together to achieve common goals.

Community Character

Chapter 3

The City of Asbury once was called the "tiniest town in the state" with a population of 27 people and was incorporated on September 7, 1933 after the repeal of prohibition, in order to have legalization of beer sales. The initial settling of the community was principally by Methodists who named the community after Bishop Francis Asbury, the first Methodist Bishop in America. The towns earliest roots are remembered as a village when farmers would travel to have their horses shod, visit the general store and local tavern. There were two churches, the Asbury Methodist Church and St. Philamena's Catholic Church and a one room schoolhouse. The incorporated city limits consisted of approximately eleven acres.

Area residents and visitors have fond memories of Blum's Grocery that also served as the courtroom for Justice of the Peace, Gayelle Blum. Many visitors remember visiting the store to pay speeding tickets. The structure over the years provided for living quarters, a grocery store, butcher shop, an oil station and feed store.

The community now has grown to a population of 4,357, expands an area over three miles and is the second largest city in Dubuque County. It still remains true to its humble beginnings as a residential community. Asbury has the feel of being close to everything – school, work, recreation and church. The City in the last fifteen years has added ten subdivision developments, two commercial developments (Asbury Mall and Saratoga Plaza), expanded the park and recreational opportunities for residents (new park property, resurface multipurpose courts, county library site, and purchase of Meadows Golf Club) and improved the utility services provided to residents (water tower, upgrades to wells and upgrade to wastewater treatment plant). Asbury Road continues to be the backbone for transportation through the community. Other major roads to service the community include Seippel Road, Radford Road and Hales Mill Road.

The City has set its direction to maintain a high quality community where people live, learn, grow, work and play – the kind of place that people want to call home.

The City of Asbury has a vision to improve the quality of life for all residents by working together to identify community strengths, and employing those strengths to create a long-term plan and maintain and improve a safe, sustainable, livable and quality community.

Goals and Objectives

1. **Invest in existing places such as infrastructure and neighborhoods, and places that the community values.**

   1.1 Prioritize funding for repair and maintenance of existing infrastructure before building new.

   1.2 Encourage economic development.

   1.3 Encourage private sector investment by providing incentives for infill development.

2. **Create great new places in areas that are designated for new development.**

   2.1 Identify designated growth areas that the community sees as best suited for new development.

   2.2 Consider guidelines that preserve distinctive local character in new development.

   2.3 Consider policies that promote development of compact, walkable, mixed use places.

   2.4 Plan for new parks and open spaces to serve new development.

   2.5 Encourage developers to build great places by using smart growth and green building approaches.

3. **Preserve the natural character of the region.**

   3.1 Develop land and economic development strategies that preserve natural landscapes.

   3.2 Promote buy local campaigns and farmers' markets.

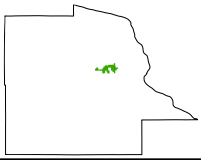
Community Overview

The following page is a summary of the current demographics and economic conditions in the City of Asbury and future forecasts for population and employment. The data will be used to assess the strengths and weaknesses of each community and the region as a whole. This information will be incorporated into the plan to create goals and objectives that will build on community strengths and address any weaknesses.

The majority of data comes from the US Census Bureau's American Community Survey (ACS) 5-year estimates. The ACS is based on a questionnaire that is sent each month to a sample of about 250,000 addresses in the United States. Each calendar year, the data is pooled and estimates are produced for approximately 60 different social, economic, and housing characteristics. Since the size of a geographic area largely determines the size of the sample, only larger areas – those with 65,000 or more people – receive 1-year estimates. For smaller places, estimates are created for multi-year periods: for areas with populations between 20,000 and 65,000, 3 years of data are needed; and for areas with fewer than 20,000 people, five years of data need to be collected in order to provide estimates.

All survey and census estimates include some amount of error. Estimates generated from sample survey data have uncertainty associated with them because they are based on a sample of the population rather than the full population. This uncertainty, referred to as sampling error, means that the estimates derived from a sample survey will likely differ from the values that would have been obtained if the entire population had been included in the survey, as well as from values that would have been obtained had a different set of sample units been selected.

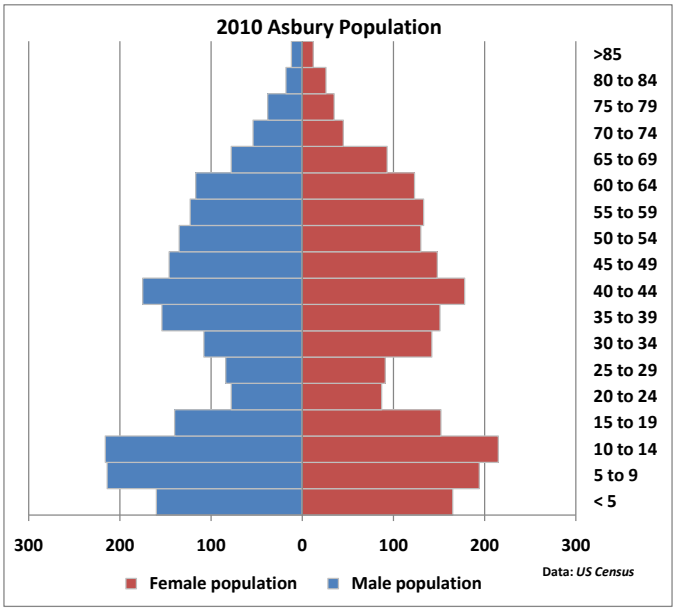
(follow with City of Asbury – Community Overview pages)

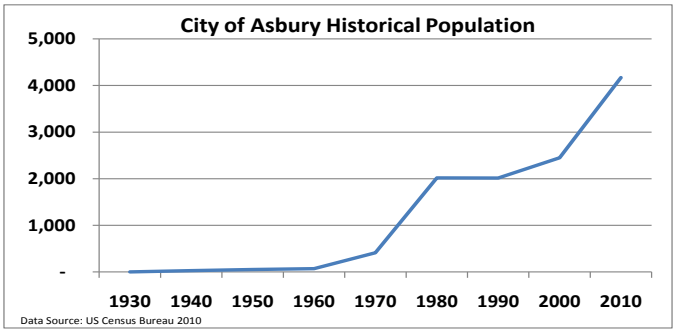


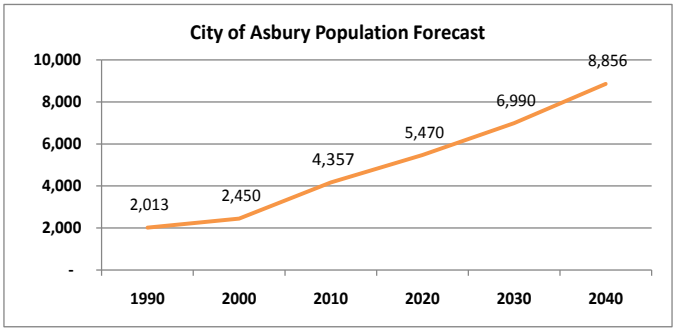
Community Overview

City of Asbury, Iowa

Population







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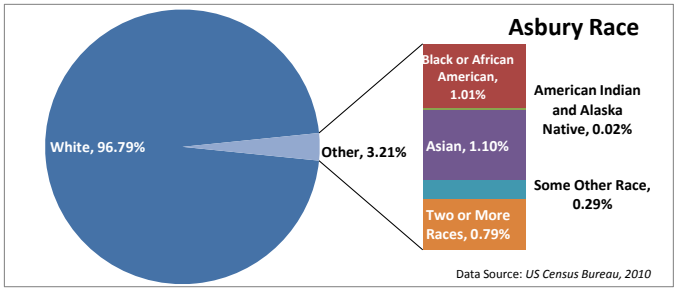
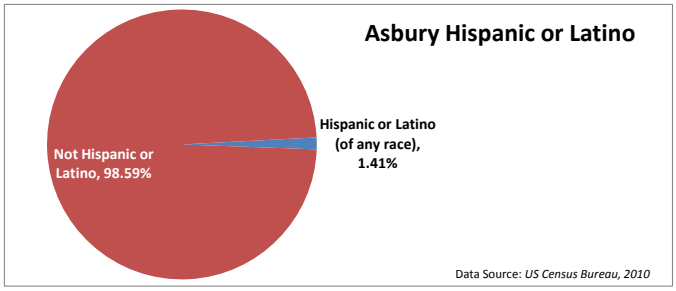
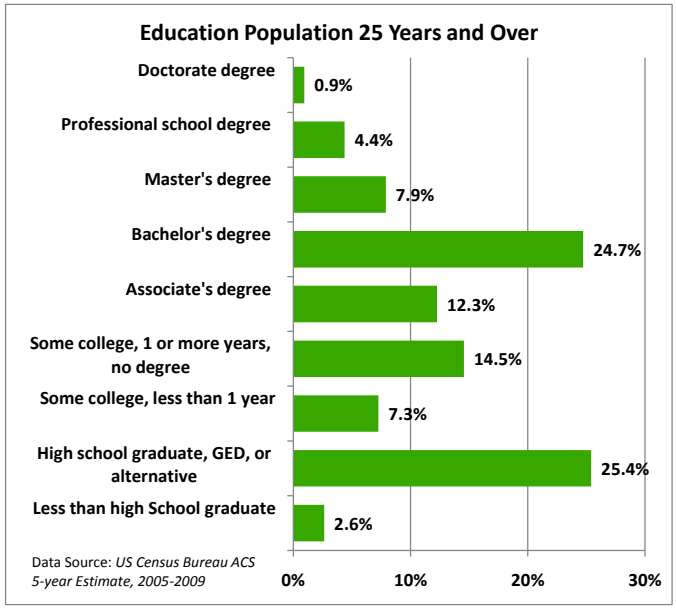




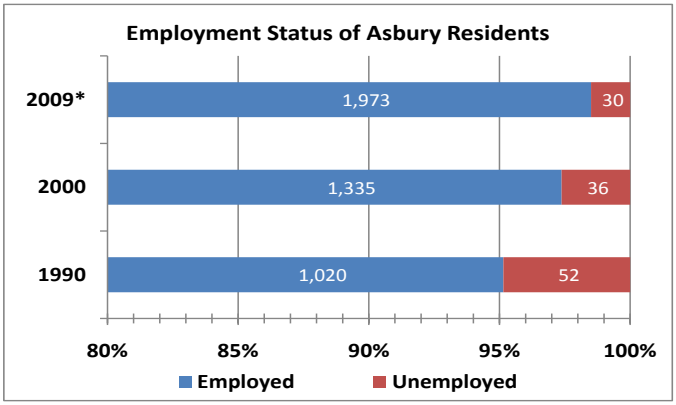
Education



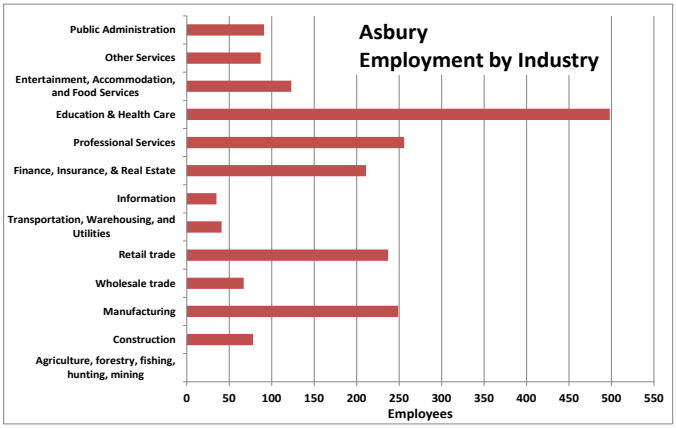
Asbury residents tend to be younger than the rest of the County. Median age is 35.6 compared to 38.6 for the county. The 2010 population pyramid shows large numbers in the 30-44 and the 5-19 age groups. This indicates the presence of many young families. Asbury has experienced rapid population growth over the last 60 years. Starting at just 27 residents in 1940, the City has grown to 4,357 residents. Asbury's rapid expansion is expected to continue over the next 30 years. According to projections, the City's population will top 9,000 by 2040. Whites make up about 97% of Asbury's population. County wide, whites make up about 94%. Education levels in Asbury are higher than in the rest of the County. 50% of residents have a college degree.

Area:	3.12 sq mi
2010 Population:	4,357
Population Density:	1,396 persons per sq mi

Employment



Data Source: US Census Bureau, 1990, 2000
* Data Source: US Census Bureau, ACS 5-year Estimate, 2005-2009



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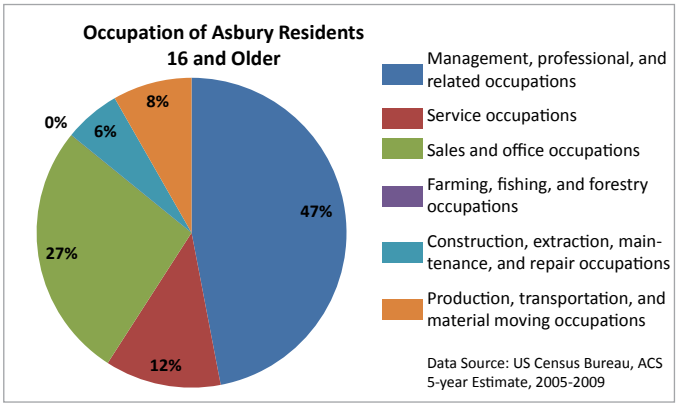
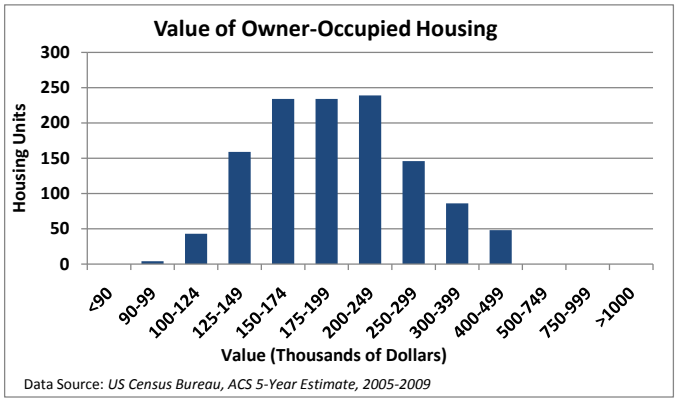


Data Source: US Census Bureau, ACS 5-year Estimate, 2005-2009

Housing

Total Occupied Housing Units:	1,463
Owner-Occupied Units:	1,262
Renter-Occupied Units:	171
Median Year Structure Built:*	1995
Median Value of Owner-Occupied Units*	$161,700

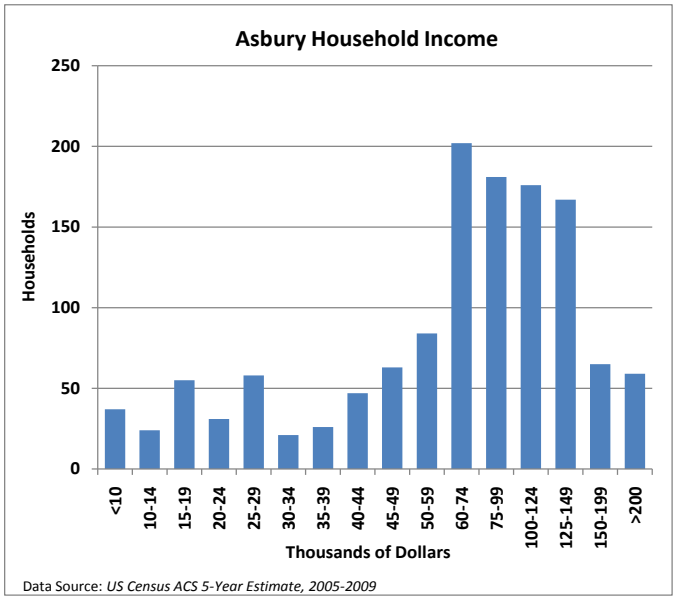
Data Source: US Census Bureau, 2010
* Data Source: US Census Bureau, ACS 5-year Estimate, 2005-2009



Data Source: *US Census Bureau, ACS 5-Year Estimate, 2005-2009*

Income

Median Household Income: $75,000 (2009 Dollars)



Data Source: *US Census ACS 5-Year Estimate, 2005-2009*

Unemployment has decreased from around 5% in 1990 to 1.5% in 2009. 74% of Asbury residents work in management, professional, sales, and office occupations. Asbury home prices tend to be higher than the rest of the county. The Asbury median home price is $30,300 higher than the County median. Median household income is $27,000 higher than the rest of the County.

Community Facilities

Chapter 4

When choosing a community to live, the community facilities that serve residents' basic needs are an important factor. The goal of this chapter is to provide high quality community facilities to all residents of the City of Asbury by maintaining the existing private – public facilities relationships, and look for areas to establish new relationships. This chapter will provide an inventory of the City of Asbury community facilities as they exist today, and then will provide a list of goals and objectives that will help the city provide the best quality community facilities to its residents and guide the future development of community facilities. The element describes location and use of existing community facilities that serve the City. Map 4-1 "Community Facilities" identifies some of the primary community facilities in Asbury.

Community Facilities Vision Statement

The City of Asbury will strive to provide community facilities to serve residents in the community, plan for future growth within the jurisdiction and collaborate with other local governments, schools and businesses.

Education

Asbury is in the Dubuque Community School District (DCSD). The District operates fourteen elementary schools, three middle schools, and two high schools. DCSD offers a variety of programming including special education and adult education programming. Figure 4.1 contains a listing of enrollment numbers over the past five years.

In addition to the public schools, Holy Family Catholic Schools provide pre K through 12 education. Holy Family currently operates five elementary schools, one middle school and one high school.

Future Needs

The Dubuque Community School District completed its Long Range Facilities Planning Document for 2012-2025 in December 2011. The goal of the plan is to provide a comprehensive facilities plan that will ensure district facilities are safe, secure, accessible, and functional and can meet the educational needs for all learners in the 21 century learning environment. The plan outlines improvements for every building and site in the district. Improvement projects were prioritized based on several parameters including: enrollment and demographic information, financials, feedback from the community, educational needs, and individual building plans. The plan will be reviewed annually and will be revised as conditions change.

In February 2011, Holy Family Catholic Schools released a demographic analysis that was compiled

Figure 4.1 - BUILDING ENROLLMENT & CERTIFIED ENROLLMENT COMPARISONS 2005-2011

GRADE & DESCRIPTION	2010-2011	2009-2010	2008-2009	2007-2008	2006-2007
Pre-K & Ungraded	**161**	**150**	**782**	**184**	**181**
K	760	774	810	783	775
1	764	831	761	773	779
2	829	795	770	785	785
3	765	783	789	789	760
4	771	801	773	764	770
5	786	775	758	779	726
Subtotal Elementary	**4,836**	**4,909**	**5,443**	**4,857**	**4,776**
6	799	768	794	774	804
7	780	804	774	807	881
8	803	774	800	881	797
Subtotal Middle School	**2,382**	**2,346**	**2,368**	**2,462**	**2,482**
9	802	832	877	811	906
10	810	881	807	890	858
11	878	789	864	843	863
12	808	875	862	884	879
Subtotal High School	**3,298**	**3,377**	**3,410**	**3,428**	**3,506**
Total PreK-12 Building Enrollment	10,516	10,632	11,221	10,747	10,764

by AltaVista Research, Inc. The report included analysis of data from multiple sources including Iowa Vital Statistics, Woods and Poole (Trends and Predictive Data), American Community Survey, Iowa Department of Education, Iowa Bureau of Planning, Research and Evaluation, and Holy Family Catholic School data. The report presented the following conclusions from the analysis.

While population in Iowa is growing in general, the greatest growth areas are Hispanic and other non-Caucasian demographics, as well as geographic areas.

Private schools' share of students in Iowa has trended down over the last 25 years.

HFCS's share of students has also gone down, but may have stabilized somewhat recently.

Most population growth in the area has been in communities near Dubuque, but not in Dubuque per se.

Some surrounding towns frequently referred to as "bedroom communities," have seen significant growth in the last 10 years. Two examples include Asbury and Peosta.

External factors such as significant changes in state funding for pre-K programs, school consolidation in public or parochial schools, and tuition rates in the Holy Family System could all have major impacts to the local level that are difficult to predict and model.

The current economy is working against private schools, including HFCS, from the standpoint of making the cost of private education more challenging to keep affordable for lower and middle income brackets.

Colleges and Universities

There are a number of post-secondary education facilities located in close proximity to Asbury. These include Loras College, Clarke University, University of Dubuque and Northeast Iowa Community College.

Loras College is a Catholic liberal arts college located in Dubuque that was established in 1839. Loras College offers undergraduate degrees in over forty areas of study, and several graduate degrees. Total in enrollment at Loras College for the 2010-2011 was 1,565.

Clarke University was founded in 1843 in Dubuque by Sister Mary Frances Clarke. Originally founded

as a liberal arts college for women, Clarke University has expanded and now offers over forty undergraduate and five graduate programs to both men and women. Clarke University's official enrollment for 2009-2010 was 1,202.

The University of Dubuque was originally established as a seminary in 1856. Over time, the curriculum was expanded and a liberal arts college was established. The college officially became the University of Dubuque in 1920. Today, the University of Dubuque offers twenty-four undergraduate majors and five graduate majors. In 2008 the University of Dubuque had an official enrollment of 1,451.

Northeast Iowa Community College (NICC) is a two-year community college with locations across Northeastern Iowa. NICC has three locations in Dubuque County: Dubuque Center for Education, and Town Clock Center for Professional Development in Dubuque and the Peosta campus in Peosta. NICC offers Associate's degrees, GED preparation, English Literacy classes, and Adult Transition services. The Town Clock Center is a full-service learning and conference center offering non-credit personal and professional development opportunities for individuals as well as customized sessions designed for businesses, organizations, or community groups.

Emmaus Bible College, originally established in Toronto, Canada in 1938 moved to Dubuque in 1984. All students who attend Emmaus earn a Bible major. Students may also add a second major in elementary education, computer information systems, intercultural studies or youth ministries. Currently 250 students are enrolled at Emmaus Bible College.

Established in 1854, Wartburg Theological Seminary is an Evangelical Lutheran seminary that trains students to become leaders in the Lutheran Church. The Seminary campus is located on the southwest side of Dubuque and has an enrollment of approximately 200 students.

Library

The City of Asbury receives library services through the Dubuque County Library. The Dubuque County Library has a branch located at 5900 Saratoga Road, Suite 5 in the City of Asbury. The City of Asbury is interested in the possible future development of a larger library facility to serve the residents.

Health Care

Dubuque serves as a regional medical center for the tri-state area, with two hospitals, independent nursing services and several clinics. The nearest hospitals are Finley Hospital, located at Grandview Avenue and Delhi Streets, and Mercy Medical Center-Dubuque, located on Mercy Drive.

Finley Hospital and Mercy Medical Center in the City of Dubuque provide a full range of health care services. The Finley Hospital has 126 staffed beds, 875 employees, and 376 volunteers. Mercy Medical Center is a non-profit Catholic hospital that has 263 beds, and 1,200 staff including a medical staff of 230. Both hospitals are classified as Level II Trauma Centers with physician staffed emergency rooms 24 hours a day. Both hospitals also provide obstetrics, orthopedics, intensive care, skilled nursing, pediatrics, cardiac care, and physical rehabilitation services.

In addition to the two larger hospitals, there are three main physician's groups in Dubuque County: Medical Associates Clinic and Health Plans, Dubuque Internal Medicine, Crescent Community Health Center, and the Tri-State Independent Physician's Association. These groups provide a broad range of primary care and surgical specialties.

Crescent Community Health Center is a medical and dental clinic located in Dubuque that provides basic (primary) medical and oral health care. Crescent Health Center serves individuals and families who are uninsured, underinsured, and those with various types of insurance. The clinic determines service costs for uninsured patients using a sliding fee scale that is based upon household income and size. Crescent Community Health Center welcomes patients from any area.

Future Needs

The Dubuque County Board of Health identified the needs that are the highest priority for the county in the Community Health Needs Assessment. The Priority Needs identified for Dubuque County are:

Promote Healthy Behaviors

Prevent Injuries

Protect Against Environmental Hazards

Prevent Epidemics and the Spread of Disease

Prepare for, Respond to and Recover from Public Health Emergencies

Strengthen Public Health Infrastructure

Child Care

Frog Hollow Daycare and Kids of the Kingdom Preschool offer childcare and preschool programs in the community. In addition, many licensed daycare facilities exist within the City of Asbury and in nearby Dubuque.

Iowa law limits the number of children a childcare center may provide child care for without a license or registration as a child development home. A provider caring for six or more children must be registered, and a provider caring for seven or more children must be licensed.

Law Enforcement

The City of Asbury Police Department is located at 4985 Asbury Road. The Asbury Police Department serves the City of Asbury with emergency and non-emergency services. The services include crime prevention programs including neighborhood watch, education for organizations, civic groups and private business, criminal investigation, traffic enforcement, accident investigation, crisis intervention, animal calls and community event support. The department is staffed by four full time officers.

The City of Asbury maintains 28E Mutual Aid Agreements with the Dubuque County Sheriff's Department and the City of Dubuque.

The Dubuque Law Enforcement Center is located at 770 Iowa Street in Dubuque. The DLEC was completed in 1974 and houses the Dubuque Police Department, the Dubuque County Sheriff's Office, the Dubuque Communications Center and the Dubuque County Jail.

Fire and Emergency Medical Services

Fire Protection

The Asbury Community Fire Department is located at 5485 Saratoga Road. The Department is a volunteer non-profit organization that was started in 1957 and is governed by a Board of Directors. It is comprised of 32 trained firefighters and six additional individuals volunteer in non-firefighting capacities. The Department operates two fire engines (which pump water onto fires), one tanker (which brings water to the site), one pick-up (for off-road access and grass fires) and two ambulances.

Emergency Medical Services

Emergency medical services are provided to the city by means of a contract with the Asbury Community Fire Department, 5485 Saratoga Road. The ambulance service provides paramedic advanced life support and is equipped with rescue equipment.

Dubuque County Emergency Communications Center

The Dubuque County Communications Center is located inside the Dubuque County Law Enforcement Center and serves all of Dubuque County. In July of 1985 the City of Dubuque and Dubuque County consolidated all public safety communications within Dubuque County into a Joint Public Safety Answering and Dispatch Point (PSAP).

The Emergency Communications Center is the answering point for all emergency and non emergency calls requesting Ambulances, Fire and Law Enforcement for the residents of and visitors to City of Asbury and Dubuque County. The Communications Center will dispatch the proper units and provide appropriate care and information until responders have arrived at the scene. The Emergency Communications Center is also the afterhours answering point for most city services. The Communications Center is responsible for all the 911 phone and radio equipment used in Dubuque County. Service is provided 24 hours a day, 7 days a week.

Parks and Recreation Facilities

The City of Asbury maintains three parks and a pedestrian trail.

Maple Hills Park is located at the end of Burr Oak Drive and has a softball diamond, tot lot and picnic tables.

Asbury Park is located on Asbury Road by Springreen Drive. Asbury Park has a baseball diamond, basketball court, two tennis courts, and two hard

surface volleyball courts, all of which are lighted. Asbury Park also has swings, slides, tot toys, picnic tables, grills, restrooms, a sand volleyball court and shelters. Information on reserving a shelter can be obtained by calling the city clerk's office at City Hall.

Althaus Wetland and Nature Preserve is located off Wintergreen Drive. The city-wide trail system connects from Althaus Wetland to Maple Hills Park.

New Park Development – 32 acre development

Meadows Golf Course -The Meadows Golf Course is a municipal golf course that consists of an eighteen (18)-hole layout and also includes a golf shop, bar and grill, and a 300-person reception facility available for functions.

Sundown Mountain Ski Resort

Sundown Mountain is located on Asbury Road just outside corporate limits. The popular skiing destination offers a variety of terrain over 45 acres. From the top of the ski hill three states and the Mississippi River Valley are visible on a clear day.

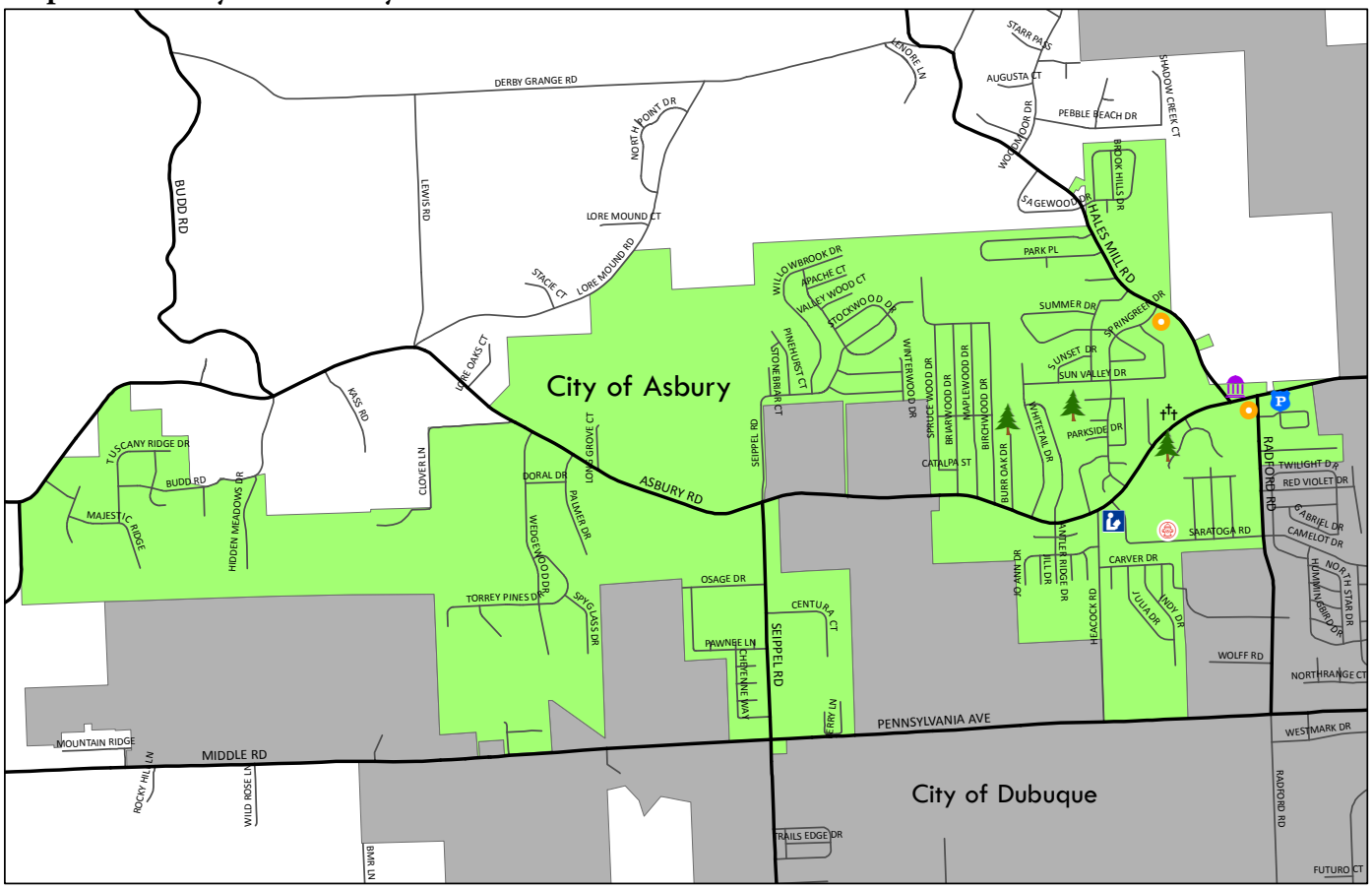
Cemeteries

There are two cemeteries located within close proximity of Asbury—Asbury Methodist Cemetery on Asbury Road within the City, and Asbury Cemetery located just east of the corporate limits.

Post Office

The nearest post office facility is located approximately 1 mile south of the City, at 4555 Futuro Court in the City of Dubuque.

Map 4.1 - Asbury Community Facilities



DUBUQUE COUNTY SMART PLAN

City of Asbury

Community Facilities

Community Facilities

- Child Care Facility
- Cemetery
- Library
- City Hall
- Fire Department
- Police Department
- Park

Data: Dubuque County, 2012
Map Created By ECIA, 2012

N

0 500 1,000 1,500 Feet

Goals and Objectives

The following goals and objectives are intended to guide the City of Asbury in providing high quality community facilities to all residents of the City of Asbury by maintaining the existing intergovernmental and public-private facilities relationships, and looking for areas to establish new relationships.

1. **Provide appropriate levels of recreation facilities for residents.**

   1.1 Continue to promote and maintain existing parks and public open spaces.

   1.2 Develop a Park Comprehensive Plan that includes planning, development and maintenance of outdoor recreation areas, open/green space, pedestrian and biking trail system connecting area parks, community facilities, schools and businesses and link to the Heritage Trail.

   1.3 Develop an amphitheatre area for movies, concerts, and other social events.

   1.4 Expand winter recreational activities to park and golf course area to include but limited to cross country skiing, ice skating and sledding.

   1.5 Develop pet friendly parks and trails.

2. **Enhance golf course facility.**

   2.1 Explore driving range.

   2.2 Develop Meadows Business and Marketing Plan

   2.3 Explore uses for the building for best utilization of facility

3. **Ensure the fair, equitable, and uniform enforcement of rules, regulations, and laws.**

   3.1 Provide comprehensive investigation of criminal offenses.

   3.2 Continue to serve the public with compassion, competence, and open-mindedness.

4. **Provide all law enforcement personnel with the training needed to deliver professional service.**

   4.1 Continue to maintain mandatory certifications as required by state law and accreditation standards.

5. **Monitor safety equipment, facilities, and procedures to ensure that adequate service is provided.**

   5.1 Review and update standard operating guidelines on a regular basis.

   5.2 Continue to expand the use of state-of-the-art technologies.

   5.3 Consider sustainable design principles when constructing new facilities.

6. **Prevent and control criminal behavior**

   6.1 Prevent and control conduct that has been recognized as threatening to life, property, or public order by responding to reports of emergencies, identifying criminal activity or hazardous conditions, and taking appropriate action.

7. **Use community activities, partnerships, outreach to foster a positive attitude, good citizenship, and cooperation with public safety efforts.**

   7.1 Promote activities that foster positive relationships between youth and public safety personnel.

   7.2 Maintain partnerships with schools and community based organizations.

   7.3 Use community oriented policing to address the causes of crime and encourage long-term, innovative problem solving and improved law enforcement-community partnerships.

   7.4 Promote programs that encourage safe behaviors. e.g. seatbelt enforcement, transportation safety education.

8. **To foster collaboration among municipal departments and the Dubuque County Sheriff's Department.**

   8.1 Review and update existing intergovernmental agreements.

   8.2 Evaluate and promote new intergovernmental agreements.

   8.3 Improve interdepartmental emergency com-

munications through interoperable communication technologies.

9. 9. Protect life and property from fire.

9.1 Study response times and deployment, to help determine future needs.

9.2 Continue to conduct inspections and enforce fire codes.

9.3 Provide emergency first responder and advanced life support medical care throughout the county.

10. Monitor fire and emergency medical service (EMS) equipment, facilities, and procedures to ensure that adequate service is provided.

10.1 Review and update standard operating guidelines on a regular basis.

10.2 Continue to expand the use of state-of-the-art technology.

10.3 Encourage fire and EMS departments to consider sustainable design principles when renovating existing facilities and constructing new facilities.

11. Minimize the impacts of manmade and natural disasters.

11.1 Encourage collaboration of the Dubuque County Fire Fighters Association and Law Enforcement agencies to review and update the Hazard Mitigation Plan as necessary.

11.2 Continue to develop and maintain comprehensive emergency management planning for local governments which include severe weather, major mass casualties, hazardous material incidents, terrorism and weapons of mass destruction.

11.3 Support a high level of disaster preparedness, to meet or exceed state and federal requirements.

11.4 Develop mitigation programs and activities which will lessen possible catastrophic results from possible disaster occurrences.

11.5 Promote appropriate disaster response training and equipment for public safety agencies.

12. Provide staff with current training and certifications.

12.1 Encourage collaboration of the Dubuque County Firefighters Association and Law Enforcement agencies on the operation of the Regional Training Center.

12.2 Encourage Fire Departments to work with local Emergency Management Office to develop and review plans, exercises and training.

13. City will collaborate with the Fire Department to promote community education and outreach on fire safety.

13.1 Educate all members of the community on fire safety.

13.2 Educate homeowners on fire safety and proper smoke detector installation and use.

13.3 Continue to work with the community to ensure fire code compliance.

14. Support the promotion of healthy behaviors.

14.1 Encourage programs that reduce obesity.

14.2 Promote reductions in "high risk behaviors," e.g. tobacco use, alcohol abuse, and drug use.

14.3 Promote access to medical, dental, and mental health care for all.

14.4 Promote prevention and screening for chronic diseases.

15. To prevent injuries.

15.1 Reduce injuries resulting from alcohol and substance abuse related accidents.

15.2 Encourage violence reduction programs.

15.3 Create safe and sanitary work, play and housing environments.

15.4 Increase the number of employers and organizations offering safety, wellness promotion, substance abuse and employee assistance programs.

16. Protect against environmental hazards.

16.1 Develop programs to improve air and water quality.

16.2 Promote a safe and healthy environment by ensuring sanitary conditions and practices are in accordance with public health, housing and environmental ordinances, codes and regulations.

16.3 Promote safe and sanitary housing conditions through the reduction of radon, lead hazards, carbon monoxide poisoning, and other environmental health concerns.

17. Work toward the prevention of epidemics and the spread of disease.

17.1 Evaluate and improve communications between health care providers, facilities, and Dubuque County Public Health.

17.2 Investigate the feasibility of a Dubuque County Laboratory that would increase the availability of testing.

17.3 Provide education on ways to reduce the spread of disease.

18. Prepare for, respond to and recover from public health emergencies.

18.1 Foster collaboration of local governments and health care providers to create emergency preparedness plans and participate in emergency preparedness training.

19. Support access to good quality affordable dependent care.

19.1 Support increased supply and range of available high quality affordable childcare, especially for low and moderate income households and those families with special needs children.

19.2 Support increased opportunities for the elderly to maintain an independent lifestyle.

19.3 Support the continuation and expansion of family services and foster care.

20. Support opportunities for life-long learning for residents of all ages.

20.1 Support efforts to increase adult literacy.

20.2 Support access to all levels of education for all persons.

20.3 Support individuals of all ages in pursuit of a sustained program of learning independent of any educational provider.

20.4 Encourage public and private employers to offer continuing education incentives.

21. Support the access to timely, accurate, and useful information through reading, audio-visual, and electronic materials and programming through public libraries.

21.1 Support coordination and sharing resources to serve better the needs of the public.

21.2 Support high-demand, high interest materials in a variety of formats for persons of all ages and abilities.

21.3 Support the use and awareness of the quality of the public libraries.

21.4 Support expansion and accessibility of library services throughout the community.

21.5 Support learning environment that utilizes state-of-the-art technologies.

22. Support the delivery of quality education that allows all students to reach their highest potential.

22.1 Promote a variety of assessment tools, methods, and strategies to evaluate and/or document student progress, in accord with national and state standards.

22.2 Champion superior standards of academic excellence, in which values are integrated in the lives and work of all members of the school community.

22.3 Support a comprehensive educational program that provides services to students ranging from severely and profoundly disabled programs through gifted programs and advanced placement courses.

22.4 Strive to prepare students for careers, lifelong learning and citizenship in contemporary international society.

22.5 Encourage activities that promote lifelong physical fitness and health awareness.

22.6 Promote high school completion and encourage postsecondary education or vocational training.

23. Encourage school districts to consider smart planning and sustainable design principles when developing school facilities plans.

23.1 Encourage school districts to consider sustainable design principles when renovating existing and constructing new facilities.

23.2 Encourage school districts to consider neighborhood impacts when considering closures of existing facilities and locations for new schools.

23.3 Foster collaboration of school districts and transit providers to explore clean, safe, efficient, and cost effective student transportation.

24. To provide public facilities and services at levels which support a desirable "quality of life" for current and future residents.

24.1 Provide facilities and services in locations compatible with planned uses, populations, and needs.

24.2 Encourage new development to over-size facilities to serve adjacent development when the adjacent development is expected to require servie.

25. Enhance library facility.

25.1 Explore sources of funding, including private donations, for the site acquisition, plan development, and expansion of library facility.

25.2 Review and study the need to increase programming service for patrons of all ages.

25.3 Support the increase in volunteers for the library.

25.4 Continue to upgrade technological resources that are available to citizens.

26. Plan and Construct a municipal center complex.

26.1 Construct a municipal facility for city hall, police and library services and a community room for programming.

Future Needs for Community Facilities

There is a desire to maintain the level of parks and open spaces, which are a source of pride for the community, to expand facilities and to increase the network of trails. There is also a desire to develop a library facility to provide a venue for learning and community activities.

This section provides recommendations on how Asbury can continue to provide sufficient delivery of services to the local community, and plan for increased efficiency and capacity.

Recommendations:

- Continue appropriate maintenance of existing parks and public open spaces.
- Update the Park, Outdoor Recreation and Open Space Plan to include recommendations for a trail system connecting area parks, community facilities, and other locales and link city trails to the Heritage Trail.
- Continue to provide necessary support for sufficient operation of police and fire services.
- Develop a long-term plan for the Asbury Branch of the Dubuque County Library including a public participation campaign, exploration of private donations, and determination of a facilities and services.
- Explore obtaining a unique zip code for the City of Asbury.

The City is planning to upgrade and update facilities to meet the needs of the community. See Figure 4.2.

Figure 4.2 - Forecasted Community Facilities Needs

Subject	Need	Approximate Timeframe	Comments
Space Needs Assessment	Facilities Development	Ongoing	Plan for future development of City Facilities
Parks	Expansion	Mid-Term	Facility development (bike trails, multi-purpose courts, skate park, etc)
Parks	Facilities Development	Mid-Term	Development of 32 acre parcel of new park property
Library, City Hall, Council Chambers and Police Department	Facilities Development	Mid-Term	Construction of a municipal building to house city offices, police department, council chambers and library
Golf Course	Facilities Development	Mid-Term	Driving Range
Public Works	Expansion	Mid-Term	Expand garage facility
Golf Course	Expansion	Mid-Term	Expand maintenance facility
Short-Term: approximately 1-4 years; Mid-Term: approximately 5-8 years; Long-Term: approximately 9+ years in the future			

Public Infrastructure and Utilities

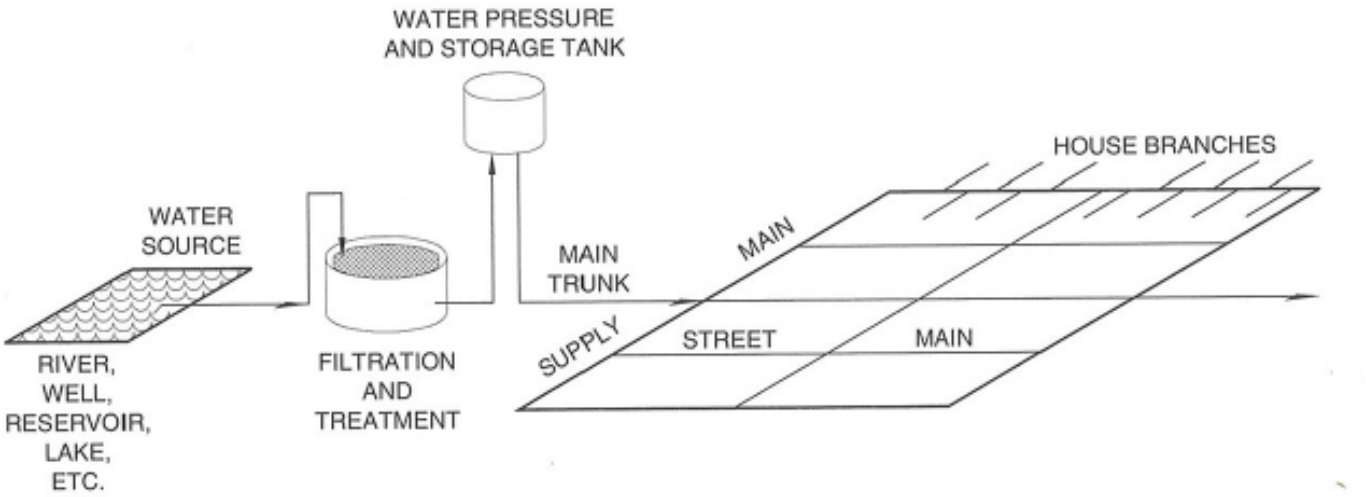
Chapter 5

Public infrastructure and utilities are a key component of quality of life within the City of Asbury. Access to infrastructure and utilities also has a profound impact on land development. Land that has access to municipal utilities has greater development potential and has a higher value than land that does not have access. This chapter will provide an introduction to the City's public infrastructure and utilities and explore how these necessary items impact land use, environmental quality, and economic development.

Water Supply and Distribution System

A typical water supply and distribution system will contain four basic components: a Water Source, Filtration and Treatment, Water Pressure and Storage Tank, and Local Distribution Pipes. Figure 5.1 shows a basic water supply and distribution system. Water filtration eliminates any undesirable biological contaminants and provides water with a desirable chemical balance. The treated water is pumped from the treatment source to a water storage tank. The purpose of the tank, which is usually in the form of an elevated water tower or reservoir, is to provide

Figure 5.1 - Schematic Diagram of a Typical Water Distribution System



Source: Anderson, Larz T. *Planning the Built Environment*, 2000

pressure to push water throughout the system. After water leaves the storage tank, a system of underground pipes deliver the water to homes and businesses.

The Asbury municipal water supply currently has three active public water wells open in the Cambrian-Ordovician aquifer. The approximate discharge for all wells is 627,000 gallons per day (gpd). The Colonial Estates well is capable of producing 425 gallons per minute (gpm), the Woodmoor well is capable of producing 180 gpm, and the Wedgewood Estates well is capable of producing 225 gpm.

Municipal water is delivered via a network of water mains of varying diameter (Figure 5.2) and a water tower with a capacity of 400,000 gallons. Map 5.1 "Water System" illustrates the City's water system.

Figure 5.2 - Asbury Water Distribution System Inventory

Water Pipe Size	Lineal Footage
4-inch	15,725
6-inch	59,615
8-inch	57,355
12-inch	32,380
Source: City Engineer/MSA files	

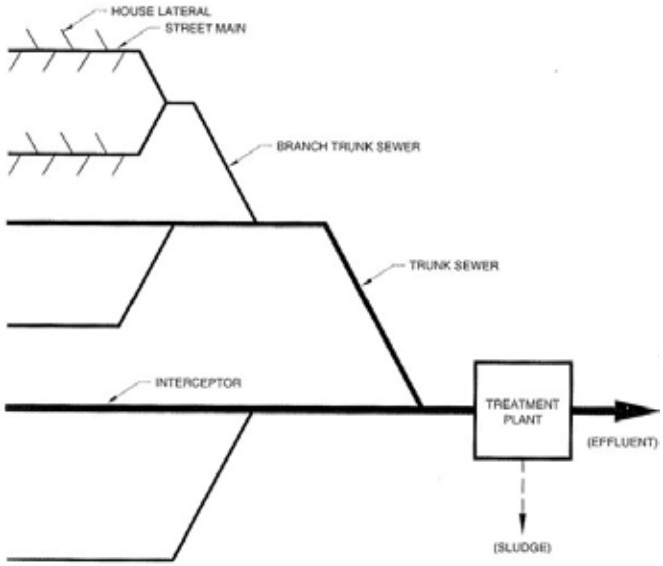
Wastewater Collection and Treatment Systems

There are two basic methods used for treating wastewater. The preferred method for urban residential and nonresidential areas is to collect wastewater through a network of pipes and let it flow by gravity to a treatment plant. The treatment plant separates solids (sludge) and liquids (effluent). The sludge is disposed of in a way that is economical and safe for the environment, and the effluent is usually discharged into a flowing stream or river. Figure 5.3 shows a schematic diagram of a wastewater collection and treatment system.

The existing wastewater collection system is in good condition. Gravity collection lines ranging in diameter from 4-inch to 16-inch and force mains ranging from 4 inches to 10 inches serve the City (Figure 5.4). In addition to gravity collection lines and force main, the City is also served by nine (9) lift stations (Hales Mill, Radford Road, Wedgewood, Arrowhead, Northwest, Meadows, Brook Haven, Asbury Court Place, Carver). A summary of existing gravity collection lines and force main are provided in Map 5.2 "Wastewater Collection" illustrates the City's wastewater collection system.

The City placed into service a new mechanical wastewater treatment facility in 2007. The new facility includes a headworks building that houses grit removal, screenings removal, a laboratory, and control room. The new process uses an oxidation ditch; final clarifiers, RAS/WAS pumping systems, sludge storage, flow equalization basins, and a UV disinfection system to achieve compliance with the City's National Pollutant Discharge Elimination System (NPDES) permit requirements. The existing facility has been designed to serve the projected 2023 population of 6,121 persons.

Figure 5.3 - Schematic Diagram of a Wastewater Collection and Treatment System



Source: Anderson, Larz T. *Planning the Built Environment*, 2000

Figure 5.4 - Asbury Wastewater Collection System Inventory

Sewer Size & Type	Lineal Footage
4-inch Force Main	996
6-inch Force Main	8,997
8-inch Force Main	7,133
10-inch Force Main	2,860
4-inch	440
8-inch	115,544
10-inch	6,128
12-inch	6,465
15-inch	3,584
16-inch	56
Source: City Engineer/MSA/Files	

Storm Sewer System

The current stormwater system uses a series of pipes and culverts to divert water from improved surfaces and roadways. It also includes stormwater detention basins in several subdivisions throughout the jurisdiction. Stormwater detention basins are required of all residential and commercial subdivisions greater than one acre in total area. Map 5.3 "Storm Sewer System" illustrates the City's storm sewer system.

Solid Waste Disposal and Recycling

The Dubuque Metropolitan Area Solid Waste Agency (DMASWA) is an intergovernmental entity formed in 1973 under Chapter 28E of the Code of Iowa. Although originally formed primarily for the purpose of owning and operating a sanitary landfill, the DMASWA has since broadened its mission. Members of the DMASWA include the City of Dubuque, with two Board representatives, and Dubuque County, with one representative. All remaining municipalities in Dubuque and Delaware Counties have signed "Non-Member Service Agreements". The Agency's municipal solid waste (MSW) landfill is located on Dubuque's west side along U.S. Highway 20. Its service area is Dubuque and Delaware counties. The Agency owns 460 acres of property, of which 80 are permitted for landfill use. The City of Asbury contracts with a private service provider for residential garbage and recycling collection. City businesses contract privately for these services.

Telecommunications

Telecommunications infrastructure is becoming an increasingly important issue for economic development and quality of life in the city. High-speed internet and mobile phone service have become a necessity for most residents and businesses. Internet access has become so important that the United Nations declared it a basic human right in 2003. Expansion of internet use has increased demand for internet bandwidth and has required expansion of telecommunications infrastructure Many people now rely on the internet for shopping, banking, entertainment, job applications, applying for government services, and much more. Telecommunications service providers currently operating in the City of Asbury are; Mediacom, Century Link and Prairienet.

Figure 5.5 shows maximum advertized broadband speed for Dubuque County and the State of Iowa. According to the maps, higher download speeds are available in the urban areas where wireline broadband is available.

Download speeds in Dubuque County are similar to those seen across the state. In the urban areas in Dubuque County, download speeds of between 25-50 mbps are available. This is comparable to most urban areas across the state, but in some areas, download speeds greater than 100 mbps are available. In most instances, the maximum advertized speeds are much higher than an average internet user would require. According to Connect Iowa, the average residential download speed in Iowa is 5.2 mbps and the average business download speed is 7.2 mbps. Higher speeds are important for businesses and institutions that need to send large quantities of data quickly.

The data presented in Figure 5.5 indicates that broadband is available in the City of Asbury, but availability does not equal accessibility. According to Connect Iowa Survey data, 34% of Iowa residents do not have broadband access. When asked why they did not subscribe to broadband the top responses were: no content worth viewing, 26%; broadband fees too expensive, 23%; and computer too expensive, 7%.

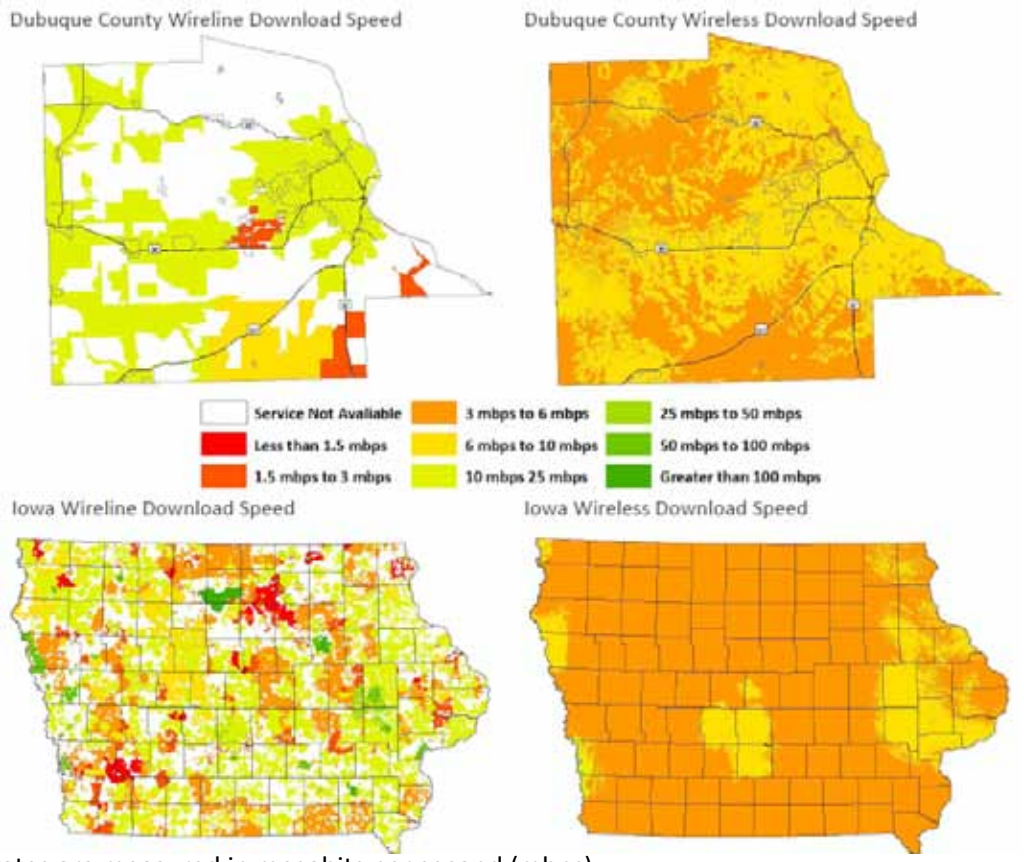
Power Plants and Transmission Lines

Interstate Power and Light Company (Alliant Energy). Alliant Energy is the primary electricity provider to customers in the City of Asbury. Alliant Energy provides electricity to 1.4 million customers in Iowa, Illinois, and Wisconsin. Alliant Energy's corporate offices are located in Madison Wisconsin. The company also has general offices in Cedar Rapids and Dubuque.

Maquoketa Valley Electric Cooperative (MVEC) is a private, non-profit electric utility that was established in 1935. MVEC is member owned and provides electric service to the primarily rural areas of Delaware, Dubuque, Jackson, and Jones Counties. MVEC serves a small portion of Asbury's residents. MVEC serves 14,000 members across 3,100 miles of line.

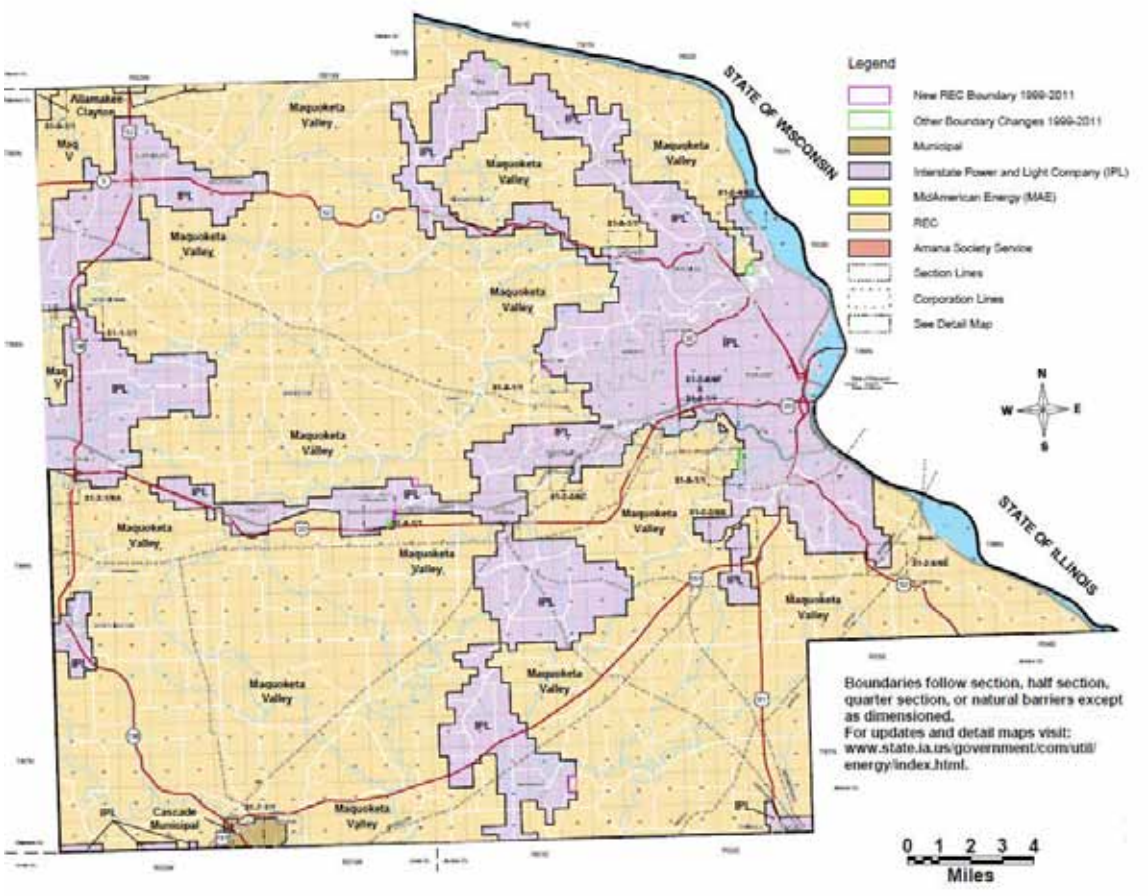
ITC Midwest, a subsidiary of ITC Holdings Corp, operates the electrical transmission lines that run through Dubuque County. ITC Midwest oper-

Figure 5.5 - Maximum Advertized Download Speed



*Data transfer rates are measured in megabits per second (mbps).

Figure 5.6 - Iowa Utilities Board Electrical Service Areas



ates more than 6,800 circuit miles of transmission lines in Iowa, Minnesota, Illinois and Missouri. The company is headquartered in Cedar Rapids, Iowa, and maintains operating locations at Dubuque, Iowa City and Perry, Iowa; and Albert Lea and Lakefield, Minnesota.

Figure 5.6 shows the service areas for the electrical service providers that operate within Dubuque County.

Infrastructure and Development

Public expenditures for infrastructure can shape a community's land use patterns, and in turn, the community's land use patterns will determine the costs and efficiency of utility service delivery. Communities can use smart planning principles such as higher density and infill development to keep utility rates low and improve delivery system efficiency. Adding new developments to the existing network spreads the systems capital costs over a larger customer base lowering the costs of service per customer. However, if new infrastructure is built for new customers, the opportunity to improve the efficiency of the existing system is lost leading to higher costs per customer.

For example, large lot low density residential development patterns can lead to increases in water demand and cost. Large lots increase the length and thus the cost of the pipes serving households and commercial buildings. Buildings on smaller lots are typically closer to the water main running under the street and require a shorter branch pipe to get the water from the main to the building. Higher density neighborhoods also have more houses per block of main, so the cost of the main will be less per house than in neighborhoods with larger lots. Large lots can also increase demand for water because of larger yards. Low density systems can lead to increased water loss because of leaks, as longer pipes require more pressure to push the water through the system.

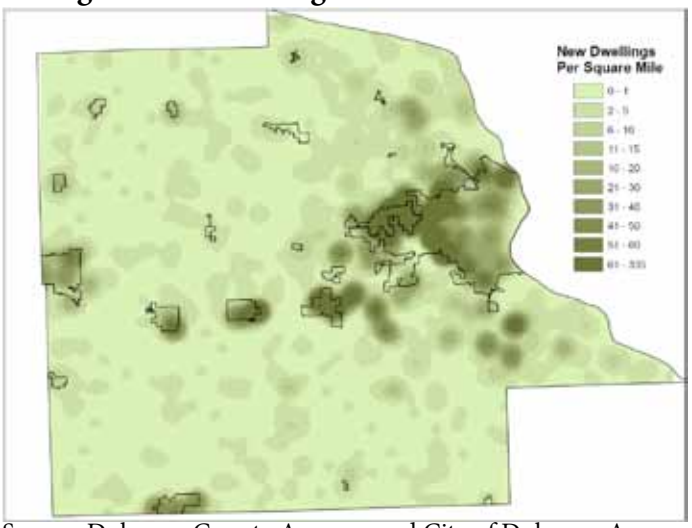
Rural development

Since the 1990 census, the population of Dubuque County has been steadily expanding. As of the 2010 census, the County had regained nearly all of the 7,342 people it had lost between 1980 and 1990. However, the population did not return to the same areas of the County. Between 1990 and 2010, the Dubuque's population began to decentralize, relocating from the City of Dubuque to the smaller cities and the unincorporated rural areas of the county. The pace of the decentralization has accelerated within the last ten years. Figure 5.7 displays new building starts between 2000-2010. The map shows large amounts of new construction in the smaller cities and in the urban fringe area on the west side of Dubuque and the surrounding unincorporated areas.

The spatial population shift of the past 20 years has resulted in expansion of public and private infrastructure within the county. This growth pattern conflicts with the smart planning principles listed above and conflicts with previously adopted goals and objectives. This conflict was identified in the 1969 county land use plan and was noted in the 2002 Dubuque County Comprehensive Land Use Development Plan.

The 2002 Dubuque County Comprehensive Land Use Development Plan attempted to address these conflicting goals. Controlling urban sprawl, encourage growth in or near cities, preserving rural farm character were all listed as key issues in the 2002 plan, but as noted in Figure 5.7, rural development has continued to expand since the plan was adopted.

Figure 5.7 - Building Starts 2000-2010



Source: Dubuque County Assessor and City of Dubuque Assessor

Return on Investment

Effective land use and utility planning are especially important during uncertain economic times. During hard economic times, communities need to "do more with less." In other words, the community needs to get more out of the investments it makes, or improve its return on investment. Communities invest in many things, but utility infrastructure is one of the largest and most important investments a community will make. Communities invest in the installation and maintenance of infrastructure to stimulate private sector investment and development, which creates value in the local economy. The value created is taxed and the tax revenue is used in part to pay for the maintenance of the infrastructure. If a community wants to get more value out of its infrastructure, it should consider investing in the most productive types of development. How can a community measure the productivity of its infrastructure investments? The County Assessor values all property in the city for tax purposes. The assessors' tax records will provide a consistent measure of value for all properties in the city.

The following is a productivity comparison of two Dubuque County properties based on assessor's tax records. Figure 5.8 shows the two properties. Both are commercial properties located in the city of Dubuque and both pay the same property tax rate. Property 1 is a three-story commercial building located in an urban area with retail on the bottom floor and apartments on the top two floors. Property 2 is a large factory located in an industrial area. Figure 5.8 also includes the annual property 2011 property tax owed on each property.

Based on total property tax, Property 2 is clearly the more valuable property. However, total property tax is not the best way to measure the property's productivity and the return on the community's infrastructure investment. Figure 5.9 uses an example to explain why total tax is not a good measure of productivity. A community's return on investment

Figure 5.8 - Total Annual Property Tax

	Property 1	Property 2
Property Tax	$3,369	$622,494
		
Source: Dubuque County Assessor		

Figure 5.9 - Fuel Economy

	SUV	Car
Miles Per Tank	474	374
Tank Size	31 gal	16 gal
Miles Per Gallon	17	26
Source: www.fueleconomy.gov		

is somewhat analogous to a family shopping for a car. Fuel consumption is the most important feature for the family and they have narrowed their choices down to a car and an SUV. If we used the same approach as above, the family would want to look at the miles per tank. However, miles per tank would be an inaccurate measure of productivity because we know that the two vehicles have different fuel tank sizes. The best way to compare fuel productivity is to look at the fuel economy of the vehicle. Using the fuel economy measure, we find that the car provides more miles of travel per gallon of gas.

We can apply the same logic to the two properties. Property 2 produces more tax revenue, but it takes up more land and requires more infrastructure than Property 1. As a result, tax per acre would be a more accurate measure for the productivity of these two buildings, as it accounts for differences in each properties size, just as the MPG calculation does for the family buying the car. The results from this example are displayed in Figure 5.10.

Using the tax per acre measurement we find that Property 1 is almost 3 times more productive than Property 2. This example is not intended to diminish the factory's contributions to the local economy. Large industrial land uses contribute to the regional economy and employ thousands of Dubuque County residents. The example was intended to show that high density urban development can provide a high return on infrastructure investment. Investing in land uses that use infrastructure most efficiently by adopting smart planning principles can help communities keep property taxes and utility rates low. Many communities would spend great amounts of time and effort to attract one large factory to their town, but updating existing infrastructure and attracting several new businesses to their downtown may be a more practical and financially productive solution for economic development.

Figure 5.10 - Property Tax Per Acre

	Property 1	Property 2
		
Property Tax	$3,369	$622,494
Acres	0.05	27.08
Tax Per Acre	$67,380	$22,987
Source: Dubuque County Assessor		

Goals and Objectives

1. **To provide, maintain, and improve safe, cost-effective, functional, and self-supporting public utility systems including water, sanitary sewer, storm sewer, solid waste disposal and recycling with a focus on sustainable materials management where applicable.**

   1.1 Support timely cost effective delivery of services.

   1.2 Perform routine maintenance and testing to ensure optimum utility provision.

   1.3 Budget for short and long term system improvements.

   1.4 Support ongoing improvements to facilities.

   1.5 Support ongoing improvements to distribution and collection systems.

   1.6 Support ongoing improvements to landfill diversion efforts.

   1.7 Comply with state, federal, and local environmental regulations.

   1.8 Support the adoption of new technologies that reduce costs, improve delivery of service, and reduce impacts on the environment.

2. **To plan for, build, and improve infrastructure systems to meet anticipated growth and development needs.**

   2.1 Encourage development and redevelopment in areas where infrastructure is existing or underutilized in the cities.

   2.2 Support building future infrastructure at a higher capacity for future identified growth areas in cities.

   2.3 Support municipal utility rate structures that are both adequate to meet current obligations and future needs and are equitable for services received by residential, commercial, and industrial users.

   2.4 Investigate and implement technological advances to optimize service delivery.

   2.5 Plan for orderly replacement and upgrade of public and private communication infrastructure with attention to features, capacity, compatibility, and future growth.

   2.6 Consider opportunities for buried public and private communication infrastructure during planning for street, water, and sewer construction projects.

   2.7 Support providing sanitary sewer and water main extensions within cities in a timely manner, when economically feasible.

   2.8 Evaluate periodically the water system storage and hydraulics of cities to ensure ability to serve future growth demands.

   2.9 Support a "looped" water distribution system, where practical.

   2.10 Monitor and coordinate appropriate implementation of communication, gas and electric delivery systems.

   2.11 Encourage public investments in infrastructure that will result in private-sector investments that can financially sustain the maintenance of that infrastructure.

   2.12 Evaluate and ensure the design and location of stormwater inlets and outlets are strategically located, managing runoff as close to its source as possible, and minimizing the volume of stormwater runoff to avoid causing problems for downstream neighbors.

3. **To encourage the use of low impact development and centralized water or sewer systems to preserve open space and protect the air and water quality throughout the region.**

   3.1 Encourage the use of Low Impact Development (LID) principles in new development throughout the region.

   3.2 Encourage development to locate within existing cities and establish urban fringe areas where adequate public utilities are planned or can be provided.

   3.3 Require new developments in the urban fringe area to be designed for future connection to municipal services.

4. To provide public facilities and services at levels which support a desirable "quality of life" for current and future residents.

4.1 Require new development to fund public water and sanitary sewer systems required to meet the needs of the proposed development.

4.2 Provide facilities and services in locations compatible with planned uses, populations, and needs.

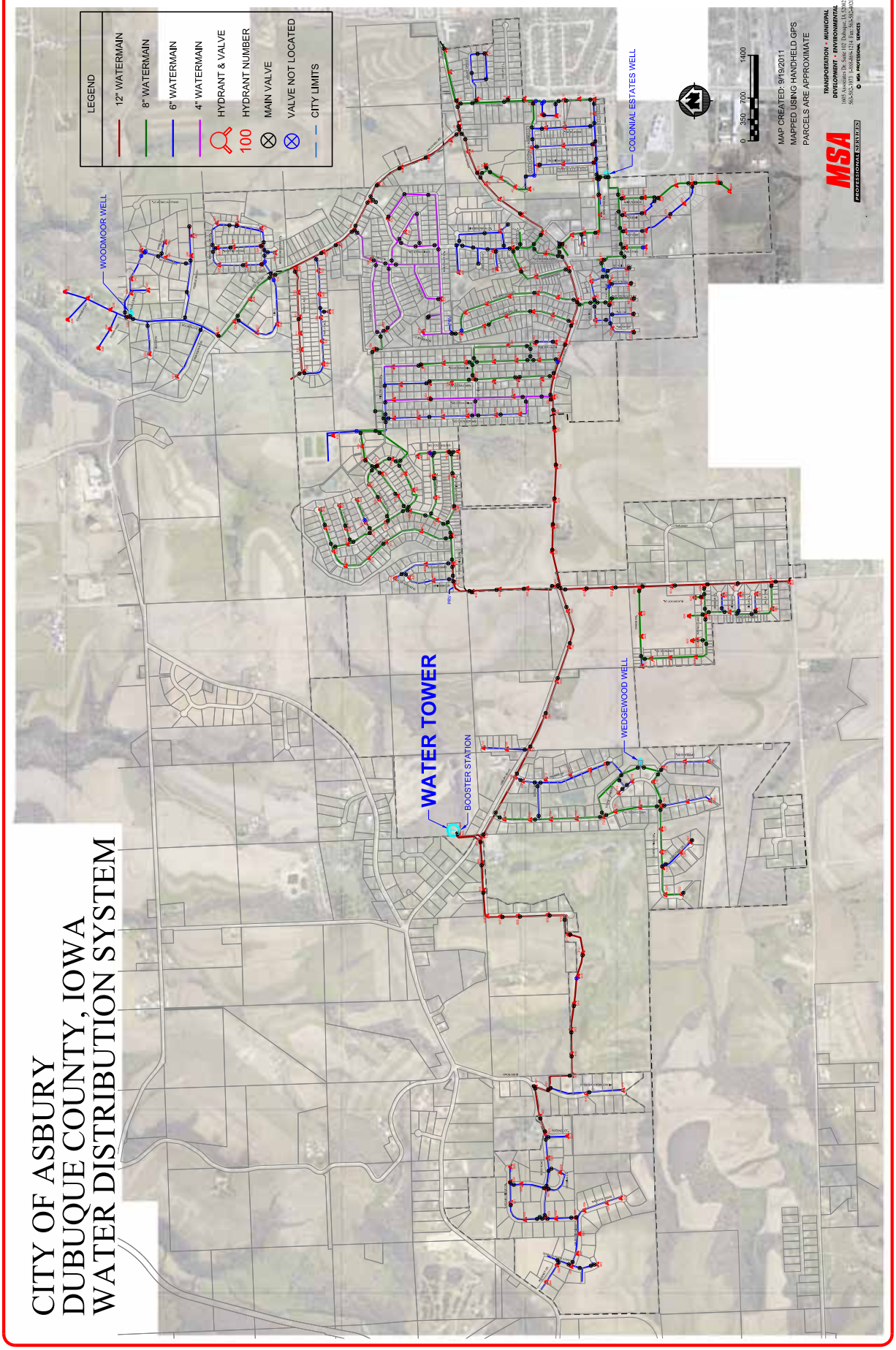
4.3 Maintain a system to monitor septic systems for detection of potential off-site environmental contamination before it occurs.

4.4 Provide financial assistance for new development to over-size facilities to serve adjacent development when the adjacent development is expected to require service.

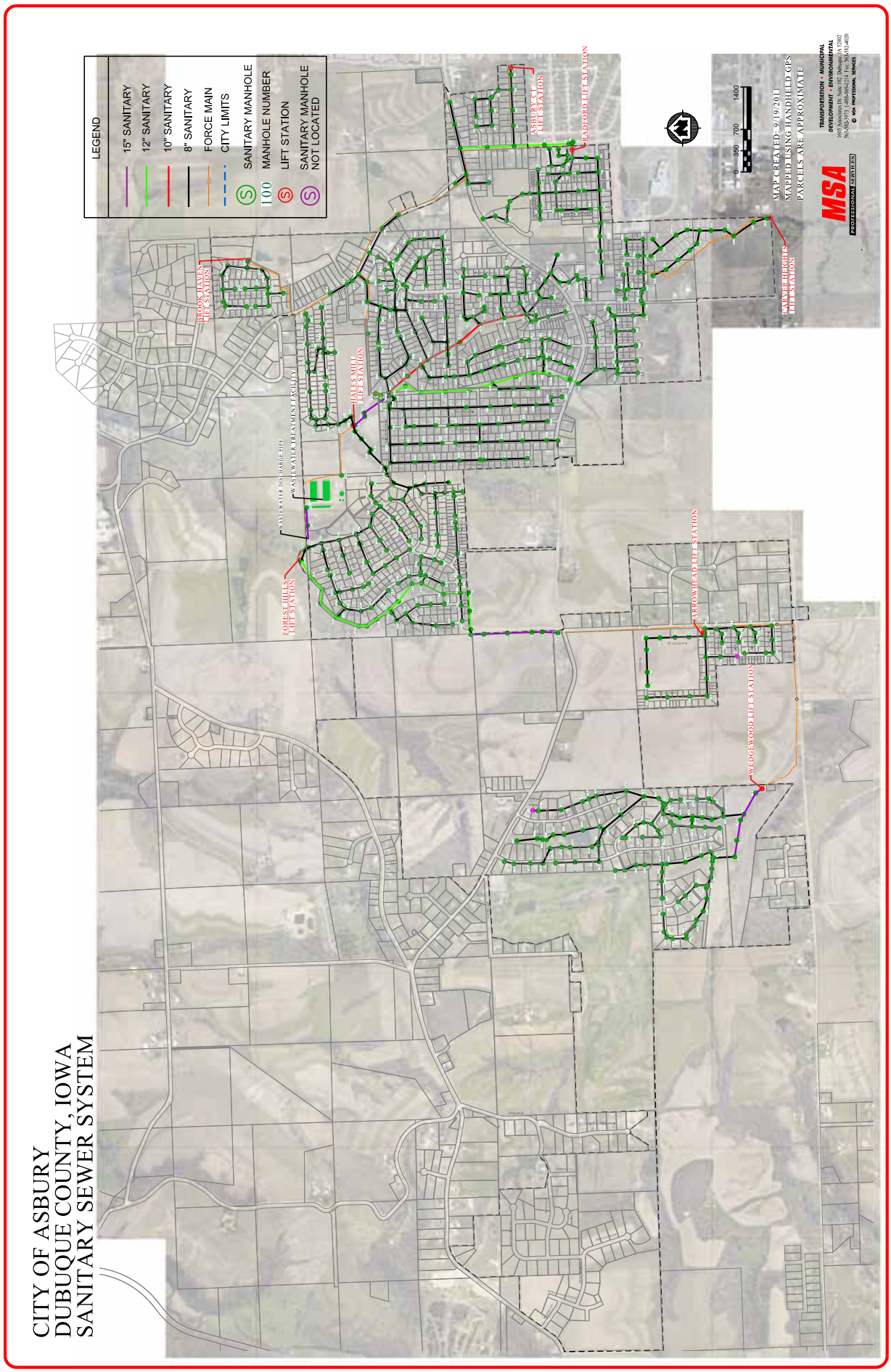
4.5 Continue to implement the State's solid waste disposal hierarchy while developing new methods to minimize wasting and divert resources to beneficial use through comprehensive deconstruction, reuse, recycling, composting, anaerobic digestion, methane capture/utilization, hazardous materials management, enforcement on illegal dumping and littering, and public education programs.

4.6 Maintain a system to monitor the performance of stormwater best management practices (BMPs), and ensure proper maintenance is being performed as needed with each practice.

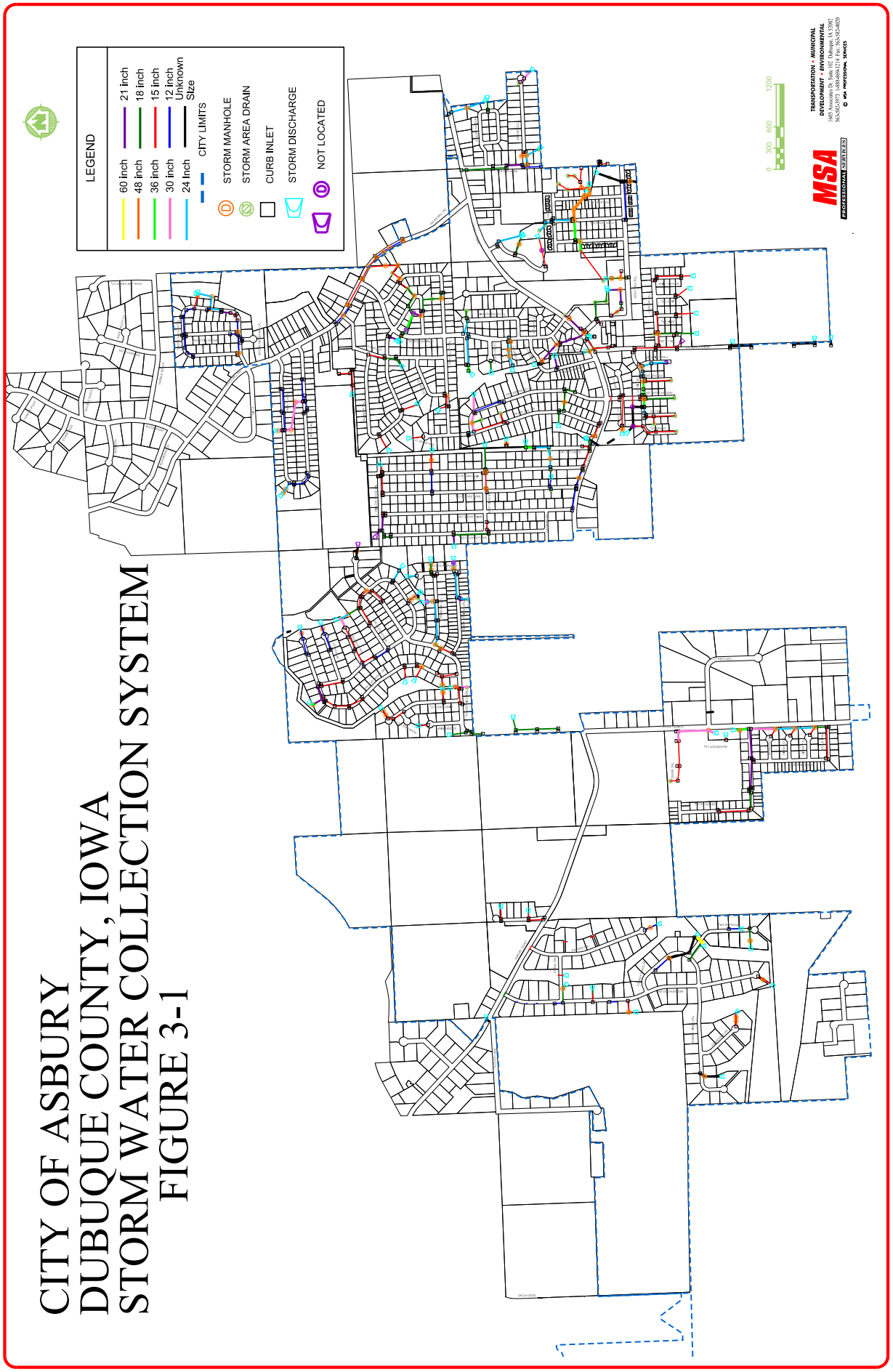
Map 5.1 - Water Distribution System



Map 5.2 - Sanitary Sewer System



Map 5.3 - Stormwater System



Transportation

Chapter 6

The transportation system is vital to everyday life in the community. The system allows residents to get from their home to employment, education, medical care and shopping.

The City will strive to provide efficient and affordable transportation to residents and businesses and provide diverse and interconnected modes of transportation, accessibility, safety and improved environmental quality.

The City of Asbury will provide and maintain a safe and efficient transportation system that accommodates multiple modes of transportation while providing a full range of accessibility through both local and regional facilities. Traffic speeds and congestion will be managed through the combination of engineering and enforcement; the trail system will provide linkages to neighborhoods, businesses, and public facilities as well as other regional trail systems; and transportation opportunities for seniors and other special needs populations will be improved through cooperative efforts with other local and regional entities.

Transportation Planning

The City of Asbury coordinates transportation planning with the Dubuque Metropolitan Area Transportation Study (DMATS). DMATS is a tri-state Metropolitan Planning Organization (MPO) that includes the cities of Dubuque, Asbury Peosta, a portion of unincorporated Dubuque County, and portions of Jo Davies County, Illinois and Grant County, Wisconsin. DMATS is responsible for approving goals and plans for development of a seamless transportation system for safe and efficient movement of people and goods within and among modes of transportation (roads, bicycle and pedestrian facilities, transit, rail, water and air) in the area. DMATS encourages cooperation among local, regional, state and federal agencies on transportation issues and plans.

More detailed transportation information may be found in the DMATS long range transportation plan (LRTP). A long range transportation plan focuses on transportation related issues in a specific area over a 20-year period. Federal law requires that MPOs update their LRTP every five years. The LRTP provides a view of the current transportation trends in the area, as well as an aid in projecting potential changes for the area into the future. The plan is available for download at www.eciatrans.org.

Roadways

The predominant transportation system in the City of Asbury is a network of streets that are used by automobiles. These roadways serve the circulation

needs of local residents, employers, and people traveling from outside the area. The following describes the roadway system in the City in terms of its functional classification, existing capacity, congestion, and safety.

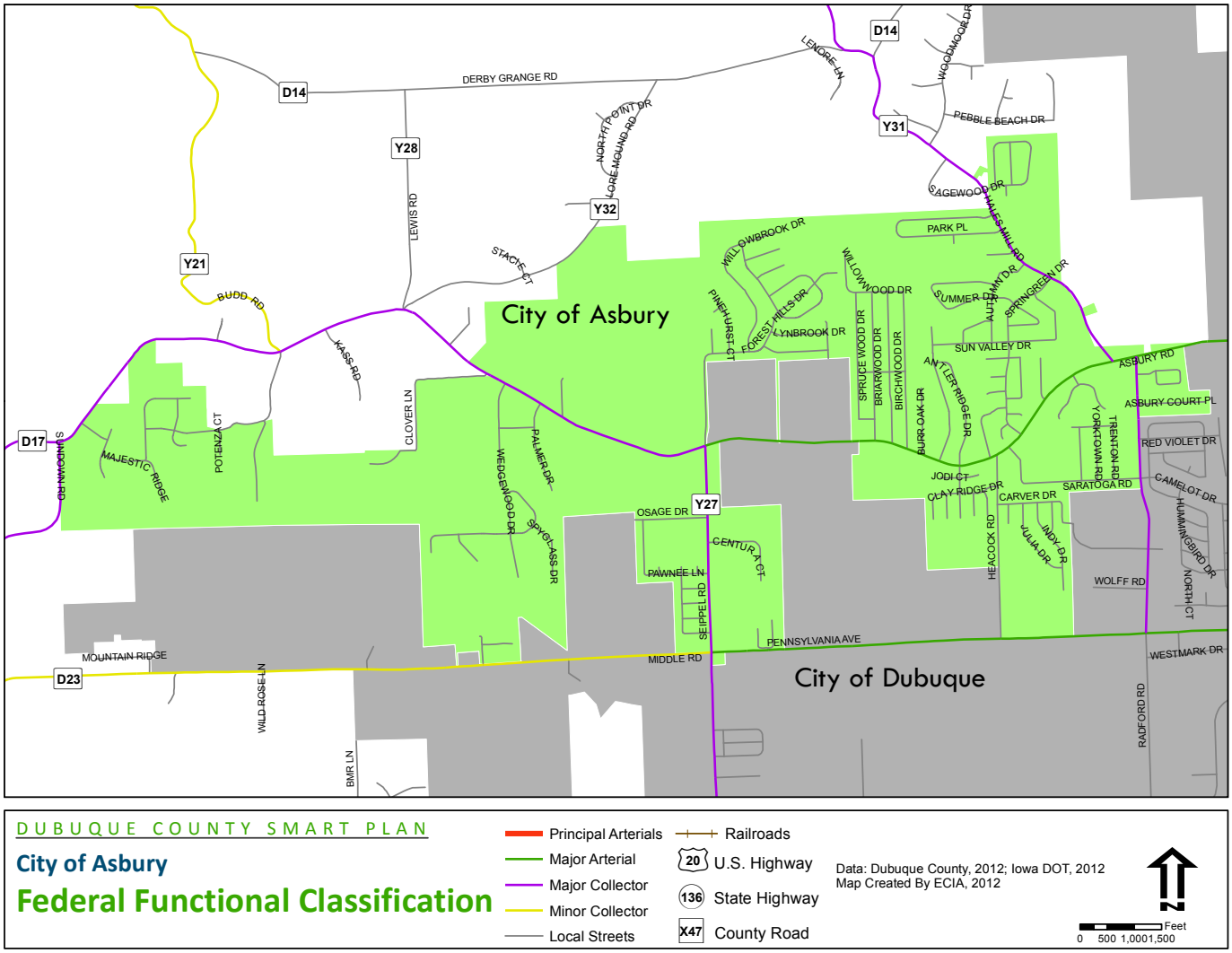
Functional classification describes roadways based on the type of service that they provide. Roadways provide two basic types of service: land access and mobility. The degree to which a roadway provides access and/or mobility determines its functional classification. The key to planning an efficient roadway system is finding the appropriate balance between mobility and accessibility. The following defines the functional classifications found in the City of Asbury. The City's Roadways are also shown in Map 6.1.

Principal Arterial roadways primarily serve a mobility function with minimal land access. The primary purpose of principal arterials is the rapid movement of people and goods for extended distances. Principal arterials are high capacity, high-speed roadways with restricted access. US 20 west of Swiss Valley Road in Dubuque County is an example of a principal arterial.

Minor Arterials interconnect with and augment principal arterials. Minor arterials within urban areas serve inter-community trips of moderate length. Although the primary use of the minor arterial is mobility, this functional class provides more access points and more land access than a principal arterial. Asbury Road is an example of a minor arterial.

Major Collector streets channel trips between the local street system and the arterials. Major collectors serve a balance between mobility and land access. Parking and direct driveway access to the street are typically allowed on major collectors. Collectors are usually wider, have higher capacity, and permit somewhat higher speeds than the local street network. Seippel Road, Radford Road and Hales Mill Road are designated as collector streets.

Map 6.1 - Federal Functional Classification



Minor Collectors & Local Streets primarily provide local land access and offer the lowest level of mobility. Characteristics of local streets include uncontrolled intersections, posted speed limits of 25 miles per hour or less, and few restrictions on parking. Local streets include all streets not classified as interstate, principal arterial, minor arterial, or collector.

Transportation Safety

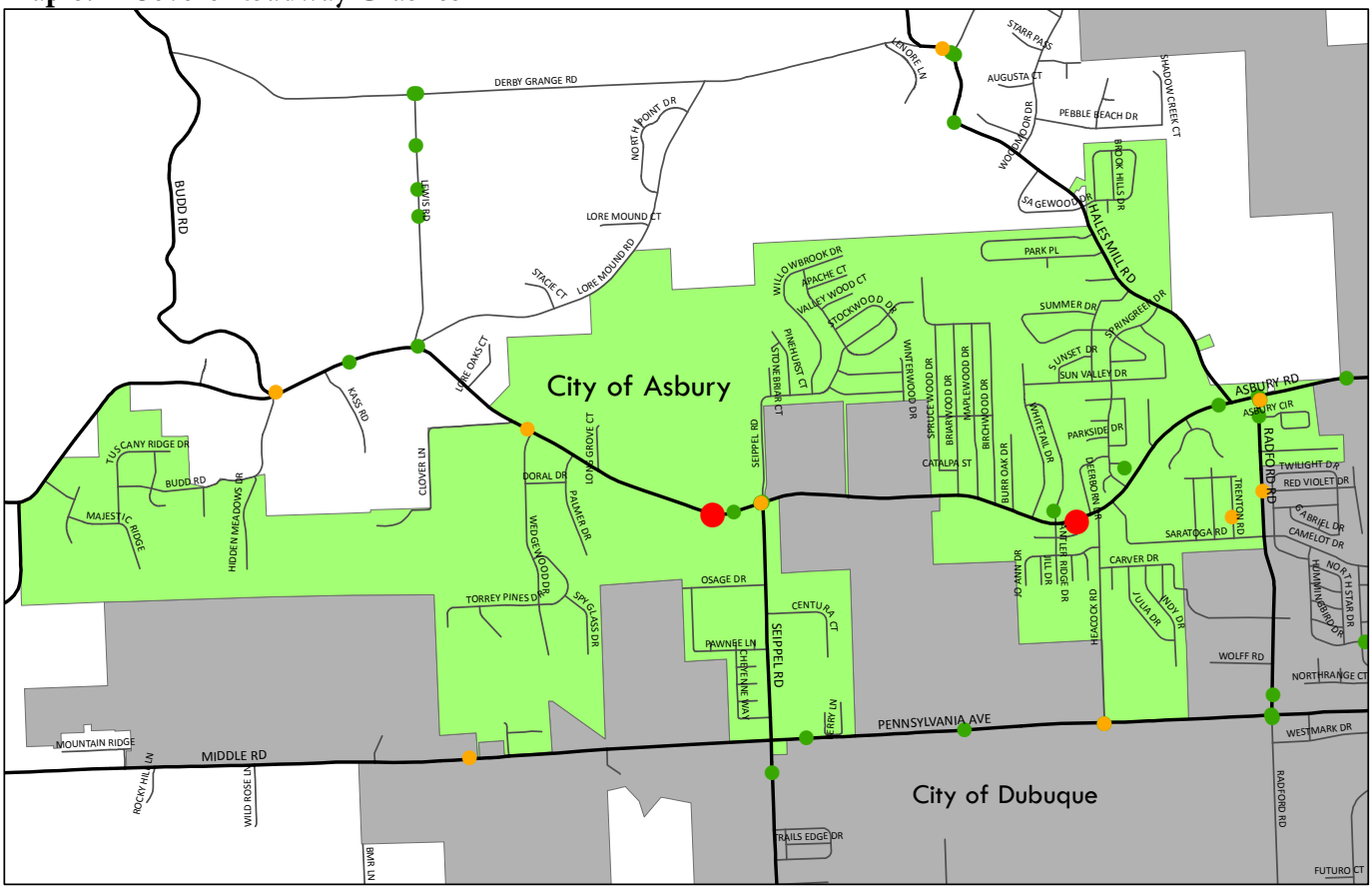
Safety is an important consideration when planning for the future of the transportation system. Outdated or deteriorating infrastructure, high traffic volumes, or unsafe driver behavior are all potential causes of safety issues that can lead to serious injury or death. Transportation planners use crash data to identify areas on the road network where the number of crashes is higher than expected. Once identified, the city can take action to correct the problem. Iowa Department of Transportation provides crash data from the last nine years, (2001-2009) of crash data, created staff maps to illustrate the distribution of fatal crashes, and crashes causing major or minor injuries. The maps are used to identify locations experiencing more crashes than normally expected.

Transportation Future Needs - Increased roadway capacity. The main thoroughfares through Asbury are historic roads that were not originally designed to accommodate the amount of traffic currently being generated both within and adjacent to the city. Improvements to Asbury Road, Seippel Road, Hales Mill Road and Heacock Road would increase access to the regional highway system and to employment opportunities located outside Asbury. An east-west corridor study was performed by HDR in collaboration with ECIA, City of Dubuque and Dubuque County to articulate proposed improvements to the Asbury Road and Pennsylvania/Middle Road.

Transit

The Regional Transit Authority of Delaware, Dubuque, & Jackson Counties (RTA), managed by

Map 6.2 - Severe Roadway Crashes



the East Central Intergovernmental Association, provides transit service to the general vicinity of the City of Asbury. Because of this regional and collaborative effort, smaller cities such as Asbury, do not have to undertake the extensive costs associated with operating a stand-alone transit service. Nearby, the City of Dubuque offers public transportation through the Jule Transit system.

Transit Future Needs

As part of the DMATS and RPA 8 2011-2015 Passenger Transportation Plan (PTP), staff conducted a public input process. The goal of this process was to identify steps transit providers could take to improve the system. The top five improvements identified for the RTA through public meetings and surveys were: 1. Expand hours and days of service. 2. Maintain a constant schedule. 3. Expand services within Dubuque. 4. Expand services to the West End. 5. Add an extra Iowa City route.

The RTA hopes to improve transit service and increase ridership by implementing the improvements listed above.

Bicycle and Pedestrian

Non-motorized transportation is a key component of a multi-modal transportation system. Good walking and biking facilities can improve quality of life by reducing the number of vehicles on the road, promoting an active lifestyle, attracting visitors to the area, and providing a low cost mode of transportation. Over the past several years, the City of Asbury has worked to integrate bike and pedestrian facilities into its transportation network, however according to the 2000 census only four percent of the population walked to work, less than one percent rode a bike. The City of Asbury will support programs that make walking and biking safer and more convenient.

The City of Asbury bike and pedestrian facilities fall into two categories, separated facilities and on-street routes. A separated facility is a bikeway physically separated from motorized traffic by open space or barrier and in the street right-of-way or in an independent right-of-way. Separated facilities are suitable for all pedestrians and bicyclists. When using On-street routes, bicyclists share space with motorized vehicles. On-street routes can take several forms including bike lanes or shared roadways. For a bike lane, a portion of the roadway designated for the preferential or exclusive use of bicyclists by striping, signing, and pavement markings. In other cases, an on-street route may be designated by signage that indicates that the route is safe for bicyclists.

When creating a bicycling, hiking, and walking system, it is importation to make sure that system will accommodate as many users as possible. The system should take into consideration the differing abilities of the potential riders using the system. The Federal Highway Administration (FHWA) uses the following categories of bicycle users to assist in determining the impact that different facilities and roadway conditions will have on the bicyclist. Group A riders have the most experience, and are comfortable riding on most city streets. Group B bicyclists are less experienced and prefer riding on separated trails or low speed low traffic volume streets. Group C bicyclists are children. Children often use bicycles to get to school or recreation, but require well defined separation from motor vehicles.

The Bicycle Federation of America estimates that out of nearly 100 million people in the United States that own bicycles, roughly 5 percent qualify as Group A bicyclists, with the remaining 95 percent as Group B and C bicyclists. See Map 6.1 for the bike and pedestrian facilities in Dubuque County.

Pedestrian travel through the City is generally accommodated on sidewalks and through the City's trail system. Many of the city's older local streets do not have sidewalks due to the combination of slow traffic speeds, low volumes, and topographical challenges. However, all new developments are required to include sidewalk facilities.

Bicycle and Pedestrian Future Needs

Safety – Improving bicycle and pedestrian safety will be a primary concern for the City of Asbury.

Improve sidewalk system - because of the discontinuous nature of the sidewalk system, there are some concerns about pedestrian accessibility and the perception of decreased safety. While there is an official policy on the development of sidewalks in new subdivisions, the idea of developing a systematic plan to connect residential areas to key pedestrian destinations (e.g., schools, parks, commercial nodes) was raised.

Distance – The City of Asbury is a suburban community. The suburban character means that walking or biking to a destination can be difficult because of distance, terrain and hazard of sharing the roadway with vehicles. The city may consider encouraging compact development that reduces sprawl and promotes land use patterns that create more walkable neighborhoods to reduce travel distances.

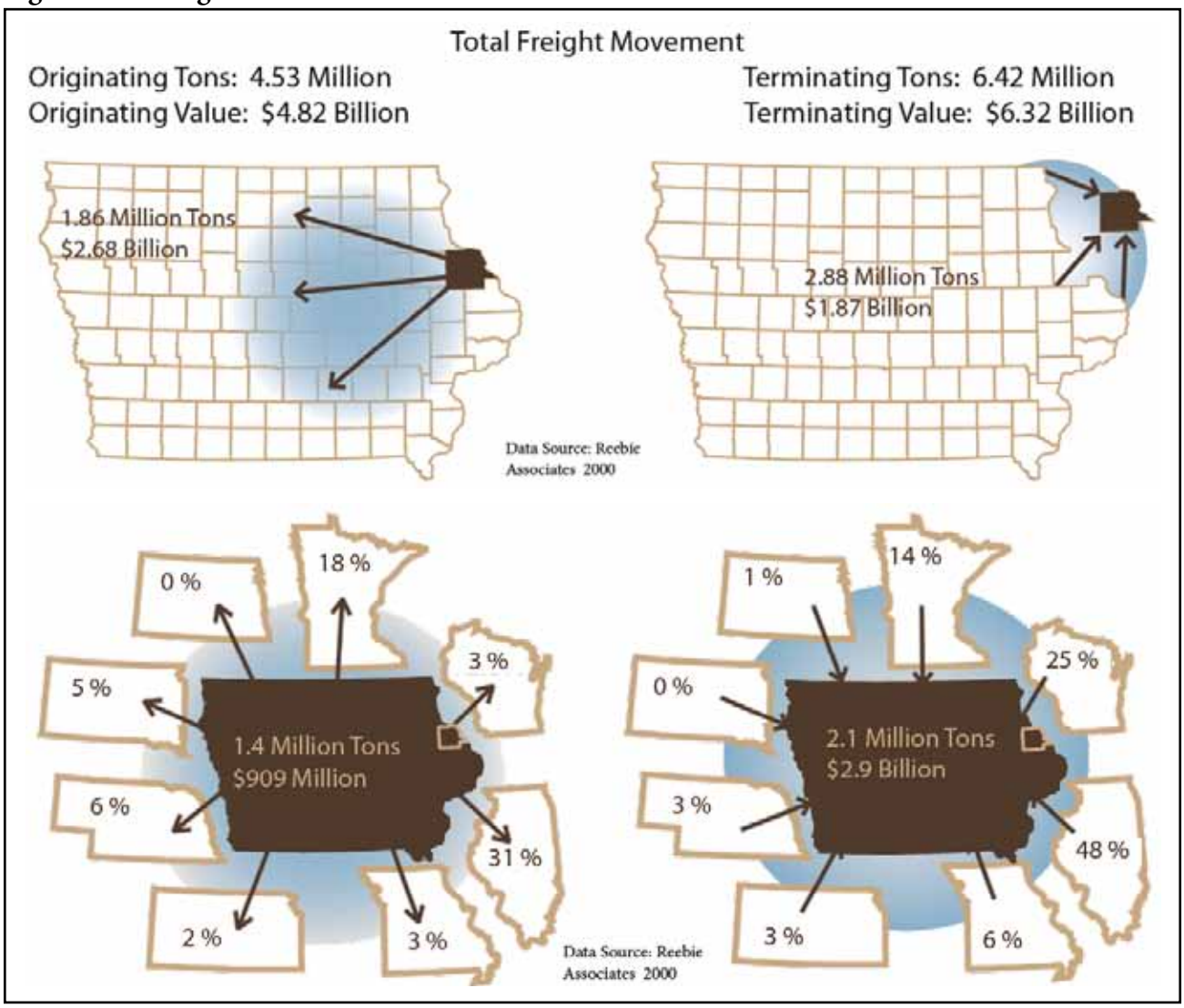
Infrastructure – Incomplete infrastructure prevents many residents from walking or biking. The City continues to explore trails, sidewalks, or complete street policies.

Freight

The efficient movement of goods is one of the keys to effective competition in the world market system. As a result, policy makers, industry specialists, and transportation planners have recognized that providing efficient systems for moving goods will help to create a competitive advantage in the global market. This section focuses on the three freight modes which are active in the Dubuque County: waterborne, truck, and rail. Although each of the freight shipping options are described separately, the different modes are often used in combination, which is referred to as intermodal freight transport. Freight data used was compiled forthe Iowa DOT by Reebie Associates in 2000 and isdisplayed in Figure 6.1.

The Mississippi River serves as a valuable asset to the area, providing direct connectivity to 10 states and numerous cities. The river is currently being used for incoming and outgoing freight. The County is also located on US Hwy 20, US Hwy 51/161, and US Hwy 52. These highways provide a ground connection to the rest of Iowa, Illinois, and Wisconsin and

Figure 6.1 - Freight Movement



the nation. The rail system that passes through the region is another valuable resource. Air transport is currently not used by Dubuque County for goods movement as Cedar Rapids, IA and Rockford, IL are located within reasonable driving distance and both serve as major air freight hubs for the surrounding area.

Focus in this section is on the current and predicted freight movement patterns as well as existing barge, and rail facilities in the region. Freight data used was compiled for the Iowa DOT by Reebie Associates in 2000.

Freight moving out of Dubuque County to the State of Iowa consists mainly of products in the following categories: ordinance or accessories, food or kindred products, and chemicals or allied products. Freight originating in Dubuque County was expected to increase by 66.9% between 2001 and 2011. Freight moving into Dubuque County from in state, consists mainly of products in the following categories: Food or kindred products, primary metal products, machinery, and lumber or wood products. Freight terminating Dubuque County was expected to increase by 69.5% between 2001 and 2011.

Freight moving out of Dubuque County and the state of Iowa consists mainly of products in the following categories: chemicals or allied products, food or kindred products, and transportation equipment. Freight originating in Dubuque County was expected to increase to all surrounding states and national regions with exception of the North Prairie region. Freight moving into the Dubuque County, not including that from in state, consists mainly of products in the following categories: chemicals or allied products, fabricated metal products and primary metal products. Freight terminating in Dubuque County was also expected to increase from all states and national regions with the exception of North Dakota.

For more information on Dubuque County Fright Transportation please refer to the RPA and DMATS Long Range Transportation Plan

Airport

The Dubuque Regional Airport is located about seven miles south of downtown Dubuque on US 61. Primary access to the airport is off of US 61. The airport occupies 1,057 acres and has a field elevation of 1,076 feet. The airport opened at the present location in 1948.

The airport has two runways and five taxiways to support air operations. Runway 18-36 is a north-south oriented runway that serves as the airport's primary runway. The runway is 6,325 feet long and 150 feet wide. Runway 13-31 is a northwest-southeast oriented runway and serves as the airport's secondary runway. The runway is 6,498 feet long and 100 feet wide. Taxiways provide adequate access to both of the runways and consist of parallel, connecting, access and entrance/exit taxiways. Taxiway A runs parallel to Runway 13-31. Taxiways B, C, D and E provide access between the two runways and the terminal/hanger area.

The Dubuque Regional Airport's groundside facilities serve passengers, freight, airport administration, and general aviation needs. The current terminal building is 11,656 square feet. The original terminal was built in 1948. A new terminal was constructed next to the existing one in 1969. In a remodeling project in 1989 the two buildings were combined. The airport also includes six T-hangers and six conventional/executive hangar buildings. The airport has 440 parking spaces in five parking lots that are available for use by airport patrons, employees, and other airport users.

The Dubuque Regional Airport Master Plan guides the City of Dubuque in the overall development of the airport. According to the Airport Master Plan, based aircraft at the airport totaled 79 aircraft in 2003. There were an estimated 55,009 total annual operations conducted in 2003.

Goals and Objectives

1. **To maintain a system of streets that safely and efficiently meets the needs of residents and business.**

   1.1 To establish, improve and maintain efficient traffic circulation system, which recognizes community facilities, future planned development areas, employment areas and natural flood hazard in floodplain areas.

   1.2 Maintain current road design and construction standards based on the Federal Functional Classification map. The map should be reviewed as needed to reflect changing traffic conditions.

   1.3 Design and construct all existing and proposed roads in accordance with the current Design Characteristics for the Federal Functional Classification System, the policies of this Plan, and adopted improvement standards.

   1.4 Maintain a system of streets that minimize long-term capital and operations costs, while providing safe and convenient land access.

   1.5 Support continuing the ongoing street construction program, providing for timely maintenance, repair and reconstruction of the street system.

   1.6 Encourage implementation of sound safety engineering principles and practices in the area of street lighting, street layout, speed limits, street signage, street pavement striping, and traffic signals.

   1.7 Support providing adequate street lighting which minimizes light pollution, maximizes energy efficiency, and ensures compatibility with neighborhoods.

   1.8 To incorporate the Complete Streets Design Concept for construction and construction of all main transportation routes for all modes of transportation involving pedestrians, cyclists, and vehicles.

2. **To secure adequate right-of-way and facility improvements to serve development and maintain acceptable levels of service.**

   2.1 Ensure safe and adequate roadway facilities are provided concurrently with new development.

   2.2 Require roadway improvements to be constructed to current city standards as defined for each street classification.

3. **To plan long-range for both local and regional street and highway systems to ensure safe, efficient access into and through the region; to support urban growth in an appropriate development pattern; and to facilitate improved four-lane access for surface transportation from Dubuque to major cities in the region.**

   3.1 Improve the existing street network to reduce traffic capacity restraints and improve safety.

   3.2 Encourage the involvement of the public in the transportation planning process.

   3.3 Plan for aesthetically appealing streets with particular focus on gateway opportunities and street tree plantings.

   3.4 Promote signage to identify gateways and physical entrances to neighborhoods and to provide identity of neighborhoods.

   3.5 Encourage public/private partnerships to plan and promote future transportation facilities with local, regional, state, and federal agencies.

   3.6 Cooperate with regional transportation agencies in the development of an improved highway system to serve the region.

   3.7 Support a street and highway system that meets current and future traffic needs.

4. **Establish, improve and maintain pedestrian and bike routes in and around the City to encourage alternative modes of transportation.**

   4.1 Coordinate with other jurisdictions the development of a comprehensive regional system of bikeways and/or multi-purpose trails which minimize conflicts between motor vehicles, bicycles, and pedestrians.

   4.2 Continue to develop a bike and pedestrian system that links residential areas, parks,

schools, and other local attractions, while providing the opportunity for recreational activity.

4.3 Promote a more bicycle and pedestrian-friendly transportation network.

4.4 Consider relevant bicycle and pedestrian elements in all new transportation projects.

4.5 Encourage development patterns more compatible with non-motorized travel. (i.e. complete streets, transit oriented development, mixed use development.)

4.6 Promote bike trails as part of new subdivision development wherever possible.

4.7 Promote bicycles as a viable alternative mode of transportation, using signs, striped lanes, and safe crossings.

4.8 Promote bike and pedestrian network continuity within the city and support connections to regional bike and pedestrian networks.

4.9 Coordinate with other jurisdictions and authorities, including the DNR, to determine access points to, and extensions of, existing facilities.

4.10 Promote education for the public to promote pedestrian, children and bicycle safety and etiquette when sharing routes.

5. Encourage efficient, affordable and accessible transit systems in the region for transit dependent populations as an alternative means of transportation.

5.1 Explore capital and operating assistance grants from state, federal, and other agencies to the maximum extent possible.

5.2 Promote a safe, clean, energy efficient, timely, affordable and comfortable mode of public transportation.

5.3 Promote the best possible transit system in the most cost-efficient manner.

5.4 Promote use of appropriately sized vehicles for needs of community to meet demand.

5.5 Consider extending public transportation to ensure service is available for transit-dependent people to get to and from work on all shifts and to meet the demands of business hours.

5.6 Encourage mass transit through partnership with businesses.

5.7 Consider providing bike racks on busses to encourage multimodal transportation.

5.8 Maintain and expand para-transit systems to serve special needs citizens, the elderly and the disabled.

6. To encourage the use sustainable design concepts that reduce the transportation system's impact on the natural environment.

6.1 Encourage the use of permeable pavement and other best management practices that allow for storm water infiltration.

6.2 Encourage the use of best management practices (BMP) that prevent soil erosion during project construction.

6.3 Reduce vehicle emissions and vehicle miles to protect air quality.

6.4 Protect agricultural land and open space by encouraging more infill development in existing urban areas, and by encouraging more compact development near existing urban areas.

7. To improve coordination between land use and transportation planning.

7.1 Encourage project where land use supports multimodal transportation, e.g. transit oriented development or mixed use neighborhoods.

7.2 To establish general locations for future collector street right-of-ways well in advance of expected need for future street construction primarily at developer expense.

7.3 Locate affordable housing in areas where multiple transportation modes are available.

7.4 Direct development to areas already connected to the transportation network.

8. Provide adequate, but not excessive, street lighting in residential areas.

8.1 Maintain subdivision ordinance for current street lighting standards.

8.2 8.2 Determine extent of lighting desired in residential neighborhoods through community participation exercises.

Transportation Actions

Asbury's current transportation system currently meets the needs for existing users. Future traffic congestion and safety concerns exist on major roads linking Asbury to the rest of the community. There is also a lack of a fully developed bicycle and pedestrian system.

This section provides recommendations on how Asbury can provide for future transportation needs and improve the quality and ease of use of the current system. See Map 3-3 "Future Transportation Facilities."

Implementation

1. Work with Dubuque Metropolitan Area Transportation Study (DMATS) to develop long-term plans for upgrades to Asbury Road. This should include meaningful public input and community involvement of stakeholders including business managers and area residents.

2. Apply for grants to develop shared-ride taxi and transit service in the City. Periodic monitoring of the need for a municipal-operated local transit system should also be performed to ensure adequate transportation to area commercial, education, and health centers.

3. Continue to update five-year capital improvement plan (CIP) to identify and budget for annual infrastructure improvements. This process should include public meetings to unveil proposed planning efforts and to help gauge the adequacy of prioritization.

4. Develop a long-term and prioritized bike and pedestrian transportation plan to help identify routes and facilities for multi-modal transportation options. First priorities should be placed on identification and development of a "safe routes to school" component. Consider extensions of the proposed system to future locales within the planning area and to existing regional trails such as the Heritage Trail and Mississippi River Trail.

5. Maintain and improve existing crosswalks throughout the City by regularly painting crosswalk areas and installing pedestrian signage.

6. Continue to work with the DMATS Policy and Technical committees to discuss planning efforts, repair, and sufficiency of the local highway system.

7. Work with the DMATS to secure transportation enhancement grant funding to improve the quality and design of lighting and pedestrian access along Asbury Road.

8. Explore the expansion of Jule Bus Service in the City of Asbury.

Economic Development

Chapter 7

A diverse vibrant regional economy is a critical component of the foundation of a sustainable community. Good jobs that pay a living wage and access to goods and services are important factors in measuring a community's quality of life. This chapter describes the data, policies, and organizations that address issues of employment, industry, and commerce in a sustainable way.

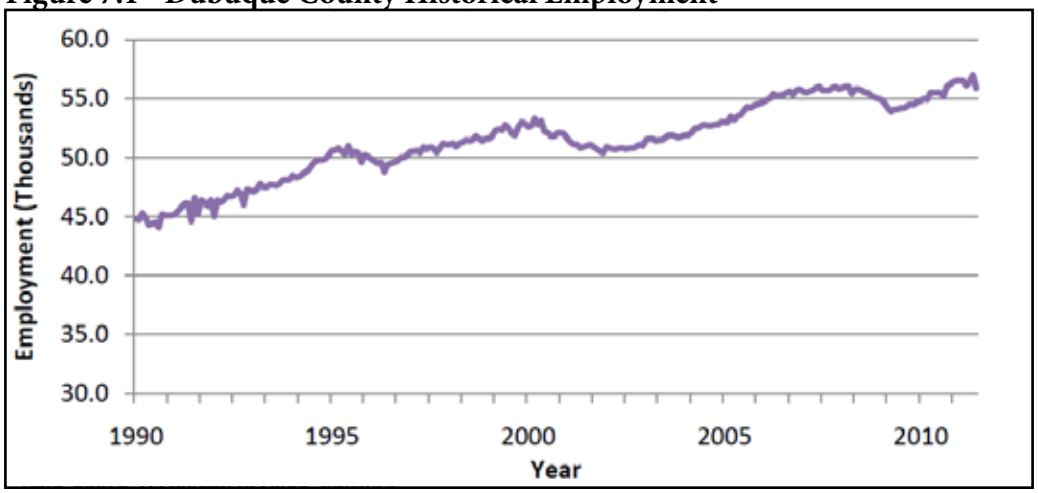
Data Analysis

As the City of Asbury strives to build a more vibrant economy through more effective local policies, local governments need to have informative data and maps that illustrate the economic forces at work. The US Census Bureau, Bureau of Economic Analysis, and the Bureau of Labor Statistics provide a wide variety of economic data through the Decennial Census and the American Community Survey (ACS). The following charts and tables are selections from the Census that depict the most important aspects of the Dubuque County Economy.

Employment

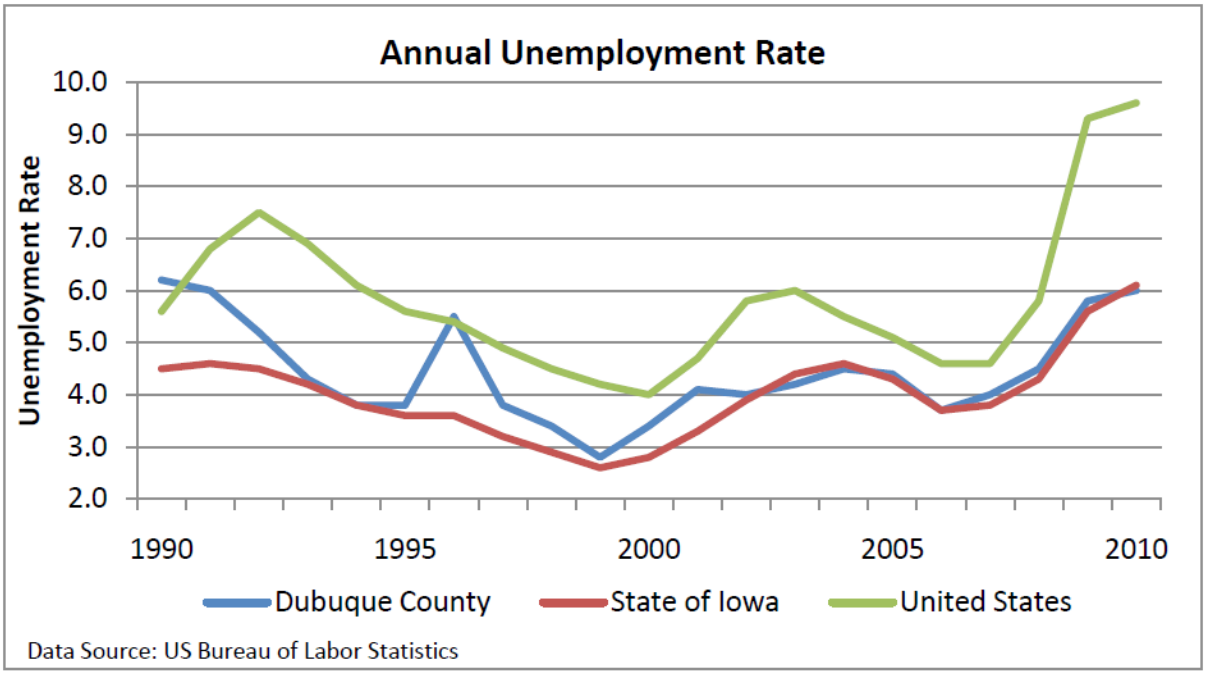
Over the last 20 years, Dubuque County has experienced positive growth in total employment. The total number of jobs has increased from 44,800 in 1990 to 57,400 in August 2011. Figure 7.1 illustrates the overall positive growth in employment since 1990.

Figure 7.1 - Dubuque County Historical Employment



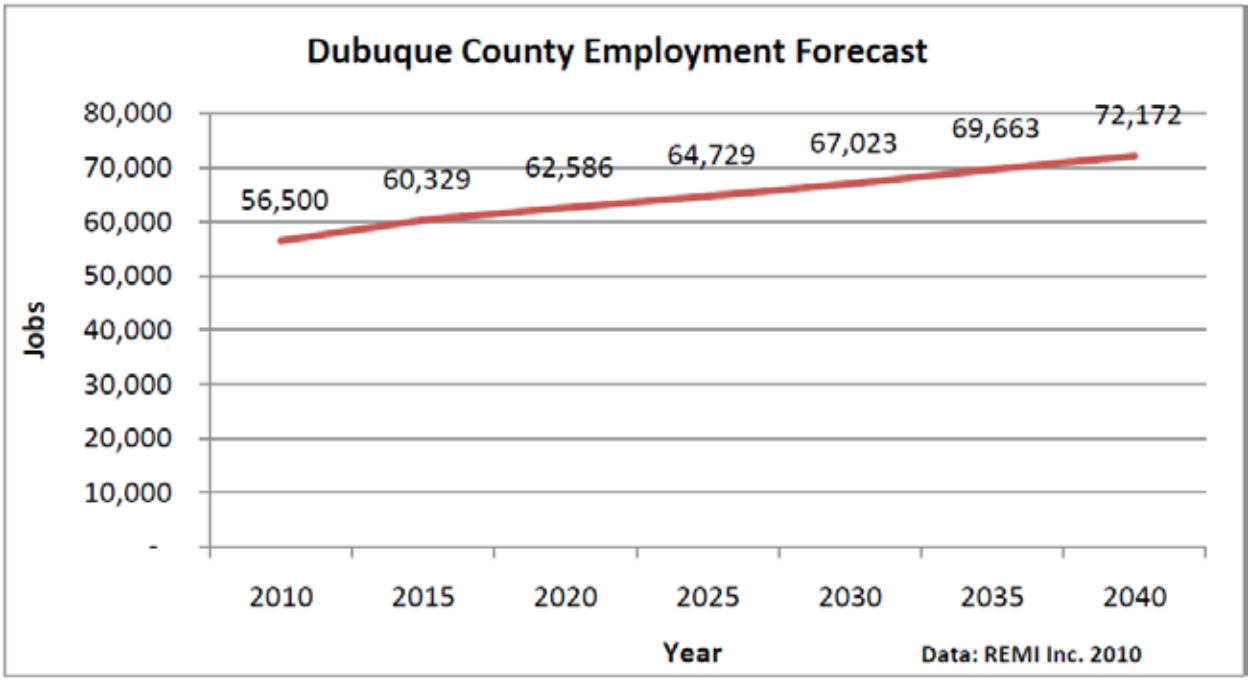
Since 2000 Dubuque County's unemployment rate has mirrored the state of Iowa's rate. Based on the BLS data presented in the chart on the left, both Dubuque County and the State of Iowa have fared well in the recession. Current unemployment rates are approximately 3 percentage points lower than the national average. Figure 7.2 shows the Annual Unemployment Rate for Dubuque County, the State of Iowa, and the United States.

Figure 7.2 - Annual Employment Rate



Employment growth is expected to continue over the next 30 years. According to projections made by Regional Economic Model, Inc, total employment in Dubuque County will reach 72,000 by the year 2040. Figrue 7.3 depicts the REMI 30-year employment projection.

Figure 7.3 - Dubuque County Employment Forecast



Information on employment by industrial sector is available through the US Census Bureau's County Business Patterns (CBP) dataset. The CBP is an annual series of data that provides county economic data by industry. Figure 7.4 contains the most recent CBP data from 2009. According to the CBP data, the Manufacturing, Health Care, and Retail Trade industries are the largest employers in the region. These three industries account for almost 50% of the employment in Dubuque County.

Figure 7.4 - 2009 County Business Patterns

Industry	Paid Employees	Percentage of Total Employees	Annual payroll ($1,000)	Total Establishments
Total for all sectors	52,354	-	$ 1,721,358	2,745
Manufacturing	8,499	16.2%	$ 363,589	155
Health care and social assistance	7,666	14.6%	$ 302,535	255
Retail trade	7,280	13.9%	$ 143,440	441
Accommodation and food services	4,399	8.4%	$ 42,820	249
Finance and insurance	2,793	5.3%	$ 125,054	207
Educational services	2,656	5.1%	$ 52,368	40
Wholesale trade	2,613	5.0%	$ 102,417	166
Other services (except public administration)	2,284	4.4%	$ 46,867	251
Transportation and warehousing	2,210	4.2%	$ 80,099	120
Construction	2,078	4.0%	$ 91,706	304
Information	1,985	3.8%	$ 87,706	54
Arts, entertainment, and recreation	1,912	3.7%	$ 35,788	57
Professional, scientific, and technical services	1,851	3.5%	$ 67,785	170
Administrative and Support and Waste Mgmt. and Remediation Srvs	1,723	3.3%	$ 40,327	123
Management of companies and enterprises	1,468	2.8%	$ 100,481	22
Real estate and rental and leasing	441	0.8%	$ 12,426	105
Utilities	346	0.7%	D	7
Forestry, fishing, hunting, and Agriculture Support	112	0.2%	$ 2,266	16
Mining, quarrying, and oil and gas extraction	19	0.0%	D	1
Industries not classified	19	0.0%	D	2

US Census Bureau, 2009
D Data withheld to avoid disclosing data for individual companies
*County Business Pattern data excludes most government employees, railroad employees, and self-employed persons

Figure 7.5 shows the total employment for each city within Dubuque County. The chart shows that the majority of the jobs within the county are concentrated in the City of Dubuque.

Figure 7.5 - Total Primary Jobs By City 2009

	Total Dubuque County Primary Jobs+
Asbury	404
Cascade*	970
Dubuque	38,582
Dyersville*	2,343
Epworth	258
Farley	810
Peosta	1,338
Dubuque County	49,331
US Census Bureau, 2009	

*Cities in more than one county

+ Public and Private sector jobs, one job per worker. A primary job is the highest paying job for an individual worker.

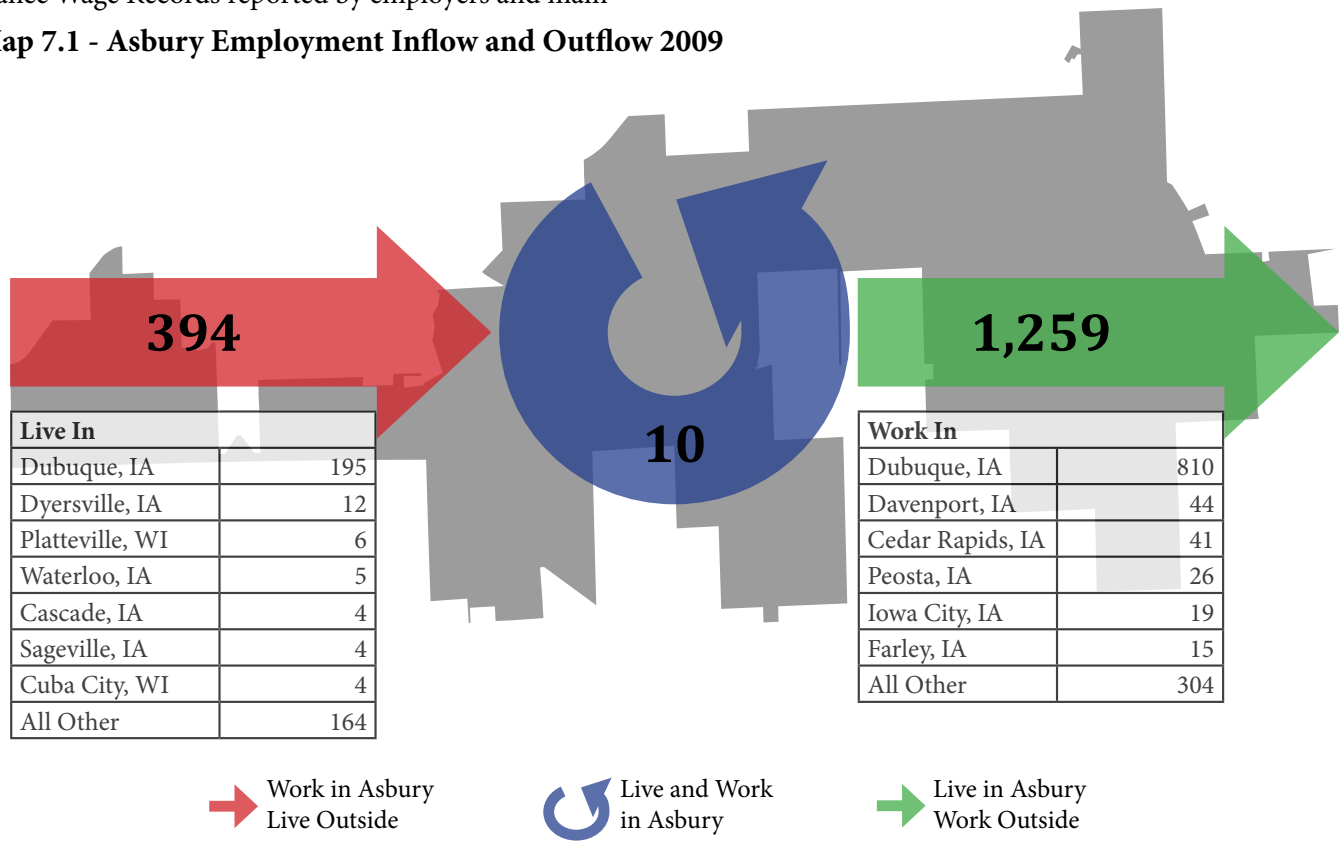
Maps

To better understand the distribution of employment across Dubuque County, employment data has been mapped using the US Census Bureau *On the Map* service. *On the Map* uses data derived from Unemployment Insurance Wage Records reported by employers and maintained by each state for the purpose of administering its unemployment insurance system. States assign employer locations, while the Census Bureau assigns workers' residence locations using data from multiple federal agencies. The Census Bureau compiles age, earnings, and industry profiles from a state's records and are supplemented with other Census Bureau source data.

Map 7.1 shows the flow of workers in and out of the City of Asbury. The arrows show the numbers of workers that commute to the city to work, the number of workers that live and work in the city, and the number of workers that live in the city but work elsewhere. The tables below the arrows show were workers who commute to the city come from, and where the workers who leave for work go. These maps are important for understanding the complex interactions among communities within Dubuque County. Map 7.2 shows the employment inflow and outflow for Dubuque County.

Map 7.3 was created using *On the Map*. The map shows the density of employment across the county. According to the map, the highest density of employment in the county is located in and around downtown Dubuque. Employment density is also high in Dubuque's west end commercial area. Other areas of moderate employment density occur at locations across the County with the larger densities mainly within the larger cities.

Map 7.1 - Asbury Employment Inflow and Outflow 2009



Live In	
Dubuque, IA	195
Dyersville, IA	12
Platteville, WI	6
Waterloo, IA	5
Cascade, IA	4
Sageville, IA	4
Cuba City, WI	4
All Other	164

Work In	
Dubuque, IA	810
Davenport, IA	44
Cedar Rapids, IA	41
Peosta, IA	26
Iowa City, IA	19
Farley, IA	15
All Other	304

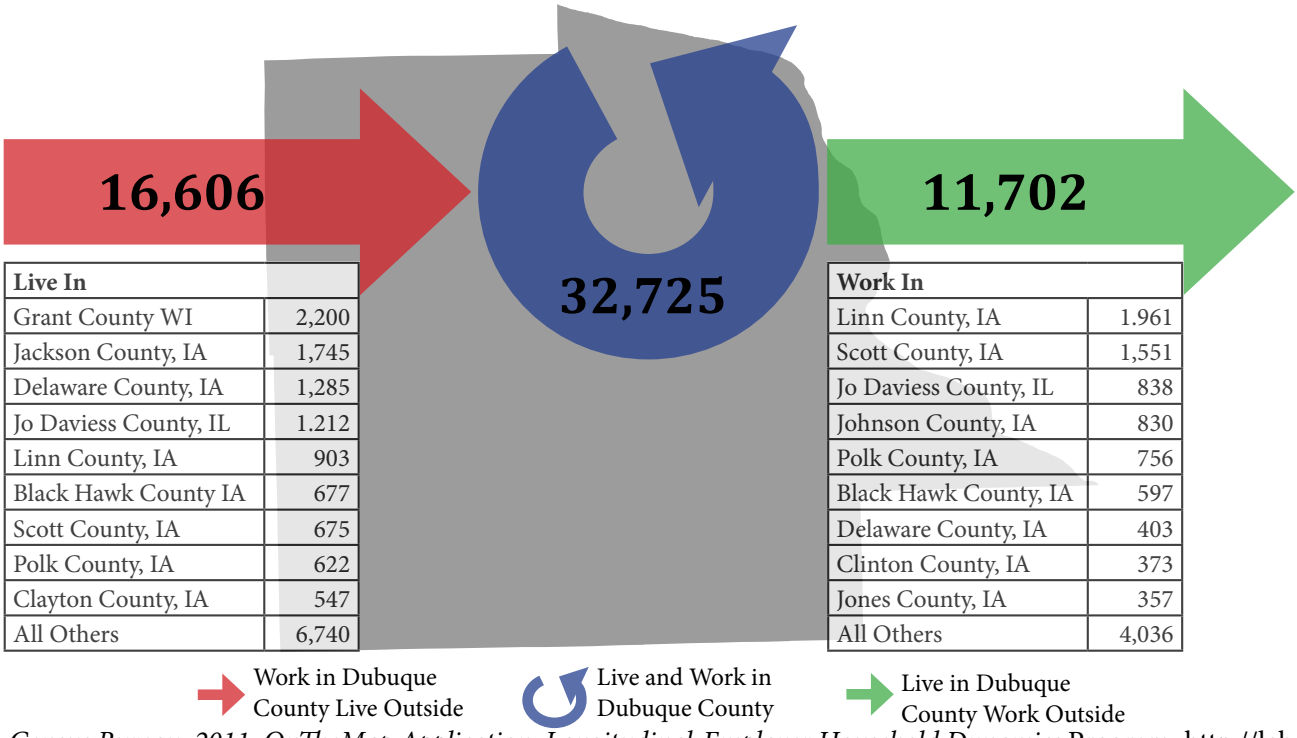
Work in Asbury Live Outside

Live and Work in Asbury

Live in Asbury Work Outside

U.S. Census Bureau. 2011. OnTheMap Application. Longitudinal-Employer Household Dynamics Program. http://lehdmap.did.census.gov/

Map 7.2 - Dubuque County Employment Inflow and Outflow 2009



Live In	
Grant County WI	2,200
Jackson County, IA	1,745
Delaware County, IA	1,285
Jo Daviess County, IL	1.212
Linn County, IA	903
Black Hawk County IA	677
Scott County, IA	675
Polk County, IA	622
Clayton County, IA	547
All Others	6,740

Work In	
Linn County, IA	1.961
Scott County, IA	1,551
Jo Daviess County, IL	838
Johnson County, IA	830
Polk County, IA	756
Black Hawk County, IA	597
Delaware County, IA	403
Clinton County, IA	373
Jones County, IA	357
All Others	4,036

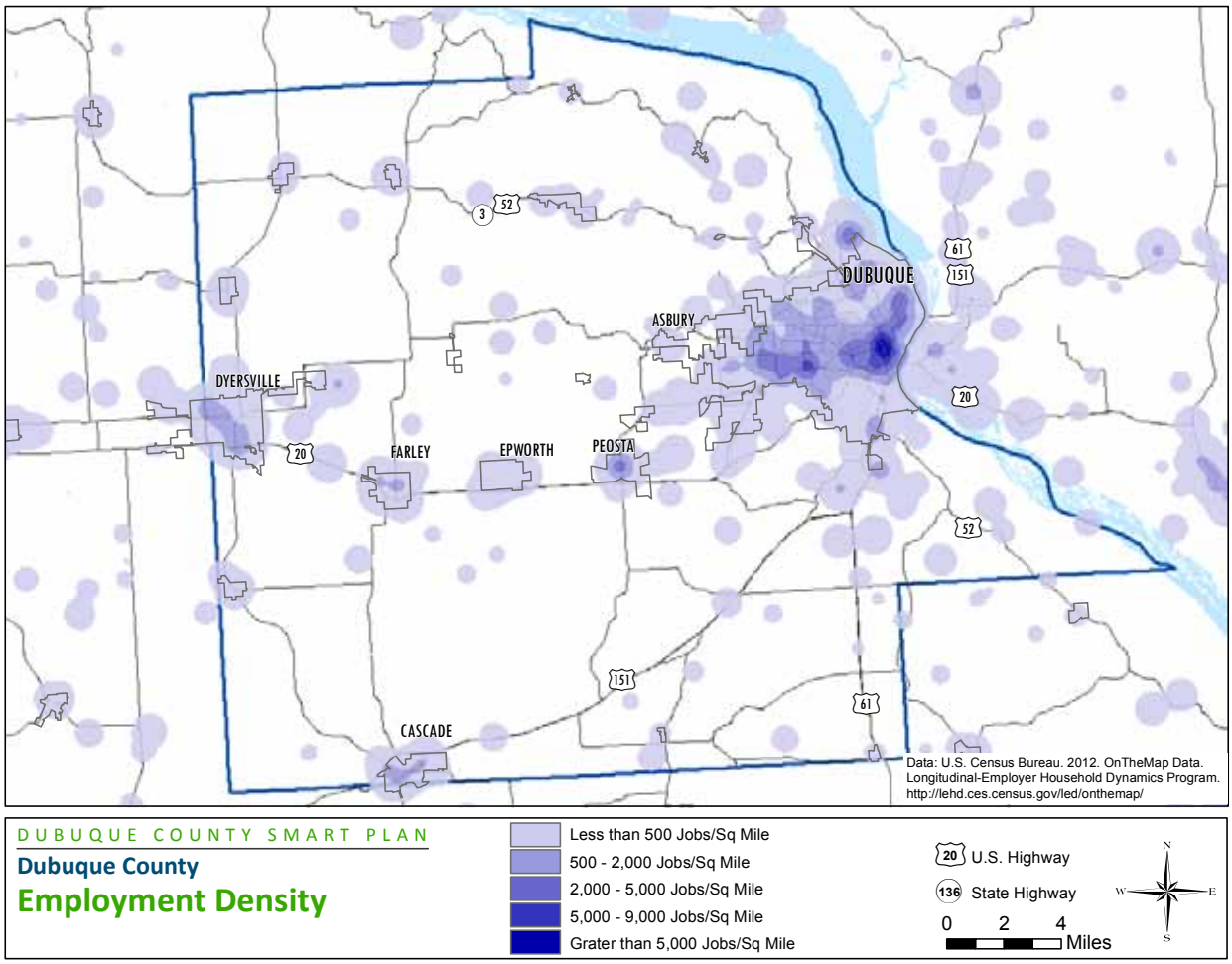
Work in Dubuque County Live Outside

Live and Work in Dubuque County

Live in Dubuque County Work Outside

U.S. Census Bureau. 2011. OnTheMap Application. Longitudinal-Employer Household Dynamics Program. http://lehd-map.did.census.gov/

Map 7.3 - Dubuque County Employment Density 2009



U.S. Census Bureau. 2011. OnTheMap Application. Longitudinal-Employer Household Dynamics Program. http://lehd-map.did.census.gov/

Economic Development Agencies

Several public and private organizations are working within Dubuque County to help improve the local economy. These organizations provide aid to small businesses, administer state programs, and help create and implement effective local polices to foster economic growth and prosperity.

Economic Development

The goal for economic development in the community is to encourage business growth. When businesses are researching communities to expand or relocate, they usually are pushing the financial limits and they need financial support packages from communities they are considering. Some of the tools used for economic development in the community include:

Tax Increment Financing (TIF) - An incentive program which captures the increased property taxes a business pays from improving their property. This incentive can be used to help pay for needed infrastructure improvements or to provide grants to the business. Businesses must commit to job creation in the community or must have an extraordinary positive impact for the community to offer this incentive.

Low Interest Loans - Loans for building improvements are available if a qualified project locates within certain areas of the community.

State of Iowa Programs - Programs like the Community Economic Betterment Account (CEBA), Enterprise Zone Benefits, Revitalize Iowa's Sound Economy (RISE), and the Iowa Values Fund are available from the State of Iowa for qualifying projects.

East Central Intergovernmental Association (ECIA)

ECIA manages a number of economic development programs. ECIA Business Growth Inc., a non-profit corporation formed in 1982, provides low-interest loans to businesses for expansion that creates new or retains current jobs. The Small Business Administration is the primary funding source. ECIA Business Growth Inc. has extended loans in excess of $68,518,199 and has created or retained more than 4,615 jobs. ECIA Business Growth Inc. also assists local communities in the administration of Revolving Loan Funds. These funds are loaned to businesses and industries, and the proceeds are returned to the local governments for future loans. Other economic development initiatives managed by ECIA include:

Prosperity Eastern Iowa is a four-county economic development region including Delaware, Dubuque, Jackson, and Jones Counties and the cities of DeWitt and Marion.

Buyer Supplier is an organization dedicated to connecting **buyers and suppliers of all types of products and services in Eastern Iowa.**

The Petal Project is a green business certification program that provides organizations with a framework for reducing their energy, water, and natural resource use to benefit the environment and their bottom line.

Economic Challenges, Strengths and Opportunities

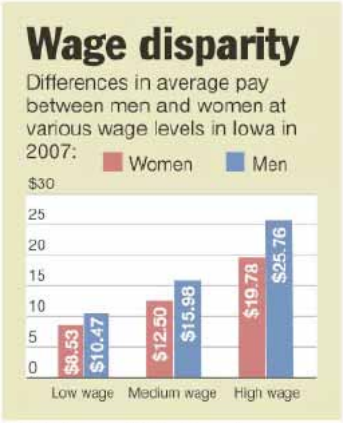
The Comprehensive Economic Development Strategy (CEDS) is a document that is produced every five years by ECIA to monitor and evaluate long-term economic goals and strategies and to coordinate the development activities in a five-county region that includes Dubuque County. In its most recent addition, completed in January 2010, the CEDS outlines the most important economic development problems and opportunities that are facing the region. The following list contains the problems and opportunities that were listed in the 2010-2014 CEDS document and the 2011 CEDS Annual Update.

The Dubuque County regional economy faces a shortage of skilled workers. In October, 2011 Iowa Workforce Development (IWD) released the *Iowa Workforce Needs Assessment* for the region that includes Dubuque, Delaware, Jackson, and Jones Counties. The Needs Assessment found that as the baby boomer generation begins to retire, employers in Dubuque County will be forced to replace and train thousands of skilled workers. According to the IWD, several industries in Dubuque County will have large percentages of their workforce eligible to retire in the next five years. The industries with the highest retirement eligibility include Educational Services (30.4%), Health Care and Social Services (25.9%), Manufacturing (14.0%), and Wholesale

and Retail Trade (6.5%). [1] The report detailed what employers are doing to replace workers who retire. Of the employers who replied to IWD's survey " 33.4 % plan to use a combination of outside workers and promoting within the company, 31.0 % do not currently plan on filling these positions, 29.1 % plan only to hire workers from outside the company, and 6.5 % plan only promoting from within the company.

Gender Wage Gap

Wage inequality between men and women is another issue that is facing Dubuque County. According to the 2011 report *The State of Working Iowa*, "gap between women's and men's earnings has narrowed with time, nationally as well as in Iowa. However, this appears to be largely due to a decline in the earnings of men."[2] Figure 7.6 shows a chart depicting the results from the Iowa Policy Project's analysis.



SOURCE: Iowa Policy Project

Natural Disasters

In recent years the area has been hit hard by natural disasters. In the past five years, tornadoes and floods have caused billions of dollars in damage across the state of Iowa. Many communities in Dubuque County are still working with federal and state agencies to rebuild flooded homes and businesses. Since 2008, Dubuque County has been included in three federal disaster decelerations. These disasters include:

2008: Severe Tornados and Flooding FEMA-1763-DR - Cedar, Clinton, Delaware, Dubuque and Jackson Counties.

2010: Severe Storms, Flooding and Tornadoes FEMA-1930-DR - Delaware, Dubuque and Jackson Counties

2011: Severe Storms and Flooding FEMA-4018-DR - Dubuque and Jackson Counties.

Adequate Transportation Infrastructure

Adequate transportation infrastructure funding is a challenge for the region and the State of Iowa. Transportation challenges that impact Iowa and the ECIA region include: increased traffic demands and freight movements, changing demographics, increased biofuels production, increased construction and maintenance costs, flattened revenues, and aging infrastructure. The State of Iowa did a study in 2008 in response to Iowa's transportation needs and found that the transportation system in Iowa requires a minimum of $200 million per year of funding to the year 2020 to address the demands of the system. Currently state legislators are debating a state gas tax increase to cover the funding gap, but the region also must work to stretch its limited transportation budget by investing its funds wisely

Lack of Quality Rental Housing

Quality rental housing has become an issue for the region with the addition of IBM and their 1,300 new employees. Rental units in the region are sparse. Of the total housing units in the region, less than 30% are rental units. The IBM workforce population in search of housing is looking for rental housing. The demographic for this population is between the ages of 25-30, recently out of college or with a year or two experience, making $30,000 to $35,000 per year. The vacancy rental rate for the region is 1.1%, and in the Dubuque area, it is less than .05%. The average year rental units were constructed in the region is 1951, which means that many of the units are close to 60 years in age. In the near future, the region must address the shortage of workforce rental housing.

Proximity to the City of Dubuque

The close proximity to the City of Dubuque is both a benefit and a hindrance. The location has allowed Asbury to develop as a residential community for many who work in and around Dubuque County. However, Asbury does not have the large available tracts of land for the development of large facilities or as many resources to provide extensive business development support.

1 citation

2 http://www.iowapolicyproject.org/2011docs/110902-SWI2011.pdf p. 11-12

Innovation

The wildcard for the region is innovation and entrepreneurship. The State New Economy Index ranked Iowa 45th in the nation when it comes to economic dynamism and its ability to rejuvenate itself through the formation of new innovative companies. The study includes such factors as the number of entrepreneurs starting businesses and the number of patents, issues among other indicators and reached the following conclusions. The region lacks a significant institutional source for innovation such as a tier one research university or major private research and development facility. Leaders in the region agree that the region's economic future will be founded on a strong seedbed of entrepreneurs and a steady stream of talented individuals who are willing to take on the risk associated with starting new businesses. The region must find ways to integrate entrepreneurship into the K-12 curriculum to encourage it at a young age and provide a way to change the culture over time. The region must find new mechanisms to harness some of the indigenous wealth in the region and recycle it into new businesses. The region needs to pursue equity capital to fund new business start-ups and finally, there needs to be a more improved efficiency of its delivery system of support for entrepreneurs.

Strengths

Manufacturing

Dubuque County's deep industrial and manufacturing roots make it attractive to employers. According to the most recent data from the US Bureau of Labor Statistics, 15% of workers in Dubuque County are employed in the manufacturing sector. Many of the firms are locally owned. A recent study for the region completed by Rural Policy Research Institute (RPRI), indicates that manufacturing employment is 24-30% of the employment base in Dubuque County. The surrounding counties of Delaware, Jackson, Cedar, and Clinton have only a 0-6% manufacturing base. According to RPRI "Manufacturing in areas such as truss manufacturing, motor vehicle seating and trim, residential electric lighting fixture manufacturing, and cut stone product manufacturing, will all experience a 60%+ growth in the 2007 to 2017 time frame." This growth presents employment opportunities for residents in the region and provides a basis for educational programs to fit the needs and the demands in the region looking out to 2017.

Business Services

Business Services remains a strong employment sector in the region. The business and professional services sector provides needed services such as consulting, processing, legal, management support, etc. to all of the other industries in the region. This sector has grown rapidly over the last several years and remains over the long term one of the fastest growing sectors nationally. Leaders in the region realize that more emphasis on growing service companies within the region will be crucial to sustaining future growth in the business services sector. Nearly 27% of the residents in the region are employed in the business services sector. The recent focus on sustainability in the region has increased interest in the service sector. According to the CEDS, "Partnerships from across the region were crucial to attracting IBM and will remain critical in the future. Part of the attraction to the region was the concentration of the educational institutions in the region that provide a ready supply of high-quality workers. Additionally, the workforce development arena remains aligned consistently with the region's employment needs and its strategic opportunities."

Tourism

Tourism has remained strong in the Asbury and will continue to be a priority with the Meadows Golf Course, Sundown Mountain, Heritage Trail, and the synergies that have been created between the counties in the region and the communities across state lines into Wisconsin and Illinois. Wineries, such as Park Farm Winery and Stone Cliff are established in the area as well as opportunities for eco and agri-tourism. Local tourism experts in the Tri-State region indicate that high gas prices, recent credit crunch, and the nation's plunge into the recession actually might boost small town tourism and fewer miles traveled can equal more fun. According to the CEDS, "Overall tourism dollars in our region increased by 1.98% from 2007 to 2008." Although the national average was 3.29% (www.poweroftravel.org), rural counties outpaced the national average. This is likely due to less than ideal economic conditions that cause people to stay in their own areas for entertainment rather than travelling to bigger areas

with attractions. For example, Cedar, Clinton and Jackson Counties had over a 5.00% change in travel impact dollars from 2007 to 2008 (www.traveliowa.com).

Opportunities

Workforce

Workforce remains a double-edged sword for the region. The region is known for its highly skilled and educated workforce, but as noted in the challenges section, retaining and recruiting younger workers to replace retiring experienced workers remains a challenge. Local economic development groups and employers have initiated efforts to address workforce issues for their communities. One such initiative is the recruitment website *Accessmyfuture.com*. *Accessmyfuture.com* is an interactive website targeting the 14-25 year old population exploring careers in the region and providing links to a variety of job search sites. Local firms have partnered with the area colleges and community colleges by connecting students to internship programs funded by local companies. Companies in the region are also offering more flexible work schedules, telecommuting, incentives, etc. to attract and retain employees. Local communities in the region need to continue to build off these initiatives to create opportunities to attract and retain a skilled workforce.

Passenger Rail

A transportation related opportunity that has come to the region is the proposed return of Amtrak passenger rail service from Chicago to Dubuque. A feasibility study was completed in 2006 by Amtrak. The State of Illinois and the State of Iowa both support the project. The study indicated an annual ridership of over 75,000 passengers at one round-trip per day. According to the study, $32 million dollars is needed to improve the track conditions and $3 million in annual subsidy. The Iowa and Illinois Departments of Transportation have applied for grant funding to assist with the initial track improvement costs. Public support for the project is widespread. Over 8,000 Iowa residents and over 15,000 Illinois residents have signed a petition in support of the Amtrak service. Anticipated implementation of the new Amtrak line is 2014.

Sustainability

Sustainable development indicatives have created new business opportunities in Dubuque County. IBM was inutility attracted to the Dubuque Area because the City was already engaged in sustainability efforts. IBM created a new opportunity for the region when it announced plans to pilot in Dubuque, the first American city to become part of IBM's Smarter Plant initiative. The Smart Cities effort involves improving sustainability on a variety of city systems. IBM will use its technological resources to improve the efficiency of water, energy, and transportation. Dubuque is a pilot and a national model for more than 1,000 other cities. Other businesses in the area have also used sustainability to grow their business. A.Y. McDonald, a Dubuque based manufacture of water works brass and valves, produced new sustainable water meter. The Unmeasured-Flow Reducer measures and accounts for small leaks throughout the home, making the homeowner more aware of unintended water usage.

Commercial Development

The City of Asbury has existing capacity for commercial and retail development in the Asbury Mall, Saratoga Plaza and along Saratoga Road in existing unused retail and office space. The Carver Heights Subdivision Development also has approximately 20 acres of undeveloped commercial area that could be used for office, medical facilities or retail development within the City.

1. **To reduce unemployment, achieve economic stability, and increase the standard of living for all citizens.**

   1.1 Promote establishing and maintaining a broad community consensus regarding the direction of economic development efforts.

   1.2 Promote diversification of the commercial base.

   1.3 Encourage access to economic incentives for quality job creation and/or tax base enhancement.

   1.4 Continue to use a unified economic development team, with public/private sector involvement, to implement the City economic development goals.

   1.5 Promote reduction of barriers to economic growth, while recognizing regulatory function.

   1.6 Attempt to identify additional resources to aid in economic development.

   1.7 Promote maintaining access to a community socio-demographic database as an information clearinghouse for economic development.

2. **To build a highly skilled, flexible workforce.**

   2.1 Cooperate with local educational institutions to coordinate training/skill requirements to meet the needs of local employers.

   2.2 Promote reduction of barriers to obtaining necessary or upgraded job skills.

   2.3 Encourage utilizing the talents and experience of mature workers who bring special skills and knowledge to the work force.

   2.4 Consider maintaining access to informational clearinghouse that coordinates job training, placement, and skills development.

   2.5 Promote providing information on work skills development and available employment opportunities through print, electronic, and telecommunications media.

3. **To concentrate on retaining and expanding existing local businesses.**

   3.1 Cooperate with business, educational institutions, community organizations, and government to provide information to local businesses.

   3.2 Promote assistance to local firms in finding appropriate development sites for expansion.

   3.3 Encourage existing neighborhood employers to grow "in place," keeping jobs close to where people live.

   3.4 Encourage retaining and expanding the base of service industry employment.

   3.5 Encourage neighborhood business development.

   3.6 Encourage diversified retail shopping.

4. **To increase the number of small firms within the CITY by fostering local entrepreneurship.**

   4.1 Cooperate with other agencies and institutions to identify programs and services to assist in the creation of new small businesses.

   4.2 Promote support for start-up businesses with both financial and technical assistance.

   4.3 Encourage and facilitate appropriate in-home businesses to be successful.

   4.4 Consider strengthening programs which provide business development, information, and technical assistance.

5. **To recruit businesses that are suited to the area, require a highly skilled work force or are willing to train an entry-level work force and are experiencing growth.**

   5.1 Encourage assistance to businesses that produce exports or import substitutes and that provide higher wages and benefits to their employees.

   5.2 Continue a collaborative recruitment strategy among business, non-profits, and government.

   5.3 Encourage the recruitment of businesses with new technology and renewable resources.

5.4 Encourage the recruitment of businesses that are in line with the State's economic development goals.

5.5 Encourage the recruitment of businesses that utilize the by-products of other businesses.

5.6 Encourage the recruitment of a variety of restaurants and retail establishments, including franchises that are not currently in the region, but that are located within the regional malls that attract shoppers from the region.

6. To work with regional partners identifying the economic needs of the chronically unemployed and underemployed in the region, and encourage programming – including education and retraining -- to meet those needs.

6.1 Develop awareness of the impediments to employment for this sector of the population.

6.2 Collaborate with unemployed and underemployed persons and potential employers to find creative ways to overcome barriers.

6.3 Promote targeting unemployed young adults (ages 18-24) for job/skills training, providing supportive services as needed.

6.4 Promote access to resources and tools for education, training, and supportive services through a variety of means and media.

6.5 Encourage business, labor, education, and government partnerships to solve work force development problems.

7. Supports efforts to maintain and strengthen region's position as a tourist destination.

7.1 Promote existing attractions.

7.2 Promote a variety of additional year-round tourist attractions.

7.3 Focus resources on future tourism initiatives, including those identified in the community visioning process.

7.4 Foster enhanced recreational access to local attractions as an economic development strategy.

8. To strengthen the local tax base.

8.1 Encourage expansion and diversification of the tax base.

8.2 Encourage property improvements and revitalization throughout the city.

8.3 Consider annexing additional land, as necessary and as possible according to smart growth principles to accommodate future expansion.

9. To establish and maintain housing and transportation, communication, and utility systems which support and foster quality development.

9.1 Encourage the coordination of the provision of supportive infrastructure in concurrence with new development.

9.2 Evaluate new development impacts on existing infrastructure and services to ensure adequate capacity and compensation.

9.3 Encourage efforts to link region with major transportation networks.

9.4 Work closely with public agencies, such as RTA, Jule transit and the private sector to deliver an efficient and effective transportation system and network. Improve transit connections between residential communities and work sites.

9.5 Encourage coordination of infrastructure investment strategy with government, business, and local institutions.

9.6 Pursue special opportunities for alternative modes of transportation to serve as attractors themselves.

10. To work with providers and other agencies to strengthen, maintain, and continually upgrade technology infrastructure and systems, and provide adequate access and capacity for current and anticipated needs.

10.1 Explore feasibility of community wide wireless computer networks, or Wi-Fi (wireless fidelity).

10.2 Promote opportunities of the information superhighway for economic development.

10.3 Promote maintenance of a computerized Geographic Information System (GIS) to support economic development.

11. To promote the provision of an adequate supply of vacant, development-ready land for commercial use.

11.1 Promote utilization of development-ready sites.

11.2 Evaluate potential commercial development sites, based on the Future Land Use Map.

11.3 Encourage protection of development potential of appropriate sites.

11.4 Consider annexing growth areas, as necessary and as possible, to ensure adequate supply of developable land and to control development on the city's fringe.

11.5 Adequate customer parking should be taken into consideration while creating or expanding commercial development. Techniques that help with traffic safety and address drainage problems should be considered.

12. To encourage development that is environmentally sensitive.

12.1 Encourage targeting environmentally sensitive business in recruitment efforts.

12.2 Promote development of businesses that are committed to enhancing local environmental quality.

12.3 Promote and encourage sound environment practices with existing businesses.

12.4 Promote and encourage the use of alternative and/or renewable fuel and energy sources for vehicle fleets and building operations.

12.5 Encourage sustainable practices such as LEED (Leadership in Energy and Environmental Design) Green Building Rating System concepts in building design for new and existing facilities.

13. Promote the fiscal soundness and viability of local government operations.

13.1 Make decisions on achieving the goals in all elements of the City of Asbury Comprehensive Plan.

13.2 Improve government productivity and service delivery.

13.3 Promote economic development efforts to expand and diversify the property tax base.

13.4 Encourage sufficient economic diversity and vibrancy so that businesses are being added at a rate greater than or equal to the rate the rate they are being lost.

13.5 Encourage public investments in infrastructure that will result in private-sector investments that can financially sustain the maintenance of that infrastructure.

13.6 Encourage adoption of a long-term plan for financial success.

13.7 Communicate the community's fiscal management process in language understandable to the general public.

13.8 Encourage increased public participation in the community budgeting process.

Housing

Chapter 8

Housing is a basic need for all human beings, and is an important factor in community planning efforts. Housing is many homeowners largest source of personal wealth and is usually their largest expenditure. According to the US Bureau of Labor Statistics, in 2010 housing accounted for more than 35% of consumer spending.[1] Housing also affects personal behavior. Where people live affects who their friends are, where their children go to school, job opportunities, and many other aspects of daily life. Housing has a large impact on individual quality of life within the city.

Housing is one of local government's most important issues. In urban areas, housing can account for 50% of land uses, and residential property tax revenues make up a large portion of local government budgets. Because of its high level of importance, housing affects all other planning elements listed in this plan. Public services people require, how much those services cost, and who should pay for them all depend on where, how, and at what densities people live. Of the services provided by local governments, transportation is one of the most impacted by housing. Individual travel behavior is greatly affected by where they live, and as a result, housing and transportation planning must be closely coordinated.

Housing serves an important role in the regional economy, as it affects employers' ability to attract and retain good quality employees, and also creates jobs. If combined housing and transportation costs are too high, employers may lose employees to other regions. The housing sector also employs many workers within the region. Builders, lenders, construction workers, and real estate brokers are an important part of the regional economy.

Residential development can greatly affect the natural environment. A sustainable community needs to balance needs for new housing with environmental protections. Low impact development, conservation subdivisions, and other green building techniques can help mitigate impact of residential development on the natural environment.

Good-quality housing is the foundation of a stable sustainable community. To be effective, community planning efforts, including sustainability efforts, must be integrated into a community's housing policies. The objective of this chapter is to encourage a diverse housing stock that serves people at all income levels and at all stages of life.

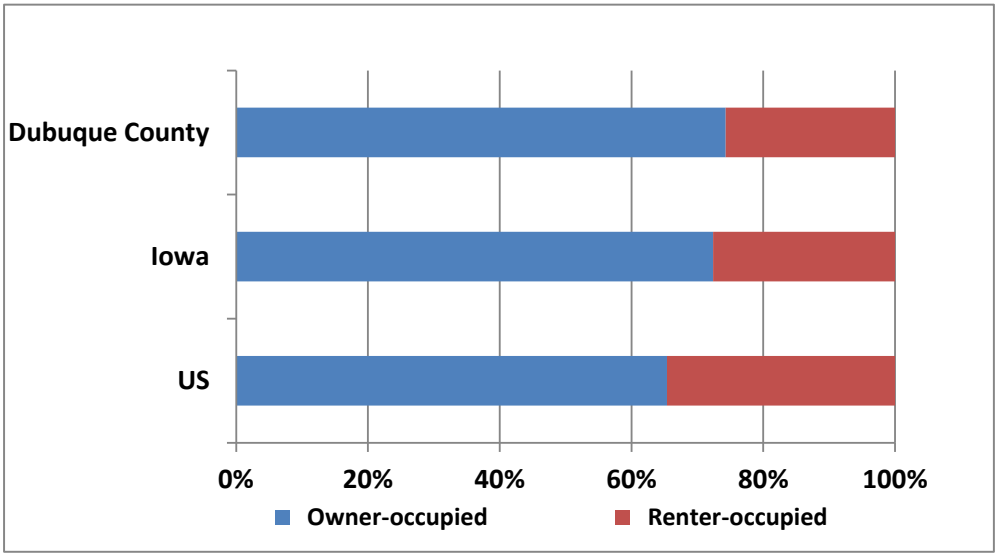
Housing Vision Statement

1 " Consumer Expenditures 2010" *BLS.gov*. 27 Sept. 2011. U.S Bureau of Labor Statistics. 1 Dec. 2011.http://www.bls.gov/news.release/cesan.nr0.htm

The city sees itself as an affluent bedroom community with available housing for all ages. A large majority of the housing stock is new and in very good condition.

It is believed that local developers are meeting the housing demand. The City will continue its support and cooperation with developers in order to provide the housing necessary to meet future population projections.

Figure 8.1 - Dubuque County Housing Tenure



Source: 2010 American Community Survey 1-Year

Ample, well maintained housing is available to meet the needs of different economic groups and the requirements of residents across their life span. The City will continue to support a mix of housing types will be available to residents.

Inventory of Existing Housing

The US Census Bureau provides a wide variety of data on housing through the decennial census and the American Community Survey (ACS). The following charts are selections from the census that depict the most important aspects of the Dubuque County housing market.

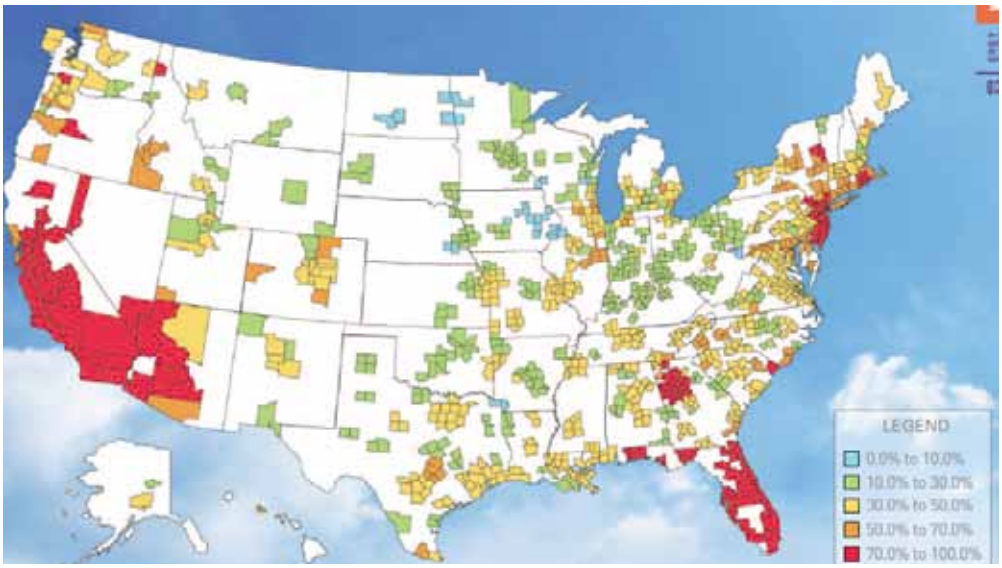
Dubuque County's vacancy rate is lower than state and national rates. In general, the Dubuque County housing market has weathered the housing crisis better than many markets in the country where large numbers of foreclosures have driven vacancy rates up.

Asbury residents are more likely to own their house. According to the housing tenure data, shown in Figure 8.1, renters account for 10% of the occupied housing units in Asbury. Nationally renters make up about 35%.

Dubuque County Housing Market

When compared with the rest of the US, the Dubuque County housing market has remained relatively stable through the recent economic downturn. According to research published by the mortgage insurance firm PMI, Dubuque County was among the least risky places in the country to buy a home. PMI's Housing Appreciation Risk Index (HARI) measures the probability that house prices will be lower in two years. According to the HARI, Dubuque County homes had a 7.6% chance of falling in the next two years. Dubuque's score is well below the national average of 43.3% and the riskiest regions in Nevada,

Figure 8.2 - Housing Appreciation Price Risk Index



Source: PMI Mortgage Insurance Co.

Arizona, Florida, and California which have HARI scores between 80% and 90%. According to PMI, "In general, the states with the lowest scores are in the Great Plains – especially North Dakota, Iowa, and Nebraska. These states did not experience large housing booms, have low unemployment and foreclosure rates, and are very affordable."[2] Figure 8.2 shows the geographic distribution of Housing Price Risk for metropolitan areas.

Housing Affordability

Housing costs as a percent of household income is a generally used measure of housing affordability. As a rule of thumb, spending less than 30% of income on housing is generally considered to be affordable. Households spending more than 30% are considered to be cost burdened and may have difficulty affording other necessities such as food, clothing, transportation, and medical care. Figures 8.3 and 8.4 show that Dubuque County is a relatively affordable region for homeowners compared to the rest of the country and the state of Iowa. According to 2010 ACS data, 76% of Asbury residents with a mortgage and 96% of residents without a mortgage are paying less than 30% of their annual income towards housing.

While owner occupied housing may be relatively affordable in Asbury, the same cannot be said about renter occupied housing. Figure 8.5 shows gross rent[3] of as percent of household income. The chart shows that housing affordability rates are similar to state and national rates: 57% of Asbury households pay more than 30% of their income towards housing.

Figure 8.3 - Monthly Owner Costs as a Percent of HH Income

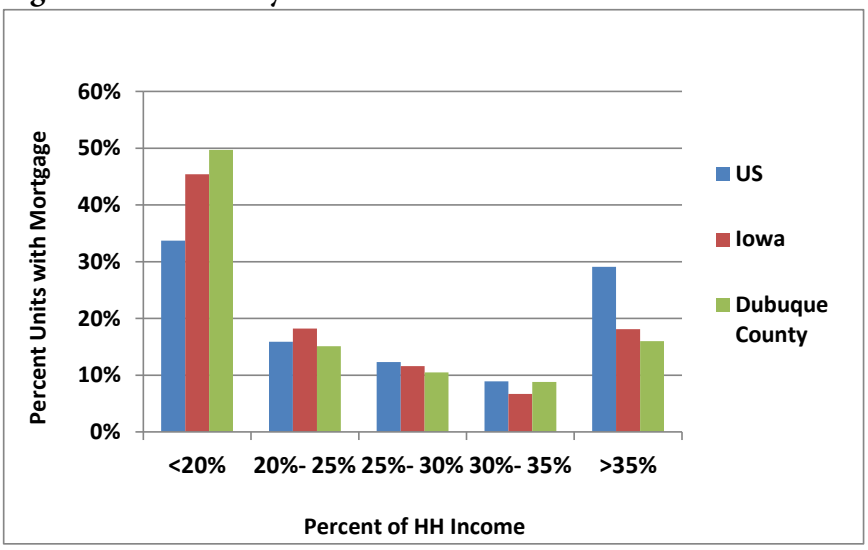


Figure 8.4 - Monthly Owners Costs as a percent of HH Income

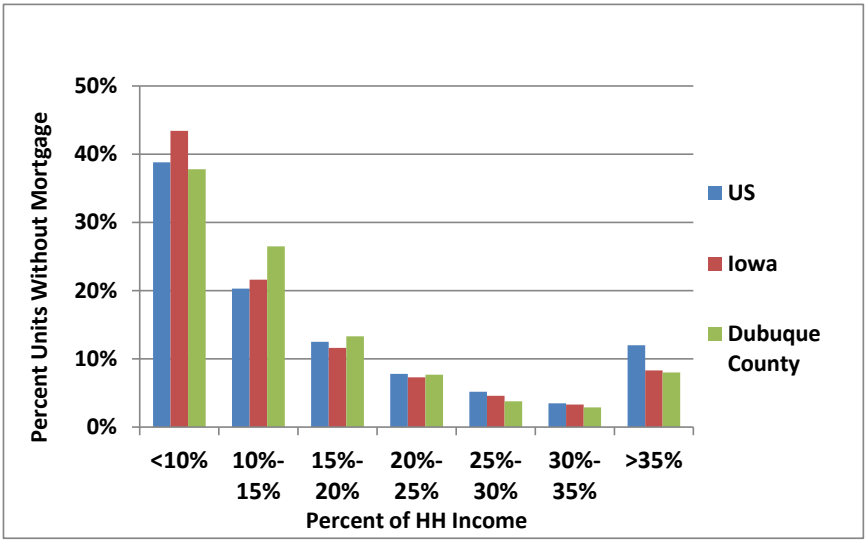
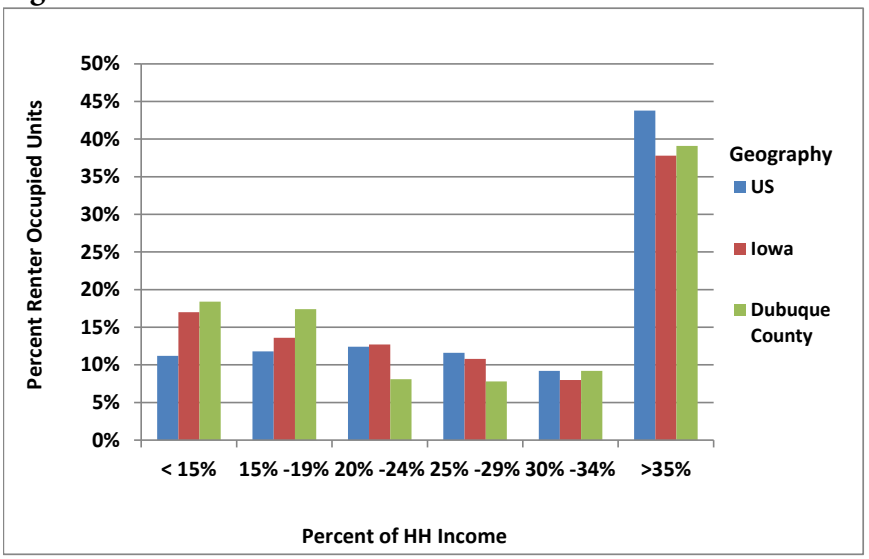


Figure 8.5 - Gross Rent as a Percent of HH Income

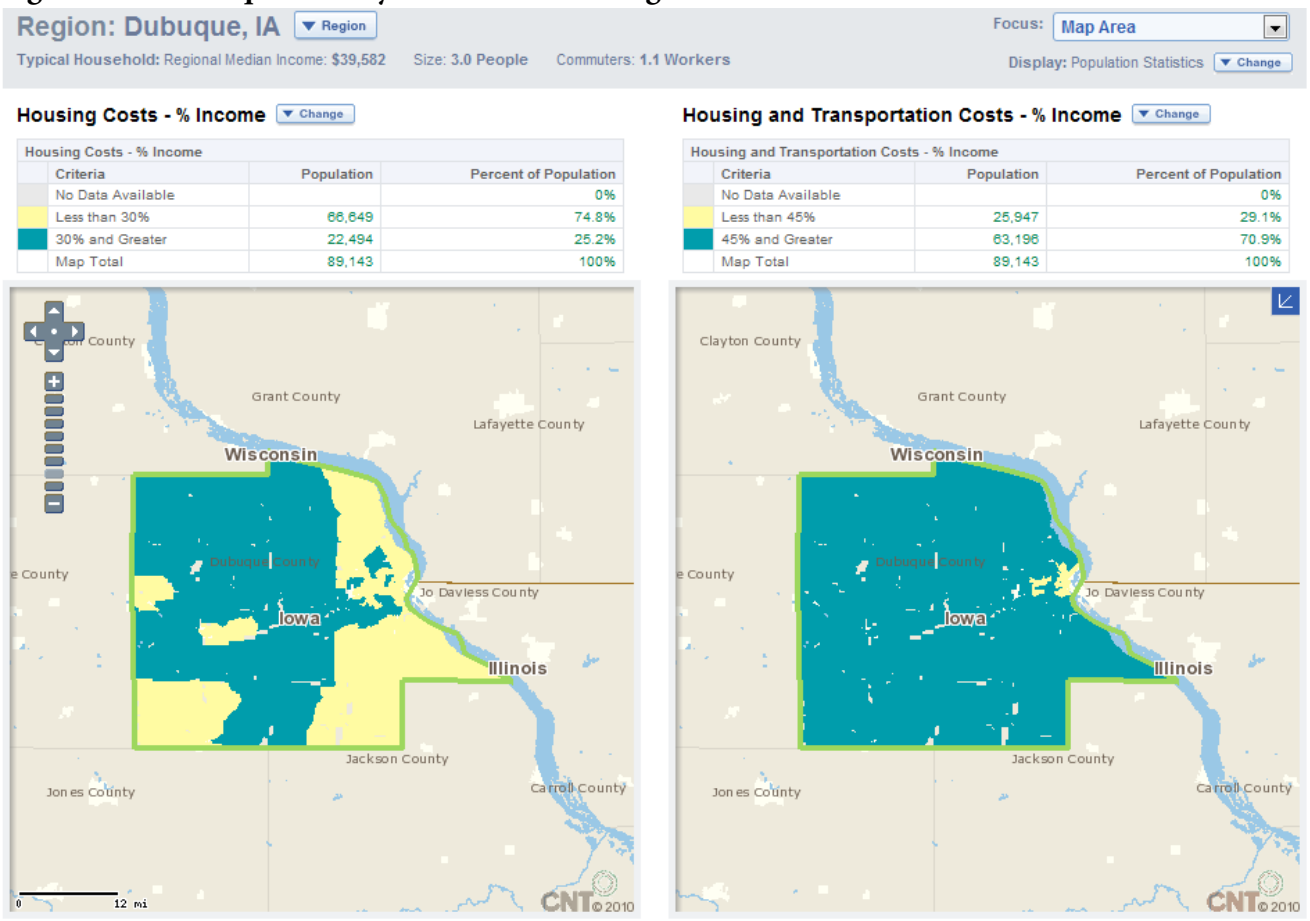


Source Fig. 3-5: 2010 American Community Survey 1-Year Estimates

2 Berson, David W. et al. "Economic and Real Estate Trends" PMI Mortgage Insurance Co. 2011, http://www.pmi-us.com/PDF/q3_11_pmi_eret.html

3 Gross Rent. The amount of the contract rent plus the estimated average monthly cost of utilities (electricity, gas, and water and sewer) and fuels (oil, coal, kerosene, wood, etc.) if these are paid for by the renter (or paid for the renter by someone else).

Figure 8.6 - Dubuque County Combined Housing Costs



Source: Center for Neighborhood Technology, 2012.

Combined Housing and Transportation Costs

Over the past fifty years many people have chosen to leave urban areas for rural and suburban communities as a way to reduce housing costs. For the most part home prices are lower in suburban areas when compared to urban areas. However, on the suburban and rural areas the distance is greater between work, school, and other daily needs. The increased distance results in residents spending increased time and money on transportation. According to a report entitled *Penny Wise, Pound Fuelish* produced by the Center for Neighborhood Technology CNT, the increased transportation costs associated with living in the suburbs can outweigh the savings on home costs and residents of these communities are more vulnerable to fluctuations in gas prices.[4] The Center for Neighborhood Technology has developed Housing and Transportation cost index (H+T Index) that allows users to compare the traditional view of affordability with the new view including transpiration costs. According to the Index in all cities, many distant suburbs are less affordable than they appear. The H+T Index takes the traditional 30% of household income measure for housing and adds an additional 15% for transportation resulting in a combined affordability measure of 45%.

H+T Index results for Dubuque County are displayed in Figure 8.6. In Figure 8.6, the traditional 30% affordability measure is displayed on the left and the 45% H+T threshold is displayed on the right. According to the traditional measure 75% of Dubuque County residents are living in affordable housing. However, according to the H+ T measure, 70% of residents pay more than 45% in housing and transportation costs and only 30% are paying less than 45%. The maps in Figure 6 display the geographic distribution of the housing cost index and the H+T index by census block. According to the H+T index the affordable areas of the county are the urban areas that are close to work, school, and services and have access to public transit.

4 "Penny Wise, Pound Fuelish" The Center for Neighborhood Technology. March 2010, http://www.cnt.org/repository/pwpf.pdf

Federal Housing Programs

The federal government has created several programs to help those individuals that are cost burdened by housing. Many of these programs operate under the US Department of Housing and Urban Development (HUD). HUD is the primary resource for housing related issues at the federal level. HUD's mission is to "to create strong, sustainable, inclusive communities and quality affordable homes for all. HUD is working to strengthen the housing market to bolster the economy and protect consumers; meet the need for quality affordable rental homes: utilize housing as a platform for improving quality of life; build inclusive and sustainable communities free from discrimination; and transform the way HUD does business."[5]

Section 8 Housing Choice Voucher

The housing choice voucher program is the federal government's major program for assisting very low-income families, the elderly, and persons with disabilities to afford decent, safe, and sanitary housing in the private market. Since housing assistance is provided on behalf of the family or individual, participants are able to find their own housing, including single-family homes, townhouses and apartments. The participant is free to choose any housing that meets the requirements of the program and is not limited to units located in subsidized housing projects.

Housing choice vouchers are administered locally by public housing agencies (PHAs). The PHAs receive federal funds from the HUD to administer the voucher program. A family that is issued a housing voucher is responsible for finding a suitable housing unit of the family's choice where the owner agrees to rent under the program. This unit may include the family's present residence. Rental units must meet minimum standards of health and safety, as determined by the PHA. A housing subsidy is paid to the landlord directly by the PHA on behalf of the participating family. The family then pays the difference between the actual rent charged by the landlord and the amount subsidized by the program. Under certain circumstances, if authorized by the PHA, a family may use its voucher to purchase a modest home.

5 "Mission" HUD.gov. Department of Housing and Urban Development. 1 Dec. 2011 http://portal.hud.gov/hudportal/HUD?src=/about/mission.

Public Housing

Public housing was established to provide decent and safe rental housing for eligible low-income families, the elderly, and persons with disabilities. Public housing comes in all sizes and types, from scattered single family houses to high-rise apartments. There are approximately 1.2 million households living in public housing units, managed by some 3,300 HAs. HUD administers federal aid to local housing agencies (HAs) that manage the housing for low-income residents at rents they can afford. HUD furnishes technical and professional assistance in planning, developing and managing these developments.

Asbury Housing Agency

HUD works with local housing agencies to implement many of their programs. The Eastern Iowa Regional Housing Authority works with HUD and the State of Iowa to assist Asbury with their housing needs.

Eastern Iowa Regional Housing Authority (EIRHA)

EIRHA was established in 1978 to meet the housing needs of low and moderate income families and the elderly. EIHRA serves Cedar, Clinton, Delaware, Dubuque, Jackson, and Jones Counties in Eastern Iowa excluding the cities of Clinton and Dubuque. EIRHA has a contract with HUD to serve as many families as possible using their calendar year budget for Housing Assistance Payments (HAP) through the Section 8 program.

EIRHA has an annual contributions contract to assist up to 883 households, within its budget authority, with rental assistance in the region through Housing Choice Vouchers (HVC). The participating family chooses a sound, safe, and sanitary rental unit in which to reside. If the landlord agrees to lease the unit to the household under the Section 8 HCV Program, and EIRHA approves the rental unit, EIRHA will make monthly rental payments to the landlord to help the household pay their rent each month. EIRHA owns and manages 164 rental units in Dubuque, Jackson, Delaware, and Clinton Counties. These Public Housing units consist of apartments, duplexes, and single family homes to provide housing for low-income families, seniors, and persons with disabilities. The Eastern Iowa Regional Housing

Corporation (EIRHC) is a subsidiary of EIRHA and was established in 1990 and organized as a not-for-profit under the provisions of Chapter 504A of the Iowa Code and serves six counties: Cedar, Clinton, Delaware, Dubuque, Jackson, and Jones Counties in Eastern Iowa. The purpose of EIRHC is to promote the general social welfare of eligible occupants of rental housing as determined by the USDA, IFA, and IDED regulations, without regard to race, color, religion, creed or national origin; to acquire, construct, improve, and operate any real or personal property or interest or rights. The Eastern Iowa Development Corporation (EIDC) is a for-profit entity and a wholly owned subsidiary of EIRHC. The EIDC was formed to serve as the general partner in all Low Income Housing Tax Credit (LIHTC) projects. The Peosta Evergreen Meadows (32 units) and Asbury Meadows (24 units) properties resulted from this formation

Sustainable Design

To encourage a more sustainable region, the City of Asbury Comprehensive Plan encourages green building strategies for residential development including: public health, energy efficiency, water conservation, smart locations, operational savings, and sustainable building practices. These strategies enhance affordable housing, community facilities, town centers, and communities as a whole.

In addition to increasing resource efficiency and reducing environmental impacts, green building strategies can yield cost savings through long-term reduction in operating expenses. The benefits include improved energy performance and comfort, a healthier indoor environment, increased durability of building components, and simplified maintenance requirements that can lead to financial efficiencies for property managers and owners. Green building practices improve the economics of managing affordable housing, community facilities, and businesses while enhancing quality of life for residents, visitors and employees. When green building practices place homes, community facilities and businesses near community amenities such as public transportation to create walkable, livable neighborhoods – the benefits for citizens and communities expand to include fewer sprawl-related transportation impacts. Housing built using the green building strategies must be cost effective to build, and durable and practical to maintain. In addition, the principles work together to help produce green buildings that, result in a high-quality, healthy living and working environment, lower utility costs, enhance connections to nature, protect the environment by conserving energy, water, materials and other resources, and advance the health of local and regional ecosystems.

Future Needs

Senior Housing – Over the next 30 years the population of Asbury will continue to become older. Asbury should plan for increased demand for nursing home and assisted living facilities. Asbury should also look into strategies, such as universal design and mixed-use transit-oriented development patterns that give elderly residents access to daily needs and allow them to stay in their own home and maintain a independent lifestyle.

Workforce Housing – Many households of moderate income can have difficulty getting into good quality housing. Asbury should work to continue and expand on affordable housing for families.**Rental Housing** – Examination of census data has shown that while owner-occupied housing units in Asbury are relatively affordable when compared with the rest of the Country, the same cannot be said about rental housing. Many renters are paying upwards of 35% of their income for housing. Asbury should conduct further analysis to determine the factors behind the high cost of rental housing and look into methods to improve rental housing affordability.

Housing + Transportation Costs – Data from the Housing + Transpiration Index shows that 70% of Dubuque County residents spend more than 45% of their income on housing and transportation. The data also revealed that the most affordable areas were located within urban areas. Asbury should look into methods to direct more housing towards urban areas and help reduce transportation costs.

1. **To promote the preservation, rehabilitation, and investment in housing stock and neighborhoods.**

   1.1 Encourage all rental housing exceeds minimum housing quality standards through systematic code enforcement.

   1.2 Encourage a range of affordable, accessible and sound rental housing options throughout the community.

   1.3 Encourage and facilitate the use of housing programs when available.Promote adaptive reuse of existing vacant or under-utilized structures where appropriate.

   1.4 Encourage the utilization of neighborhood associations to promote civic engagement and community relationships.

   1.5 Promote residential educational workshops regarding restoration, rehabilitation, maintenance and energy efficient improvements.

   1.6 Encourage relocation of existing housing as opposed to demolition whenever possible; when removal is necessary, require deconstruction and landfill diversion as much as possible.

   1.7 Support the integration of new neighborhood residents into the neighborhood associations, local schools, and community activities.

   1.8 Eliminate vacant and abandoned housing in our neighborhoods through code compliance, purchase, rehabilitation, and deconstruction if necessary.

2. **To promote programs, education, and training that support and encourage appropriate rental housing oversight.**

   2.1 Promote programs, education, and training that support and encourage appropriate landlord accountability.

   2.2 Promote programs, education, and training that support and encourage appropriate tenant accountability.

   2.3 Support Community Oriented Policing and participation of neighborhood residents in crime reduction strategies.

3. **To promote the creation and maintenance of an adequate supply of sound, affordable housing integrated throughout the city.**

   3.1 Promote partnerships with private sector, nonprofit, other government agencies and neighborhood groups to access available public funding and attract private capital for affordable housing development.

   3.2 Promote mixed-income, mixed-rental housing developments.

   3.3 Encourage local lenders to work with all homeowners to rehabilitate, remodel, or repair existing homes.

   3.4 Develop programs and incentives that encourage property owners to maintain and improve the appearance of their property.

   3.5 Maintain the existing sound housing units and to upgrade or replace all substandard housing units.

   3.6 Support the Green and Healthy Homes Initiative, providing empowerment services to households in combination with efficient rehabilitation and preservation of affordable and workforce housing.

4. **Expand the opportunities for homeownership. Encourage the use of flexible development regulations (i.e. PUD) in order to assist affordable and workforce housing production and decrease housing costs.**

   4.1 Encourage local lenders to participate in programs designed to assist first-time home buyers.

   4.2 Support infill housing development opportunities, through a combination of public subsidy, affordable housing incentives and owner sweat equity.

   4.3 Promote contiguous development with a variety of density housing options that utilize available infrastructure within the existing built environment.

   4.4 Encourage financial planning for homeown-

ership to ensure that households have the wherewithal to be successful.

5. Promote fair housing opportunity for residents in all neighborhoods.

5.1 Provide for effective implementation of existing fair housing programs.

5.2 Encourage involvement of neighborhood residents to the fullest extent possible when planning affordable housing developments.

5.3 Evaluate federal, state and local codes and regulation that are possible barriers to the development of housing.

6. To assist local service agencies in providing shelter and semi-independent living for persons in need of supportive services.

6.1 Provide technical assistance to agencies in preparation of applications for program funding.

6.2 Encourage partnerships with area agencies in sponsorship of housing initiatives for special needs populations.

6.3 Encourage development of special housing for the elderly and persons with disabilities wherever suitable sites can be made available.

7. To promote the understanding that the availability and affordability of workforce housing is an important key to successful economic development.

7.1 Support corporate participation in employer assisted housing and home purchase assistance for employees.

7.2 Encourage corporate participation in the Federal Low Income Tax Credit Program, for purposes of investment in affordable housing development.

7.3 Work to achieve a housing supply to support workforce development efforts.

8. To promote the public's awareness of housing needs and issues through informational and educational efforts.

8.1 Consider serving as a clearinghouse of information for housing issues and information, to include providing educational programs for tenants, landlords and homeowners.

8.2 Monitor housing market conditions and availability of housing.

8.3 Be proactive in attracting new residents. Promote workshops for area housing industry members (contractors, lenders, realtors) regarding changing regulatory mandates, i.e., lead-based paint, asbestos removal.

8.4 Continue to promote collaboration with housing industry groups (Board of Realtors, Mortgage Lenders Association, Dubuque Area Landlords Association) to promote cooperation and consensus-building regarding housing issues.

9. To continue to provide appropriate infrastructure and services to neighborhoods.

9.1 Continue incremental improvements in water, wastewater, and stormwater facilities.

9.2 Continue appropriate levels of service to maintain public parks and open spaces.

9.3 Continue to enforce parkland dedication requirements, and other developer-paid infrastructure development costs to ensure stability and equitability. Work with public and private utilities to ensure that a range of high speed internet options are available. To provide a variety of housing types, costs and locations.

9.4 Promote the planning, design, and construction of a wide range of housing unit types. Ensure that all new housing development is protected from potential flood hazard.

9.5 Support the continuation of single-family development in appropriate locations at similar density levels as experienced on a community wide basis.

9.6 Discourage scattered residential development in the unincorporated portion of the County within the city two mile review area. Guide new development into a compact and compatible growth pattern within or adjacent to the incorporated area and within easily

serviceable watersheds.

9.7 Continue to encourage a wider range of housing types in the residential areas of the city, including single-family and multi-family structures, in response to changing housing market demands.

9.8 Continue to provide developers with appropriate levels of information and service.

9.9 Maintain minimum standards (height and bulk) for houses.

9.10 Support design guidelines for residential development.

10. Increase resource efficiency, improve public health, and reduce environmental impacts by using green residential building strategies.

10.1 Encourage water conservation strategies including water efficient appliances and plumbing fixtures, low-water landscaping, and rain water catchment.

10.2 Encourage energy conservation strategies including energy efficient appliances, lighting, and heating and cooling systems

10.3 Promote programs to improve energy efficiency.

10.4 Encourage the use of renewable energy sources.

10.5 Promote the use of recycled building materials.

10.6 Promote the use of building materials that do not cause negative health impacts for residents or workers.

10.7 Encourage radon testing and education about abatement options in residential properties .

Agriculture and Natural Resources

Chapter 9

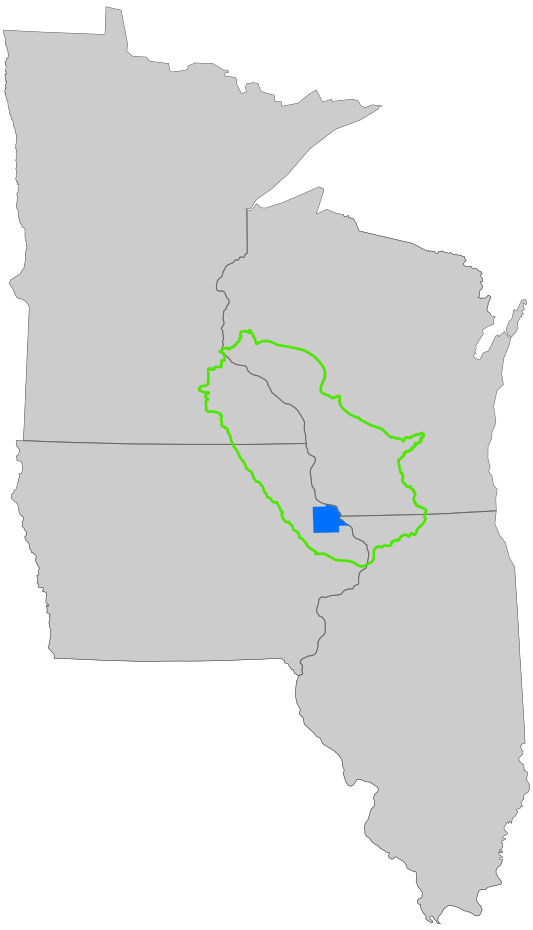
Asbury is located in a unique region of the Upper Mississippi River Basin known as the Driftless Area. The Driftless Area covers over 16,000 square miles in the states of Iowa, Illinois, Minnesota, and Wisconsin. The name "Driftless Area" refers to the lack of glacial drift, the silt, clay, sand, gravel, and boulders left behind by continental glaciers. The lack of glacial drift followed by thousands of years of weathering and erosion have resulted in a region of diverse topography, soils, and ecosystems. The steep and rugged landscape is referred to as karst topography. Map 9.1 displays the boundaries of the Driftless Area.

The topography of Asbury ranges from gently sloping to hilly and steep. Much of the area containing the steep terrain is heavily wooded. Map 9.2 illustrates the varying terrain across the area.

Land Development:

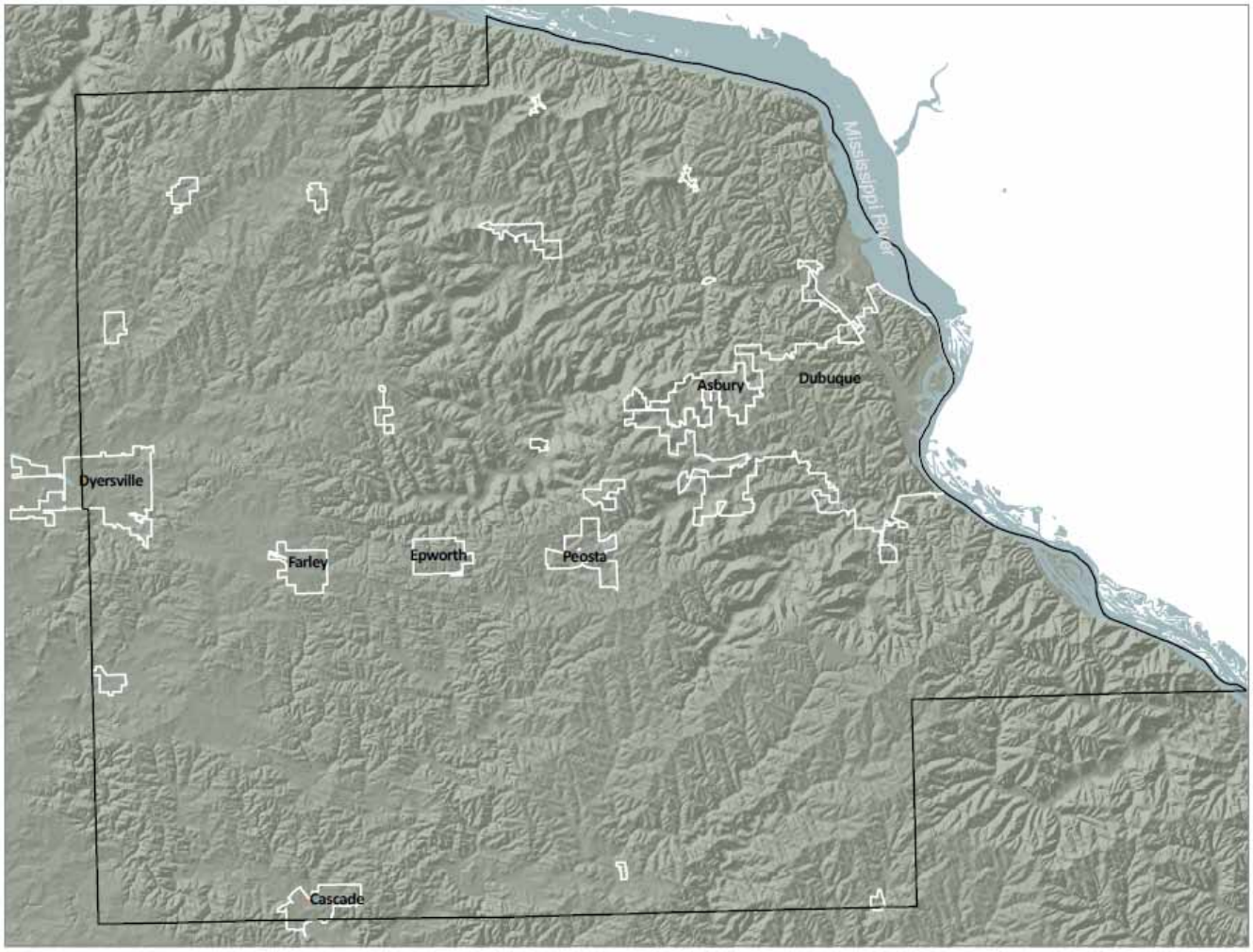
The loss of agricultural land to non-agricultural suburban development is an issue facing Dubuque County farmers. New non-agricultural buildings were most prevalent in the areas surrounding the community of Asbury. Map 9.5 shows new the new non-agricultural building starts for Dubuque County between 2000 and 2010. The new buildings are predominantly single-family homes that are scattered across agricultural areas. This type of resi-

Map 9.1 - The Driftless Area



Source: The Driftless Area Initiative

Map 9.2 - Dubuque County Topography



Source: US Geological Survey

dential development is a concern for the agricultural industry because it can lead to the loss of productive agricultural land, increased potential for conflict between agricultural and non-agricultural land uses, and increased traffic on rural roads.

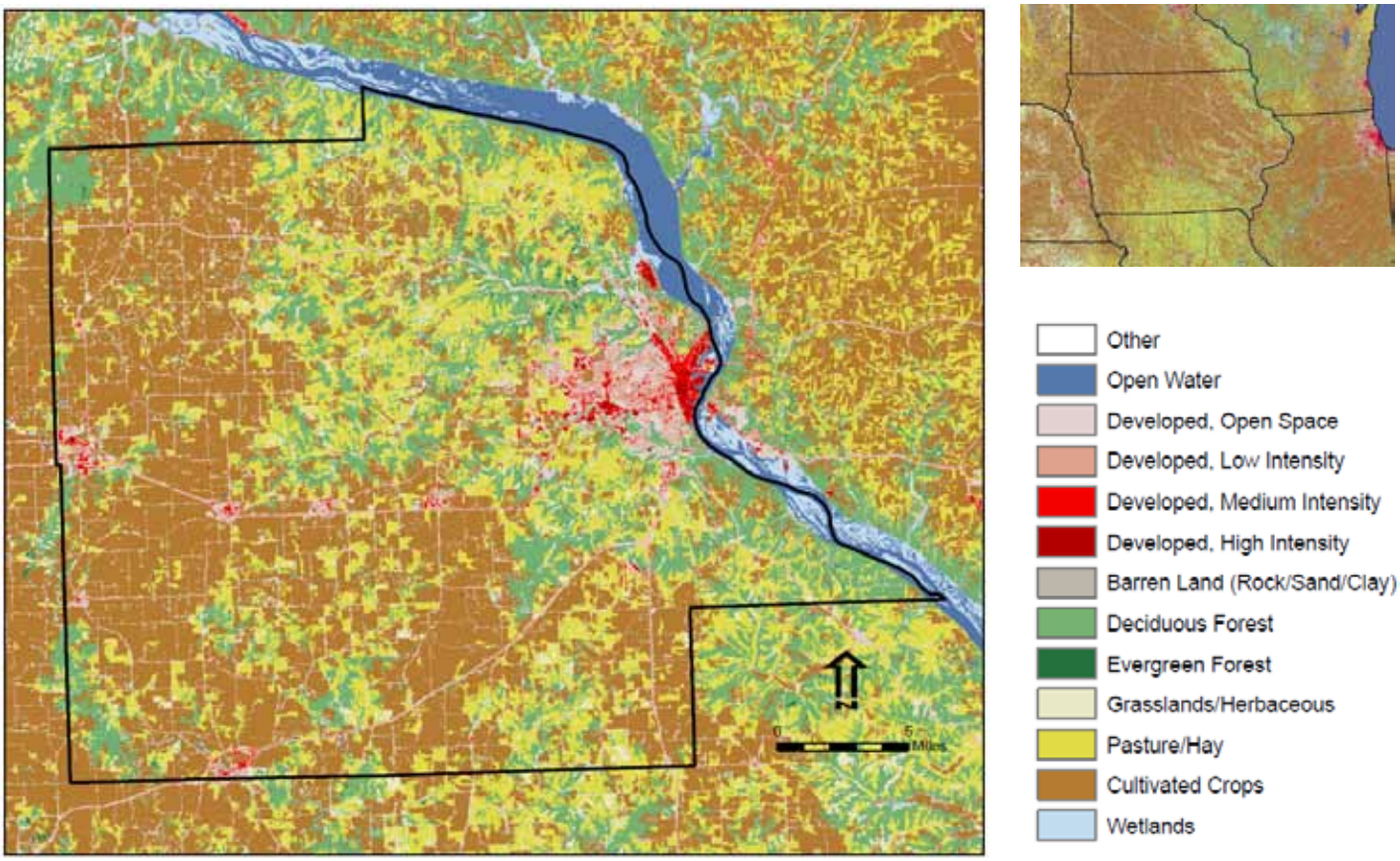
Land Cover

The steep landscape that exists throughout much of northeast Iowa has restricted development and farming activities. Row crop production is limited in the eastern half of the county by the region's steep topography. Farmland in the more hilly areas of the county is more likely to be used as pasture or woodland. According to the 2007 Census of Agriculture, 76% of the farm land in Dubuque County was used as cropland, while across the state, 86% of the land in farms was used as cropland. Map 9.3 shows the differences in land cover across Dubuque County.

Agriculture

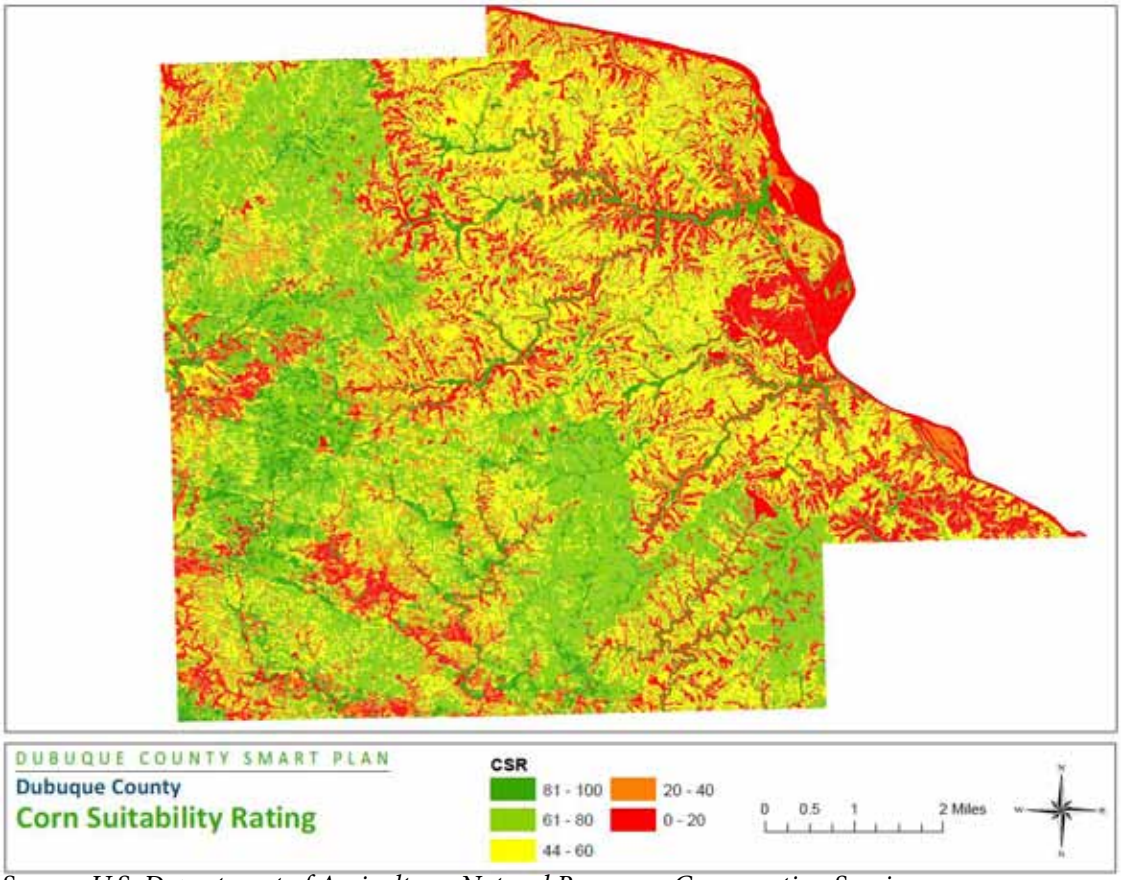
Soil quality varies greatly across area due to the uneven topography and prehistoric soil erosion. Corn Suitability Rating (CSR) is used to provide a relative ranking of soils based on their potential for row crop production. Soils with no limitations for row crop production will rate 100, while soils with severe limitations will rate 5. Map 9.4 displays the CSR for Dubuque County soils.

Map 9.3 - Dubuque County Land Cover



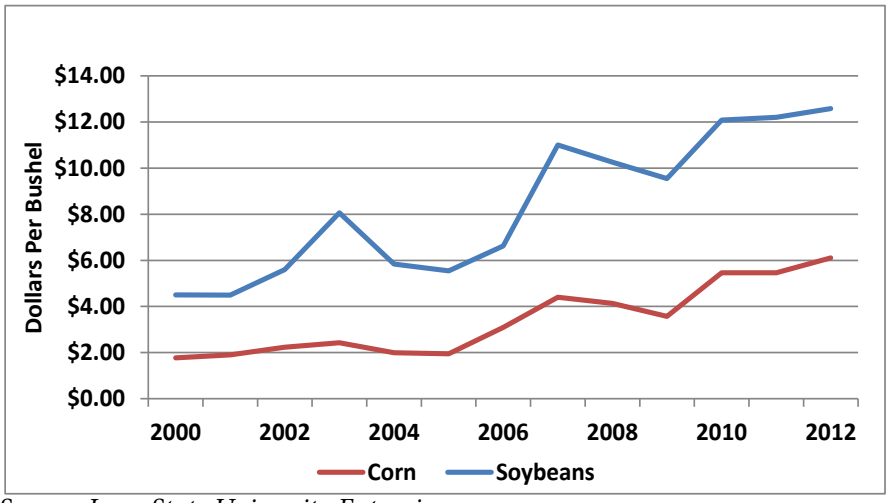
Source: US Geological Survey National Land Cover Database, 2006

Map 9.4 - Dubuque County Corn Suitability Rating



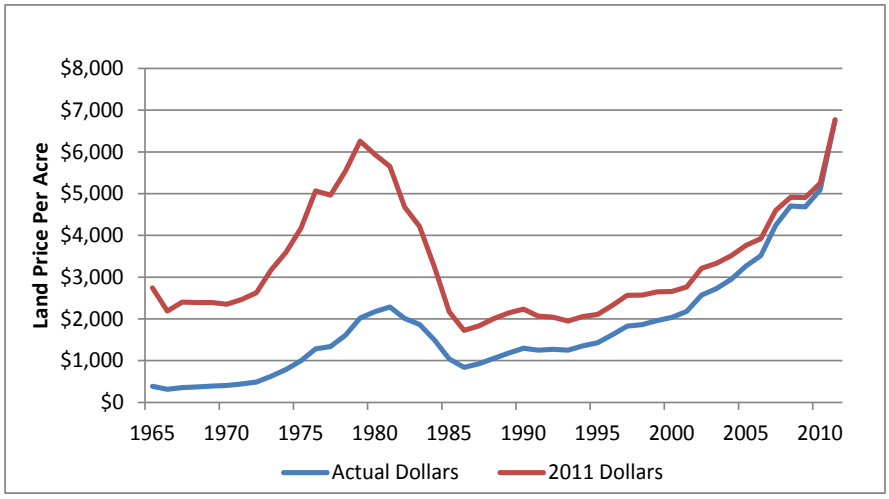
Source: U.S. Department of Agriculture, Natural Resources Conservation Service

Figure 9.1 - Average Corn & Soybean Prices



Source: Iowa State University Extension

Figure 9.2 - Historic Dubuque County Land Values



Source: Iowa State University Extension

Agricultural Economy

Agriculture is an important part of region's economy. The agricultural sector in Dubuque County employs thousands of workers and produces millions in commodity sales. Many non-farm industries such as chemical production, machinery production, and food processing link directly to the agricultural sector. Other industries with indirect links to agriculture include freight transportation and warehousing, wholesalers, and finance, insurance and real estate services. A 2002 study conducted by Iowa State University found that every dollar's worth of output in Iowa's agricultural sector results in $.63 in additional sales in the rest of the Iowa economy.[1] Over the past several years the agricultural sector has fared well despite the downturn in the overall economy. According to a 2012 Food and Agricultural Policy Research Institute report, U.S. farmers earned a record net income of $98 billion in 2011.[2] The primary reason for the success of the agriculture sector has been high commodity prices that have resulted from increased exports and increased ethanol consumption. Figure 9.1 shows the rise in corn and soybean prices since 2000. High commodity prices have led to an increase in land values. Figure 9.2 displays the dramatic rise in land use prices in the past five years.

1 http://www.econ.iastate.edu/sites/default/files/publications/papers/p7185-2002-12-01.pdf, *17.*

2 http://www.fapri.missouri.edu/outreach/publications/2012/FAPRI_MU_Report_01_12.pdf, *62.*

Agricultural Issues

Soil erosion is an important issue for agricultural producers in the area because it removes topsoil, reduces levels of organic matter, and contributes to the breakdown of soil structure. Soil erosion creates a less favorable environment for plant growth. Nutrients that are removed by erosion can no longer support plant growth, but can accumulate in water and cause problems such as algal blooms. Soils that are lost to erosion cannot be replaced, so erosion prevention is key to maintaining high agricultural soil quality. Many farmers use conservation practices to prevent erosion and maintain the quality of their land. Some of the most popular practices include:

Contour Farming – Uses crop row ridges, built by tilling and planting on the contour to create hundreds of small dams that slow water flow, increase infiltration, and reduce erosion.

Grassed Waterways – Creates a natural drainage way that is graded to form a smooth bowl-shaped channel and is seeded to sod-forming grasses. Runoff flows across the grass rather than tearing away soil and forming a gully.

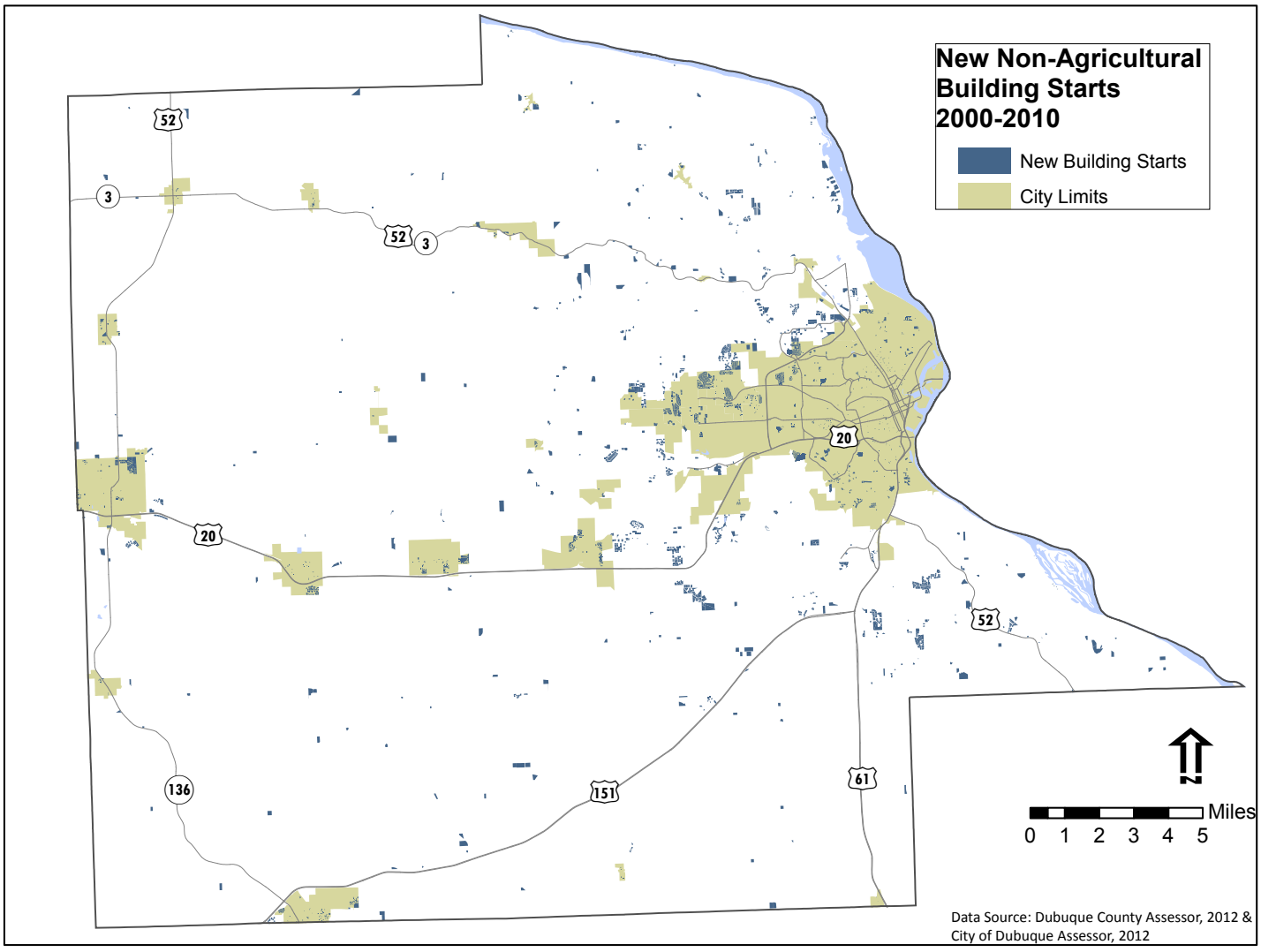
Terracing – Breaks up long slopes and usually follows the contour. As water makes its way down a hill, terraces serve as small dams to intercept water and guide it to an outlet.

Photos Courtesy of the Dubuque Soil and Water Conservation District

Land Development

The loss of agricultural land to non-agricultural suburban development is an issue facing Dubuque County farmers. New non-agricultural buildings were most prevalent in the areas surrounding the community of Asbury. Map 9.5 shows new the new non-agricultural building starts for Dubuque County between 2000 and 2010. The new buildings are predominantly single-family homes that are scattered across agricultural areas. This type of residential development is a concern for the agricultural industry because it can lead to the loss of productive agricultural land, increased potential for conflict between agricultural and non-agricultural land uses, and increased traffic on rural roads.

Map 9.5 - New Non Agricultural Building Starts 2000-2010



Source: Dubuque County Assessor, 2012 & City of Dubuque Assessor, 2012.

Air Quality

Because of its rural setting, Asbury tends to have better air quality than heavily populated urban areas. However, this is not a reason to ignore this issue. Poor air quality is unhealthy for everyone, especially children, the elderly, and people with respiratory conditions like asthma. Cleaner air requires local and regional efforts. City leaders will need to work together and with the Iowa Department of Natural Resources (DNR) and the US Environmental Protection Agency (EPA) to create workable solutions for air quality issues.

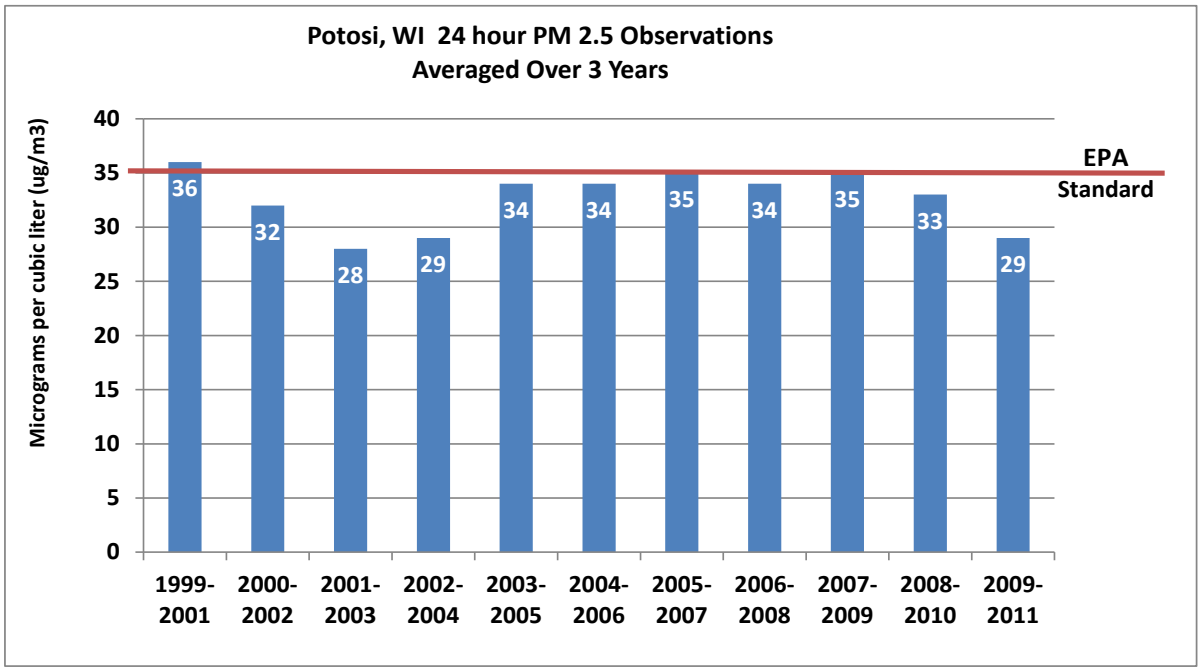
The Federal Clean Air Act regulates six common pollutants: Coarse Particles (PM 10), Fine Particles (PM2.5), Ozone (O3), Lead (Pb), Carbon Monoxide (CO), Nitrogen Dioxide (NO2), and Sulfer Dioxide (SO2). The pollutants listed above are called "criteria" air pollutants because the EPA uses human health-based and environmentally-based criteria for setting limits on the amount of these pollutants that are permissible in the ambient air. Of the six criteria pollutants, particle pollution and ozone represent the most widespread health threats. The EPA designates areas that meet the criteria as "attainment areas" and areas that exceed the criteria as "non-attainment areas." In addition to environmental and human health concerns, a non-attainment designation can bring many negative consequences including: increased complexity and cost of environmental permitting for public and private projects and negative perception of business considering the area for expansion.

Although Asbury is currently a clean air attainment area, the region's air quality is approaching EPA non-attainment levels. Currently, fine particles (PM 2.5) represent the greatest concern for the region. The EPA has set Dubuque County's PM 2.5 standard at 35 micrograms per cubic meter of air (ug/m3). The nearest PM 2.5 monitor is located 13 miles north of Dubuque in Potosi, Wisconsin. Figure 1.3 shows that between 2005 and 2008 measurements at the Potosi monitor were just under the acceptable standard. In response to the air quality data, the City of Dubuque, Dubuque Metropolitan Area Transportation Study (DMATS), and the Metropolitan Planning Organization for the region, formed a clean air task force. The task force is working closely with local industry, public and private school systems, and the regional transit systems to improve the overall air quality of the region and keep PM 2.5 measurements below the threshold level.

Water Quality

Healthy water is important to human health, but is also necessary for a great number of other reasons such as aquatic life, recreational use, wildlife habitat, economic value, and aesthetic value. Water qual-

Figure 9.3 - Observed PM 2.5



Data: Iowa DNR and Wisconsin DNR

ity is measured by various standards, but primarily involves studies concerned with excessive sediment and nutrient deposits or bacteria levels. Clean and clear waters ultimately limit aerobic bacteria, which consume dissolved oxygen. Higher dissolved oxygen levels within aquatic habitats allow for a more diverse range of aquatic life and a healthier atmosphere for the land animals (including humans) who frequent these environments.

Throughout Dubuque County, water quality changes with each watershed in the region. Fortunately, largely due to high levels of public interest in water-related recreational activities, several watersheds in the region play critical roles in protecting water quality. These efforts focus on both smaller, tributary streams and the Mississippi River itself. It is important to gather water quality data on both small tributaries and larger streams throughout Dubuque County. Every watershed in the region flows into the Mississippi River, a river that is classified as an impaired waterbody through much of its course towards the Gulf of Mexico. The Mississippi River is the main source that is causing the "dead zone" or hypoxic area in the Gulf of Mexico. The dead zone is caused by nutrient deposits from the runoff upstream into the Mississippi River, particularly the nutrients of nitrogen and phosphorous.

In order to diagnose water quality issues and devise solutions, scientific monitoring must be conducted. Monitoring water quality in the region has been done primarily through the Iowa DNR, the City of Dubuque, the Dubuque Soil and Water Conservation District (SWCD), and a volunteer citizen-based program called IOWATER. To learn more about IOWATER, view water quality data, and seek relevant information on how anyone can be involved in this community effort, visit www.iowater.net. IOWATER monitors the physical aspects of water quality and the riparian area, as well as the chemical parameters in water. These would include nitrates, nitrites, phosphorus, chloride, temperature, dissolved oxygen, ph, and bacteria.

The Catfish Creek Watershed, which flows through Dubuque County and the cities of Dubuque, Peosta, Asbury, and Centralia, has had extensive water quality monitoring done throughout the watershed. Bacteria limits are far above the "safe" or approved IDNR standard. Nitrates and chloride are also considered to be pollutants of concern in Catfish Creek. Additional monitoring is being performed throughout the watershed, and recently, a Watershed Management Authority Board was formed to serve as an advisory committee to help further educate and inform community leaders and residents within the Catfish Creek Watershed, the City of Asbury is a member of this advisory committee.

The majority of Dubuque County residents get their drinking water from underground sources by public or private well. Therefore, protecting groundwater quality is an important environmental health issue for Dubuque County communities. Groundwater quality is especially important in the County's rural areas and small communities, as they do not have the water testing and treatment resources of larger municipal systems. Iowa officials are unsure of how many private wells deliver unsafe water. However, of the nearly 10,000 private water supply samples submitted to the State annually, approximately 40% show unsafe bacterial content and 15% to 20% exceed the maximum recommended level for nitrate in drinking water.1 There are a large number of potential ground water contaminants, but coliform bacterial and nitrates are commonly used as general indicators of water quality. Private well owners interested in testing their water quality or improving the safety of their well should contact the Dubuque County Health Department for more information.

Conservation Areas

The City of Asbury maintains nine park and recreation areas for public use. These properties are very diverse in both land and wildlife. The uses in these areas range from golfing, tennis, baseball, basketball, volleyball, bicycling, trails, picnicking, and much more. Along with all the activities the City provides for the public, they protect the special flora and fauna found in the Driftless Area.

Dubuque County is located in the Paleozoic plateau which exhibits deep valleys, high bluffs, caves, crevices, and sinkholes. The stream valleys are deep, narrow and v-shaped, exposing underlying sediment bedrock. These exposed rock formations include fossil rich Ordovician formations at the base of the hills, and Silurian formations near the tops of the hills.

1 Glanville, Tom. "Good Wells for Safe Water" Iowa State University Extension. March 3, 1993. http://www.extension.iastate.edu/Publications/PM840.pdf

The landscape of the City is one of diversity and beauty. There are remnant prairies, sprawling oaks, bogs, and much more yet to be discovered.

Plants and Wildlife

Dubuque County boasts several rare and threatened plant and animal species. Summers are a great time to see the beauty of the tropics in the Midwest; Cerulean Warblers, Scarlet Tanagers, Wood Thrush, Ovenbirds, Bobolinks, Henslow sparrows, Indigo Buntings, Rufous-Sided Towhees all nest here in the summer and provides a glimpse into the magic of birds. Bobcats and river otters have been observed at Whitewater Canyon and along the Heritage Trail. Pohlman Prairie is a place to enjoy a plethora of rare butterfly species along with a beautiful remnant hilltop prairie. Along with discovering unusual plants and animals, the streams are fantastic for fishing. Dubuque County boasts several cold water trout streams (some with natural reproduction), as well as small mouth bass fishing, river access at three County parks, and at Heritage Pond, which is a great family fishing location.

Dubuque County has no shortage of rare and threatened plants: Saxifrage, Muskroot, Sullivantia, Shrubby cinquefoil, Canada yew, Monkshood, and more. There are also rare and threatened animals that live in the region, such as, the Indiana Bat, Pleistocene snail, and spotted skunk. Additionally, animals of concern include the red-shouldered hawk, northern harrier, flying squirrel, and bull snakes. Invasive plant species are also a concern across area. The most predominant invasive species are: garlic mustard, buckthorn, honeysuckle, and wild parsnip. The Dubuque County Conservation Board and several other conservation groups in the area are working towards mitigating invasive species presence in the area.

Description of Government Programs

The federal government, the State of Iowa, and Dubuque County have several different conservation programs in which landowners and/or cities can participate. These programs often provide financial assistance for conservation practices, and are listed below. For more information on a specific program, contact the Dubuque Soil and Water Conservation District (SWCD)office, located in Epworth, IA.

State Programs

- Conservation Cost-Sharing
- State Revolving Fund (SRF)
- Water Quality Projects
- Stormwater Best Management Practices Loan
- Resource Enhancement & Protection (REAP)

Federal Programs

- Conservation Reserve Program (CRP)
- Wetlands Reserve Program (WRP)
- Environmental Quality Incentives Program (EQIP)
- Mississippi River Basin Initiative (MRBI)
- Wildlife Habitat Incentive Program (WHIP)State Programs

Conservation Cost-Sharing – Fund allocations are made to Soil and Water Conservation Districts, where Commissioners set priorities for their use and field office staff assure the technical quality of those practices that are approved and built. These practices are subject to long term maintenance agreements.

State Revolving Fund (SRF) - The State Revolving Loan Fund is a source of low-cost financing available to landowners. This opportunity is available specifically to assist and encourage landowners to address and explain source pollution of Iowa streams and lakes. Applications are accepted at any time during the year, and require no cash up front. Interest rates on a revolving loan are well below other financing sources.

Water Quality Projects - Water quality protection projects protect the state's surface and groundwater resources from point and non-point sources of contamination. Authorized under Iowa Code Chapter 161C, projects are developed through a locally led process and are initiated by Soil and Water Conservation Districts. SWCD's are responsible for coordinating the resources and programs of a variety of organizations to achieve local objectives. Project applications consider the importance of the resource to be protected, the nature and extent of the water quality concern, proposed solutions, landowner

interest, and the overall cost effectiveness of the project. Water quality protection projects commonly use the watershed approach to address water quality problems. This approach involves the assessment of all possible sources that may have an effect on water quality in the project area. It provides the most comprehensive, efficient and effective way to achieve soil and water quality protection objectives. Successful projects usually have a high level of community support and include strong public information and education programs. They also feature partnerships with federal, state and local agencies and organizations. These projects have effectively improved water quality in watersheds above publicly owned lakes, trout streams, high use recreation areas, drinking water sources, urban developments and aquifer recharge areas. Practices commonly utilized for those projects include permanent soil and water conservation practices (terraces, basins, etc.), temporary management practices (no-till, nutrient management, etc.) as well as urban erosion and storm water management practices (silt fences, bio-swales, etc.)

Stormwater Best Management Practices (BMP) Loans - The Stormwater BMP Loans are a source of low-cost financing for long term / voluntary practices that manage storm water quality. This loan opportunity is available specifically to assist and encourage developers and cities to address non-point source pollution of Iowa streams and lakes through implementing stormwater quality BMPs that are included in the Iowa Stormwater Management Manual at www.ctre.iastate.edu/pubs/stormwater/index.cfm.

Resource Enhancement and Protection Program (REAP) - REAP is a state program that invests in, as its name implies, the enhancement and protection of the state's natural and cultural resources. Iowa is blessed with a diverse array of natural and cultural resources and REAP is likewise diverse and far reaching. Depending on the individual programs, REAP provides money for projects through state agency budgets or in the form of grants. Several aspects of REAP also encourage private contributions that help accomplish program objectives. Based on a submitted proposal and allotment, REAP funds may be available for soil conservation practices through Soil and Water Conservation Districts. For more information regarding REAP visit: http://www.iowareap.com/ .

Federal Programs

Conservation Reserve Program (CRP) - The Farm Service Agency (FSA) and Natural Resources Conservation Service (NRCS) administer the CRP. This program has two ways to enroll. The program cost-shares tree planting and grass establishment on highly erodible land and pays landowners an annual rental payment for up to 15 years. Although the date of the next general CRP sign-up is uncertain, there is a continuous sign-up for highly sensitive environmental areas such as riparian areas adjacent to streams and creeks, bottomland areas, and living snowfences. Through the continuous sign-up program, landowners can find out if land is eligible, what payment they will receive, and may sign up at any time. Eligible land is automatically accepted into the continuous CRP program. Under the general CRP sign-up, landowners can receive around $100 per acre land rental rate and 50% cost-share reimbursement for installation of the CRP practice. For more information on CRP visit: http://www.fsa.usda.gov/.

Wetlands Reserve Program (WRP) - Iowa landowners are interested in the WRP both environmental and economic reasons. The primary reason for participation is economic. Continuing to farm wet or frequently flooded marginal soils gives less financial return than does a wetland easement in a U.S. Department of Agriculture (USDA) program. Also important to the farmers entering the programs are the benefits wetlands give to wildlife and water quality. Iowa's wetland restoration goal is to reestablish wetland ecosystems. Restoration activities typically include tile breaks, ditch plugs, shallow excavations, water control structures, and seedings of native grasses and forbs. Under WRP, administered by the NRCS, landowners can restore wetlands through permanent easements, a 30-year easement, or by restoring the land under a restoration cost share agreement. For more information on WRP visit: http://www.nrcs.usda.gov/programs/wrp/states/ia.html.

Environmental Quality Incentives Program (EQIP) – EQIP is a voluntary conservation program of the United States Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) that promotes agricultural production and environmental quality. This program is available to farmers and offers financial and technical assistance

to install or implement structural and management practices on eligible agricultural land. Applications for EQIP can be made at local NRCS offices.

The EQIP application is based on decisions reached with producers during the conservation planning process. EQIP applications are prioritized for funding using a state or locally developed ranking worksheet that generally considers cost-effectiveness, resources to be treated, meeting national EQIP priorities, compliance with federal, state or tribal environmental regulations or reducing the need for future regulations and, to a degree, the location of the contract. Funded EQIP applications result in a contract which lists the practices to be applied along with an application schedule and federal funds committed. Conservation practices applied with EQIP funds are to be maintained for the service life of the practice, which may be longer than the term of the EQIP contract. The minimum contract length is one year after the implementation of the last scheduled practice with a maximum length of ten years. The implemented practices are subject to NRCS technical standards. Farmers may elect to use NRCS or a Technical Service Provider for EQIP technical assistance. For more information on EQIP, visit: http://www.ia.nrcs.usda.gov/programs/stateeqip.html .

Mississippi River Basin Initiative (MRBI) - To improve the health of the Mississippi River Basin, including water quality and wildlife habitat, the NRCS is developing the Mississippi River Basin Healthy Watersheds Initiative. Through this new Initiative, NRCS and its partners will help producers in selected watersheds in the Mississippi River Basin voluntarily implement conservation practices that avoid, control, and trap nutrient runoff; improve wildlife habitat; and maintain agricultural productivity.

These improvements will be accomplished through a conservation systems approach to manage and optimize nitrogen and phosphorous within fields to minimize runoff and reduce downstream nutrient loading. NRCS will provide producers assistance with a system of practices that will control soil erosion, improve soil quality, and provide wildlife habitat while managing runoff and drainage water for improved water quality.

The Initiative will build on the past efforts of producers, NRCS, partners, and other State and Federal agencies in the 12-State Initiative area to address nutrient loading in the Mississippi River Basin. Nutrient loading contributes to both local water quality problems and the hypoxic zone in the Gulf of Mexico. The 12 participating States are Arkansas, Kentucky, Illinois, Indiana, Iowa, Louisiana, Minnesota, Mississippi, Missouri, Ohio Tennessee, and Wisconsin.

NRCS will offer this Initiative in Fiscal Year 2010 through 2013, dedicating at least $80 million in each year. This is in addition to the agency's regular program funding in the 12 Initiative States and funding by other Federal agencies, States and partners and the contributions of producers. For more information on MRBI please visit: http://www.ia.nrcs.usda.gov/programs/MRBI.html.

Wildlife Habitat Incentive Program (WHIP) - WHIP provides cost-share reimbursement for wildlife habitat practices. A portion of Iowa's WHIP allocation will be set aside for woodland wildlife habitat improvement. WHIP will also cost-share on wildlife practices that improve grasslands, riparian corridors, shelterbelts, windbreaks, native prairie restoration, and aquatic habitat. For more information on WHIP visit: http://www.ia.nrcs.usda.gov/programs/whip.html.

Summary

Asbury has a diversified landscape, consisting of rolling hills and impressive bluffs, as well as high quality agricultural land composed of row crops and pasture ground. Both air quality and water quality vary across the area and are continually being monitored to improve conditions. Several different conservation programs are available through the Natural Resource Conservation Service and the Dubuque Soil and Water Conservation District to assist both cities and landowners installing conservation practices on the ground. Wildlife opportunities are abundant in the area and offer a diverse set of flora and fauna opportunities to thrive in our landscape. Preserving and restoring the area's landscape, air quality, water quality, and wildlife, while protecting our agricultural land, is an integral part of our area's natural resources.

Goals and Objectives

1. **To encourage the creation of a sustainable environment that successfully balances urban growth and development with ecological constraints.**

   1.1 Encourage expansion and recruitment of environmentally conscious businesses.

   1.2 Encourage existing businesses to incorporate sustainability efforts into their operations.

   1.3 Maintain and plan for biodiverse green space as development and public improvements occur.

   1.4 Identify, preserve, and promote linkages or connections of open/green spaces.

   1.5 Promote programs and enforce ordinances program that minimize soil erosion.

   1.6 Promote outdoor lighting practices that minimize light pollution.

   1.7 Encourage existing businesses and residential subdivisions to add retention basins and/or on-site infiltration systems to further control flooding and runoff.

   1.8 Promote appropriate lifestyles and infrastructure changes to reduce causes and impacts of global climate change.

   1.9 Identify and plan for future locations for active and passive park and recreation areas that protect natural places that are unique to the area.

   1.10 Develop more recreational trails around natural and wetland areas to preserve and utilize these areas.

   1.11 Encourage active, physical mobility (bike, walk, mass transit) to areas of daily living.

   1.12 Create and maintain urban forest inventories and plan for planting of diverse native species of trees throughout the area.

2. **To promote the protection, preservation, and enhancement of the region's prairies, wetlands, waterways, scenic views, vegetation, wildlife, and all natural areas.**

   2.1 Prevent the degradation of environmentally sensitive natural resources such as stream banks, flood plains, steep slopes, slide prone areas, natural forests, wildlife habitat, areas containing shallow soils, karst areas, and endangered plants and animals.

   2.2 Promote identification, restoration, and protection of rare, native, and sensitive habitat (including prairies and woodlands), and areas that contribute to the natural character of the region with concern to the evolving understanding of expertise in current management techniques.

   2.3 Encourage protection and restoration of sensitive areas as development and redevelopment occurs.

   2.4 Encourage environmentally appropriate public use of, and access to, the region's bluffs, wetlands, and waterways.

   2.5 Partner with community groups to demonstrate and educate the community on best management practices for sustainable design.

   2.6 Encourage reduction of non-native, invasive plant and animal species and maintain an appropriate balance of native species.

   2.7 Promote preservation of private and public lands which contribute to the area's natural character, through connecting green belts, wildlife refuges, or passive recreational areas.

   2.8 Encourage owners of land which contains environmentally sensitive natural resources or contributes to the natural character of the city, to preserve these areas by conservation easement, lease, deed restriction, or other formal method.

3. **To recognize agricultural land outside the urban fringe areas as an important natural resource of the area, and to preserve agricultural soils that have historically exhibited high crop yields and are considered most suitable for agricultural production.**

   3.1 Discourage development of productive agricultural soils by nonfarm uses in the nonfringe areas.

3.2 Research the possibility of using the Land Evaluation and Site Assessment *(LESA)* system and a Corn Suitability Rating of 45 to be applied by the County for the preservation of agricultural land areas designated on the Future Land Use Development Map on sites proposed for non-farm development.

3.3 Consider other factors besides Corn Suitability Rating to determine whether agricultural land preservation is appropriate; such as, physical characteristics and topography of the property, location of the property and the compatibility of surrounding land uses, Land Capability Classification, and historic yields per acre of the property.

3.4 Support economic development efforts to diversify the farm economy through "value added" products, organic farming, and alternative crops and livestock.

4. Encourage farming techniques and soil conservation practices which will protect and conserve top soil and prevent degradation of water resources.

4.1 Encourage landowners to work with the Dubuque Soil and Water Conservation District (SWCD) to install conservation practices on their ground that protect soil loss and water quality.

4.2 Support the Dubuque Soil and Water Conservation District Commissioners by partnering on watershed projects and/or conservation practices throughout the community.

4.3 Promote the protection of wetlands, and/or sensitive areas, which play a crucial role in our local and global ecosystem.

4.4 Encourage landowners to leave adequate buffers between agricultural land and waterways.

4.5 Encourage landowners to leave fencerows, timber areas, and riparian areas for wildlife and waterway protection.

5. To minimize the conflicts between agriculture and non-farm rural development.

5.1 Discourage non-farm uses from locating outside of urban areas, or limit such uses to areas that are appropriate for the development, are least disruptive to the area's natural character, and are designed to blend with the area's natural character as much as possible.

5.2 Provide appropriate environmentally sensitive transition areas between agrarian or natural areas and developing areas.

5.3 Discourage non-farm development in agricultural areas that may hinder efficient farming practices, agricultural operations, and the ability of the agricultural community to maintain and expand agriculture activity.

5.4 Permit agricultural services and businesses that serve the local agricultural community in rural areas if compatible with adjacent uses. Encourage locating services along a road that is adequate to support projected traffic demand.

6. To promote conservation practices that result in responsible use of non-renewable natural resources.

6.1 Consider the potential for open space in any actions relative to land use.

6.2 Promote awareness and use of alternate, renewable resources.

6.3 Remove barriers to, explore incentives for, and encourage green building and landscaping principles.

6.4 Promote programs to improve energy efficiency.

6.5 Promote planting and preserving trees to reduce energy use.

6.6 Promote walking, mass transit use, and cycling through infrastructure development to reduce energy consumption and to improve citizen and community health.

6.7 Encourage public organizations to lead by example by purchasing and using energy and fuel efficient vehicles.

7. To educate citizens about environmental issues affecting their lives and their community.

7.1 Partner with educational institutions and me-

dia to report status of environmental indicators trends to the community.

7.2 Encourage ongoing environmental education programs for citizens of all ages, including the human health effects of environmental issues and problems.

7.3 Encourage coordination of community organizations concerned with environmental issues and local ecosystems.

8. To protect and preserve existing water and air quality and ensure that future water and air quality is safeguarded.

8.1 Identify and develop potential controlling measures to safeguard existing and future water and air quality.

8.2 Ensure that all new development meets the applicable standards for water and air quality controls and investigate improvements to standards when necessary.

8.3 Protect, control, and maintain water distribution systems to preserve water quality and meet state and federal mandates.

8.4 Promote ground water protection and adequate water quality and quantity of our streams and rivers by expanded infiltration.

9. To assure appropriate control, collection, disposal, and per capita reduction of stormwater, wastewater, solid wastes, and household hazardous wastes.

9.1 Promote reduction and proper disposal of business and household hazardous waste, including purchasing alternatives.

9.2 Promote reduction, proper collection and disposal of solid wastes in accordance with environmental and aesthetic standards.

9.3 Prevent toxic waste discharge into the wastewater treatment system and/or the environment through education, monitoring, and enforcement.

9.4 Support the Dubuque Metropolitan Area Solid Waste Agency's various materials diversion programs.

9.5 Promote a safe and sanitary environment along streets, alleys, and other properties.

9.6 Promote implementation of best management practices in the collection and disposal of stormwater and wastewater.

9.7 Encourage natural infiltration from rainfall and snow melt to replenish groundwater and recharge springs and aquifers.

10. To promote residential and business programs that reduce, reuse, recycle, and safely dispose of the community's discard stream.

10.1 Expand recycling efforts through increased participation and new materials collections, e.g. electronics.

10.2 Promote use of recycled content products, e.g. compost and environmentally preferable purchasing.

10.3 Encourage food scrap and backyard composting options and awareness.

10.4 Educate the community concerning recycling and other materials management and solid waste minimization methods.

10.5 Promote reuse of existing buildings, deconstruction and alternative uses rather than disposal of construction/demolition materials.

11. To promote community clean-up and beautification efforts through public and private partnerships.

11.1 Educate the public on litter prevention and illegal dumping and enforce existing laws.

11.2 Encourage clean-up, beautification, and landscaping for the public, private, and business sectors, i.e. parkland, roadway, and shoreline adoption programs.

11.3 Encourage plantings of native species conducive to urban native wildlife, i.e. birds and butterflies.

11.4 Encourage community and neighborhood clean up and beautification efforts.

11.5 Encourage balancing the advertising and identification needs of businesses, and orga-

nizations with on-premise and off-premise sign regulations that protect scenic vistas, minimize sign clutter, and are consistent with local, state, and federal sign regulations.

12. To meet or exceed all federal, state, and local regulations for environmental quality.

12.1 Gain knowledge of and promote compliance with regulations.

12.2 Support federal and state entities in their monitoring and enforcement of their regulations.

12.3 Enforce laws on illegal dumping and littering.

Watershed Management

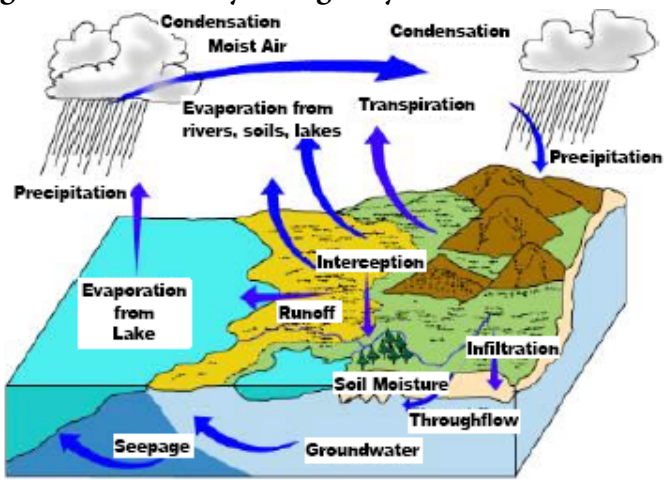
Chapter 11

Dubuque County Watersheds are in a state of constant change. Land use changes, Agricultural farming practices, and urban development has produced habitat alteration and a drastic increase in the rate and volume of stormwater inputs. Understanding the importance of land use planning, the impacts of infiltration based practices, and developing site specific boundaries of non-point source pollution within a watershed will lead to improvements in our local watersheds. Map 11.1 at the end of the chapter shows the watershed boundries within the city. One of the goals of this plan is to work towards repairing the damage done to in-stream habitat and reduce the rate and volume of stormwater flow using infiltration based practices.

The Hydrologic Cycle

The hydrologic cycle, illustrated in Figure 11.1, is the movement of water from the atmosphere to the earth's surface. Water moves through one or more components of the cycle including evaporation, transpiration, runoff, precipitation, infiltration, percolation and its eventual return to the atmosphere. In an undeveloped area, with natural ground cover such as forest or meadow, a significant portion of precipitation infiltrates into the soil. This water is filtered and cooled as it travels underground. Some infiltrated water is subsequently discharged into rivers and streams as baseflow. Baseflow provides a steady contribution of high quality water to lakes, streams and rivers. Other infiltrated water descends deeper underground to the water table and recharges aquifers. Groundwater recharge replenishes the supply of underground water that can be extracted for domestic use and irrigation. Another portion of precipitation is returned to the atmosphere through a combination of evaporation and plant transpiration called evapotranspiration. Where there is natural ground cover, all of these processes together serve to minimize the percentage of precipitation that becomes runoff, the water that flows over that land surface into streams and other surface water bodies.

Figure 10.1 - The Hydrologic Cycle



Adapted from: The Physical Environment: An Introduction to Physical Geography

Urbanization dramatically affects the hydrologic cycle by altering the relative percentage of precipitation that contributes to groundwater, evapotranspiration, and runoff relative to the natural ground cover. Specifically, urbanization increases runoff by decreasing the amount of water that infiltrates into the ground and is taken up and transpired by plants. This is because water cannot infiltrate into, and plants cannot grow on, impervious surfaces such as pavement and rooftops. Figure 11.2 illustrates how watershed imperviousness affects the magnitude of each of the hydrologic cycle components. Increased stormwater runoff not only decreases baseflow and groundwater recharge, but also increases the amount of water that runs off the surface, picking up and carrying pollutants to lakes, streams, rivers and wetlands. The increased surface runoff increases flooding frequency and severity while the increased input of pollutants degrades water quality and aquatic habitat.

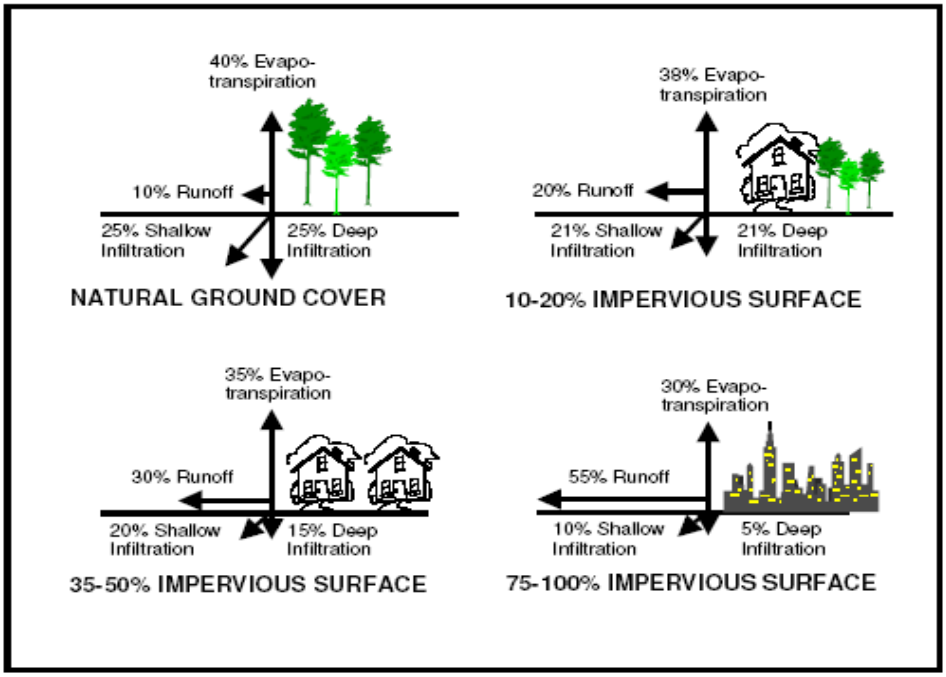
Adapted from: Prince Georges County Department of Environmental Resources Programs and Planning Division, 1999. Low-impact Development Design Strategies: An Integrated Design Approach. Department of Environmental Resources, Prince Georges County, Maryland.

Establishing countywide standards for the quantity and quality of water that runs off land under construction in urban and rural areas, including farms will play a crucial role in protecting our watersheds in Dubuque County. Providing flexibility in meeting those standards, and recognizing the unique characteristics of each project site, will be equal as important.

Construction site erosion and uncontrolled stormwater runoff from land disturbing and land development activities have significant adverse effects upon regional water resources including the health, safety, property and general welfare of the community, diminishing the public enjoyment and use of natural resources. Effective erosion control, sediment and stormwater management depends on proper planning, design, timely installation and continued maintenance of erosion control and stormwater management practices. Specifically, soil erosion and stormwater runoff can:

- Carry sediment, nutrients, pathogens, organic matter, heavy metals, toxins and other pollutants to regional lakes, streams and wetlands;
- Diminish the capacity of water resources to support recreational and water supply uses and a natural diversity of plant and animal life;
- Clog existing storm drainage systems, increasing maintenance problems and costs;
- Cause bank and channel erosion;
- Increase downstream flooding;
- Reduce groundwater recharge, which may diminish stream base flows and lower water levels in regional lakes, ponds and wetlands;
- Contaminate drinking water supplies;
- Increase risk of property damage and personal injury, and;
- Cause damage to agricultural fields and crops

Figure 10.2 - Impact of Impervious Area on the Hydrologic Cycle Fluxes



Adapted from: Prince Georges County Department of Environmental Resources Programs and Planning Division, 1999. Low-impact Development Design Strategies: An Integrated Design Approach. Department of Environmental Resources, Prince Georges County, Maryland.

Good stormwater management does not begin with site disturbance and construction. Decisions about lot layout, building density, location of public rights-of-way, protection of sensitive areas, and preservation of open space all have an impact on the quality and quantity of stormwater runoff.

When using site-planning techniques to control stormwater, designers should keep local zoning, land division and building codes in mind. Many communities have adopted site design or land division criteria to serve a variety of land use goals that may or may not directly relate to stormwater runoff.

Examples include:

- Preserving neighborhood or rural character
- Protecting specific natural or scenic resources
- Promoting smooth traffic flow
- Allowing for future land division
- Ensuring adequate pedestrian, bicycle or emergency vehicle access

Usually, such goals complement or reinforce good design for stormwater control. However, in some cases, such as choosing between grid-pattern or cul-de-sac street layouts, the designer may need to strike a balance between competing land use goals. For example, in a community seeking to promote traditional neighborhood design, engineered stormwater basins may be preferable to a curvilinear street layout.

Many techniques can be employed during the site planning and design stage of development to reduce the volume of runoff, thus reducing the need for structural practices to store and treat stormwater. Design and location of stable outlets for site runoff is also important to consider at this time, to avoid causing problems for downstream neighbors. Consider implementing the following techniques (which are listed in order of priority) and manage runoff as close to the source as possible to minimize the volume of stormwater runoff.

A. Identify and Avoid Sensitive Areas

Local variations in topography, soil types, vegetation and hydrology can have a significant influence on the nature and amount of stormwater runoff. The first step in site planning for stormwater management should be identification and mapping of areas that:

- Contain features that could be adversely impacted by stormwater runoff (such as wetlands, floodplains, lakes, streams, and shallow fractured bedrock);
- In their natural state, contribute to infiltration, soil and water retention, groundwater recharge or temperature control (such as highly pervious soils, native grasslands, woodlands or hydric soils);
- Provide natural drainage ways for surface water runoff (such as intermittent or perennial streams, natural or artificial drainage ways); or
- Could be a source of sedimentation, channelized flow or erosion if disturbed (such as steep slopes or easily eroded soils).
- Contain cultural resources, which are protected by federal law. Cultural resources can be found at: http://www.ia.nrcs.usda.gov/technical/culturalresources.html

Development should be designed and construction operations planned to avoid disturbing these areas wherever possible. Federal, state or local regulations protect some natural features, such as wetlands or navigable waterways. Changes in volume and direction of stormwater flow resulting from development or other stormwater practices should be carefully designed and controlled to avoid secondary impacts to natural areas. For example, increased runoff volume can erode streambeds and banks or damage natural wetlands without careful consideration early in the planning process.

Working around sensitive areas should be incorporated as part of the preliminary design, which not only avoids these areas but also highlights them as natural amenities that add value to the development. These sensitive areas complement the functions and values provided by the countywide network of open space corridors.

B. Minimize Impervious Surfaces

Impervious surfaces are the primary source of runoff in both small and large storm events. Hence, the single most effective means of reducing runoff volume

is by minimizing the site's impervious surface area.

1. Preserve and Reproduce Pre-Development Hydrologic Conditions

- Utilize natural drainage flow paths. Dubuque County strongly recommends the use of grass waterways, vegetated drainage channels and/or water quality swales along street right-of-ways or back lots to channel runoff without abrupt changes in the direction of flow.
- Restore soil permeability. Use practices such as deep tilling, chisel plowing and incorporating organic matter into the upper soil layer to restore soil infiltration capacity on heavily disturbed sites. When soil is compacted, its capacity to infiltrate water is greatly diminished. On heavily disturbed sites where practices are used to restore soil permeability, the county may waive the requirement to lower the soil permeability class rating in hydrologic calculations.
- Minimize directly connected impervious area. Any impervious surface that drains into a catch basin, area drain, or other conveyance structure is a "directly connected impervious area (DCIA)." Impervious surfaces also increase the runoff rate (reducing the runoff time of concentration) and runoff volume, which may cause higher peak flows downstream, and increase flood and erosion potential. To minimize directly connected impervious areas, downspouts and driveways should be directed to pervious areas, where feasible. This promotes infiltration and reduces the velocity of runoff water. Other strategies for minimizing connected impervious area include directing sheet flow through vegetated areas and locating impervious areas so they drain to vegetated buffers or other pervious areas.
- Use bioretention and other practices to increase infiltration. Bioretention basins are engineered practices that use natural processes, including microbial soil processes, infiltration, and evapotranspiration to improve stormwater quality. Rain gardens, often very attractive, are one type of practice commonly designed for residential lots to soak up rainwater from roofs, driveways, and lawns.
- Include green infrastructures. Developed areas may provide self-treatment of runoff via the use of green infrastructures if properly designed and drained. Green infrastructures may consist of conserved natural spaces, large landscaped areas (including parks and lawns), grass/vegetated swales, and turf block paving areas. The infiltration and bio-treatment inherent to such areas may provide the treatment control necessary. These areas therefore act as their own BMP, and no additional BMPs to treat runoff should be required.

2. Site and Lot Vegetation

- Predevelopment vegetation. Maintain as much predevelopment vegetation as possible. Vegetation prevents erosion and absorbs water and, therefore, reduces runoff volume.
- Swales. Use shallow grassed roadside swales, boulevards and sunken parking lot islands with check dams instead of curb and gutter storm drain systems to handle runoff, wherever possible.
- Natural buffers and drainage ways. Maintain natural buffers between development sites and water bodies. Buffers slow runoff, remove sediment and enhance infiltration. Natural depressions and channels should be maintained to slow, store, and infiltrate water.

3. Streets and Roads

- *Road length.* Minimize subdivision roadway length by using a roadway layout with the least pavement length suitable for the site's topography and other planning goals.
- *Road width*. Work within local zoning requirements and planned unit development provisions to minimize road width by narrowing road sections and/or reducing on-street parking. On-street parking may be restricted to one side of the street or eliminated altogether. Pavement and right of-way width must still meet minimum standards described in local land division and zoning ordinances, and should allow for safe vehicular travel and emergency vehicle access.
- *Design road patterns to match landforms*. In rolling terrain, for example, local streets should branch from collector streets and end in short

loops or cul-de-sacs, where consistent with other local ordinances and land use goals. Some local ordinances and plans seek to create traditional grid patterns or limit the use of cul-de-sacs to address traffic, neighborhood character or other design objectives.

4. Lot Layout

- Rooftops. Reduce the impervious rooftop area by minimizing the building footprint of houses or utilizing green roof technology. Use vertical space rather than horizontal house layouts. Sod or vegetative "green roofs" rather than conventional roofing materials.
- Driveways. Where permitted under local driveway, zoning or land division ordinances, reduce impervious driveway area by using shared driveways, limiting driveway width, using pervious pavement, and using reduced building setbacks.
- Parking lots. For commercial sites, reduce overall impervious area by providing compact car spaces, eliminating excessive or unnecessary spaces, utilizing shared parking, minimizing stall dimensions, incorporating efficient parking lands, and using pervious materials in spillover parking areas.

C. Low-Impact Development (LID) and Conservation Subdivision Design

Many of the practices and techniques discussed above are commonly referred to as "low-impact design" or "conservation subdivision design". Both low impact designs and conservation subdivisions have common goals; however, they have different strategies in obtaining that goal.

Low Impact Development is a site design strategy with a goal of maintaining predevelopment hydrologic conditions by managing runoff at the source using uniformly distributed stormwater management facilities. Instead of conveying and treating stormwater in large facilities located at the bottom of drainage areas, LID addresses stormwater through small, cost-effective landscape features located at the lot level. The low-impact analysis and design approach focuses on the following hydrologic analysis and design components:

i. Runoff curve number (RCN): Minimizing change in post-development hydrology by reducing impervious areas and preserving more trees and meadows to reduce the storage requirements to maintain the pre-development runoff volume.

ii. Time of concentration (Tc): Maintaining the pre-development Tc in order to minimize the increase of the peak runoff rate after development by lengthening flow paths and reducing the length of the runoff conveyance systems.

iii. Infiltration: Manage water quality volume through infiltration.

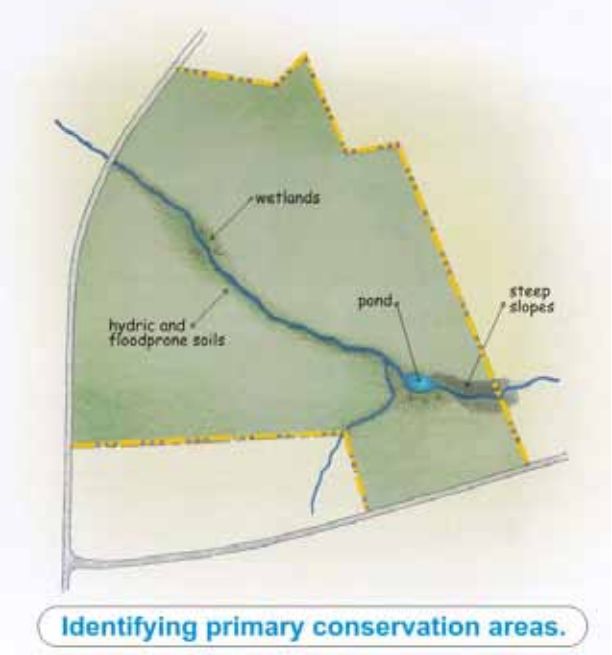
iv. Retention: Providing permanent pool storage for volume and peak control, as well as water quality control, to maintain the same storage volume as the pre-development condition.

v. Detention: Providing additional storage above permanent pool levels, if required, to maintain the same peak runoff rate and/or prevent flooding for storm recurrence intervals ≥ 5-10 years.

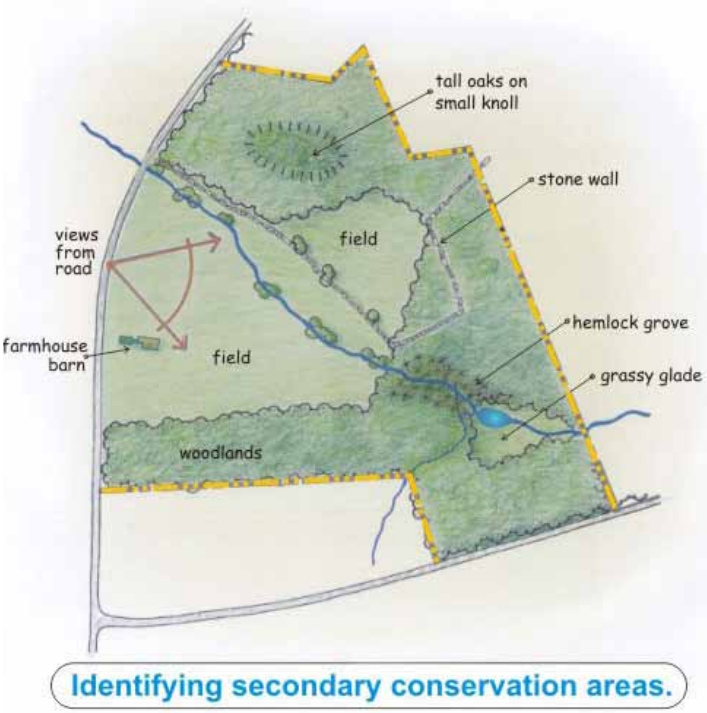
Conservation subdivision designs are characterized by common open space and clustered compact lots. The purpose of a conservation subdivision is to protect sensitive and valuable open space, habitat and other environmental resources while allowing for the maximum number of residences under current community zoning and subdivision regulations. Figures 11.3, 11.4 and 11.5 compares a conventional subdivision layout with a subdivision incorporating

Figure 10.3 - Conservation Design Subdivision Layout

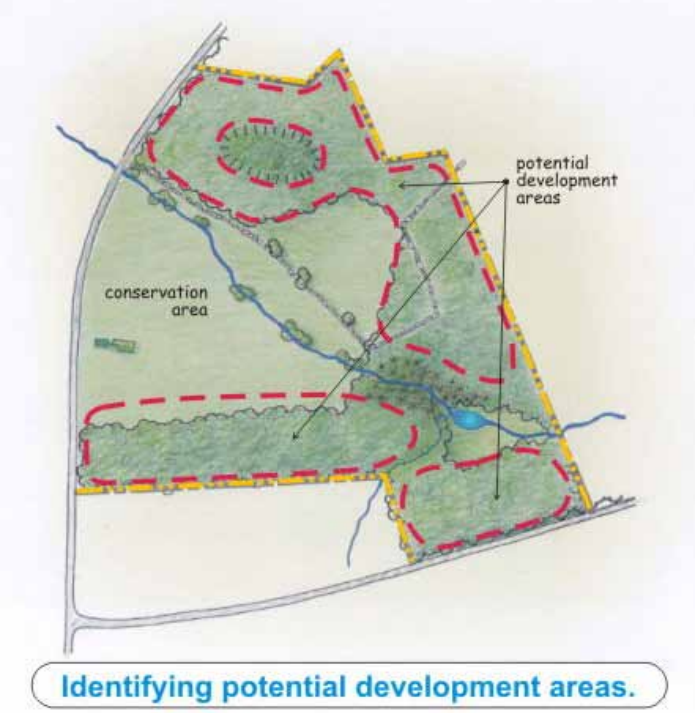
Site before development.



Identifying primary conservation areas.

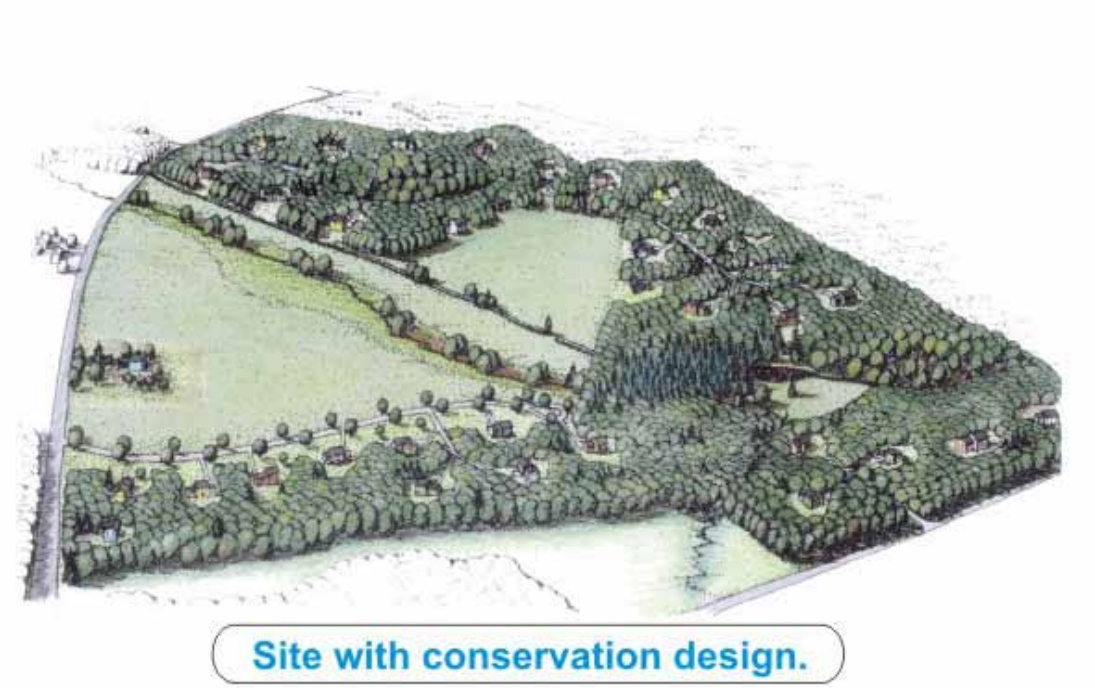


Identifying secondary conservation areas.



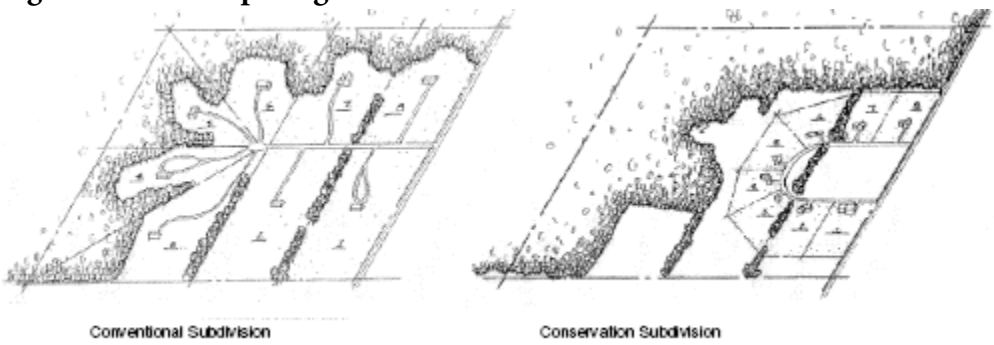
Identifying potential development areas.

Figure 10.4 - Conservation Design Subdivision Layout Continued



Source: http://www.mass.gov/envir/smart_growth_toolkit/pages/mod-lid.html

Figure 10.5 - Comparing Conventional and Conservation Subdivisions.



Source: Ordinance for a Conservation Subdivision, UWEX, Brian Ohm.

conservation design practices.

During plan review, LID and conservation subdivision design and other practices may need to be evaluated to ensure that the land division meets or exceeds subdivision ordinance requirements or planned-unit development (PUD) approval procedures.

Cost Considerations – Incorporating LID.

Often times, critics of conservation design and LID practices raise concern over the high costs of incorporating LID into subdivisions. What may seem like a simple question, can often be very difficult to analyze and has several dimensions, making it more of a complex topic. It is important to analyze the word "costs" by several dimensions: planning, design, capital costs, short-term vs. long-term maintenance, land values, transportation surfaces, and environmental impacts.

Figure 11.6 is offered to help planners, engineers, regulators, and developers compare the costs and benefits of LID with a more conventional land development approach.

Figure 10.6 - Qualitative Cost Comparison – How LID Practices Compare with Conventional Practices

LID Practice	Design Costs	Construction Costs	Long-Term Maintenance Costs	Increased Land Values	Decreased Environmental Impact
Better Site Design	🙁	🙂	😎	🙂	🙂
Better Local Roads	🙁	🙂	🙂	😎	🙂
Bioretention/Rain Gardens	🙂	😎	😎	🙂	🙂
Infiltration/PermeablePavements	🙁	🙁 (1)	🙁 (1)	😎	🙂
Stormwater Planters	🙂	😎	😎	🙂	🙂
Vegetated Swales	🙂	🙂	😎	😎	🙂
Vegetated Buffers	🙂	🙂	🙂	🙂	🙂
Cisterns/Rain Barrels	🙂	🙂	🙁 (1)	😎	🙂
Green Roofs	🙁	🙁 (1)	😎	😎	🙂

Key : Key :

🙂- LID practice compares favorably with conventional approach (e.g., costs less)
🙁- LID practice compares unfavorably with conventional approach (e.g., costs more)
😎- Too close to determine, site conditions or other factors may affect cost

(1) - Costs may be too close to call, or even favorable when all costs such as heating, cooling, roof replacement, irrigation, or additional downstream detention are considered.

Source: Massachusetts State, Smart Growth/Smart Energy Toolkit

D. Watershed-Wide Planning for Stormwater Management

The Dubuque County Manual, while focusing on plans and practices to meet the erosion control and stormwater needs of particular sites, encourages watershed-wide planning. Ideally, stormwater management should be conducted as part of a watershed plan.

In watershed-wide planning, communities can work together across municipal boundaries to identify potential locations for regional stormwater treatment facilities, and coordinate on-site basins and outlets to reduce the effect of combined peak discharges after storm events. They can also collectively identify areas where stormwater treatment facilities should not be located, e.g. in hydric or alluvial soils, and target areas where they are preferred, e.g. deep sandy soil. Such a collaborative approach may result in significant cost savings from economies of scale and shared responsibility.

E. Regional Stormwater Management

Using individual, onsite structural stormwater management facilities for each development is the typical approach for downstream flood control. The developer finances the design and construction of these management facilities, and is initially responsible for all operation and maintenance. A potential alternative approach is for a community to install strategically-located regional stormwater management facilities in a sub-watershed rather than require onsite management facilities. Regional stormwater management facilities are designed to manage stormwater runoff from multiple projects and/or properties through a local jurisdiction-sponsored program, where the individual properties may assist in the financing of the facility, and the requirement for onsite management facilities is either eliminated or reduced. Figure 11.7 lists some advantages and disadvantages of regional facilities as compared to individual on-site facilities.

Figure 10.7 - Advantages and Disadvantages of Regional Stormwater Management Facilities

Advantages
Reduced construction costs
Reduced operation and maintenance costs
Ability to serve as a recreational and aesthetic amenity for a community
Ability to maximize the intent of the proposed project. (The area set aside for stormwater management facilities is minimized)
Higher assurance of maintenance
Mitigates existing developments with insufficient stormwater management facilities while also providing for future development

Disadvantages
Determining an effective location can be difficult
Initial capital costs can be high
Substantial planning, financing and permitting are required.
The local government may need to establish a stormwater utility or alternative program to fund and implement stormwater control.

If a community decides to implement a regional stormwater control, it must ensure that the conveyances between the individual upstream developments and the regional facility can handle the design peak flows and volumes without causing adverse impact or property damage. Full build-out conditions in the regional facility drainage area should be used in the analysis. In addition, unless the system consists of completely man-made conveyances (i.e. storm drains, pipes, concrete channels, etc.); onsite structural management facilities for water quality and downstream channel protection will be required for all developments within the facility's drainage area.

Federal water quality provisions do not allow the degradation of water bodies from untreated stormwater discharges, and it is U.S. EPA policy to not allow regional stormwater management facilities that would degrade stream quality between the upstream development and the regional facility. Without onsite water quality and channel protection, regional management facilities do not protect smaller streams upstream from the facility from degradation and stream bank erosion. Upstream inundation from a regional facility impoundment can eliminate floodplains, wetlands, and other habitat. Further, without adequate channel protection, aquatic habitats and water quality in the channel network upstream of a regional facility may be degraded by stream bank erosion if they are not protected from bank-full flows and high velocities. Based on these concerns, both the EPA and the U.S. Army Corps of Engineers have expressed opposition to in-stream regional stormwater control facilities. In-stream facilities should be avoided if possible, and will likely be permitted on a case-by-case basis only.

F. City of Asbury Erosion Control and Stormwater Ordinance

In June of 2011, the City of Asbury City Council passed an Erosion Control and Stormwater Management Ordinance. In addition to the Ordinance, the City worked with a local engineering firm to complete a Stormwater Management Manual.

Goals and Objectives

The following goals and objectives are intended to maximize opportunities to guide the City of Asbury and communities of Dubuque County in providing relevant information to all residents regarding watersheds. The following goals encompass and highlight how existing and future development impact our county watersheds, and what objectives can be taken to mitigate and prevent watershed degradation.

1. **To prevent erosion by establishing preconstruction sediment control measures before, during, and after any land disturbing activities take place to improve the health of our local watersheds.**

   1.1 Plan for and design effective erosion and sediment control structures before any land disturbing development occurs.

   1.2 Install and maintain erosion and sediment control structures and monitor for continued effectiveness throughout until development is complete and full build out occurs.

   1.3 Identify and avoid developing in environmentally sensitive areas including stream banks, flood plains and low lying areas; steep slopes, bluff lands and slide prone areas; areas containing shallow soils or fractured limestone; karst areas and areas with low water tables that can have a significant influence on erosion.

2. **To prevent erosion and control sediment during construction.**

   2.1 Address areas that are prone to and/or have erosion problems with stabilization control Best Management Practices (BMPs) including grass channels, dust control, mulching, seeding and fertilizing, silt fence, sod, surface roughening, vegetative filter strip, compost blankets, compost filter tubes, rolled erosion control products (RECPs), wattles, flocculants, and turf reinforcement mats (TRMs) when working in existing built environments.

   2.2 Build and maintain structural erosion and sediment control Best Management Practices (BMPs) including benches, compost filter berms, check dams, temporary slope drains, energy dissipaters, flotation silt curtains, rock chutes and flumes, gabions, inlet protection, jetties, level spreaders, rock outlet protection, retaining walls, stabilized construction entrances, rip-rap, sediment barriers, sediment basins, streambank protection, stream channel enhancement, subsurface drainage, and diversion structures as any land disturbing activities take place.

3. **To reduce the rate and volume of stormwater runoff on post construction development, while at the same time promoting better water quality using infiltration based practices and controls.**

   3.1 Utilize Low-Impact Development (LID) principles and Conservation Subdivision Design to promote good stormwater management through smaller building lots, higher density standards, reduction of public right-of-way and protection of sensitive areas through preservation of open space.

   3.2 Use stormwater management BMP's during the site planning and design stage of development to reduce the volume of runoff, thus reducing the need for large retention and detention structures to store and treat stormwater.

   3.3 Design and strategically locate drainage outlets for site runoff that limits negative impacts to downstream neighbors.

   3.4 Minimize impervious surfaces in development which are the primary source of runoff for both small and large storm events to reduce runoff volume.

4. **To preserve and reproduce pre-development hydrologic conditions whenever possible to maximize runoff infiltration and reduce flooding and to promote healthy water supplies.**

   4.1 Utilize natural drainage flow paths using grass waterways, vegetated drainage channels and/or water quality swales along street right-of-ways or the back of lots to channel runoff without abrupt changes in the direction of flow.

   4.2 Restore soil permeability using practices such

as deep tilling, chisel plowing and incorporating organic matter into the upper soil layer to restore soil infiltration capacity on heavily disturbed sites to maximize water infiltration.

4.3 Minimize directly connected impervious areas or any impervious surface that drains into a catch basin, area drain, or other conveyance structure by outletting downspouts onto grassy areas and directing runoff from driveways to pervious areas to promote infiltration and reduce the velocity of runoff water.

4.4 Use bioretention and other similar practices such as rain gardens to soak up rainwater from roofs, driveways, and lawns which will increase natural infiltration, microbial soil processes and evapotranspiration and will improve stormwater quality and quantity.

4.5 Include green infrastructure measures such as conservation of natural habitat and green space consisting of large landscaped areas (including parks and lawns), grass/vegetated swales, and turf block paving areas to treat and infiltrate runoff.

5. To protect and establish site and lot vegetation to prevent erosion and infiltrate runoff.

5.1 Maintain as much predevelopment vegetation as possible to prevent erosion and absorb water reducing runoff volume.

5.2 Use shallow grassed roadside swales, boulevards and sunken parking lot islands with check dams instead of curb and gutter storm drain systems to handle runoff, wherever possible.

5.3 Maintain natural buffers, depressions and channels between development sites and water bodies to slow runoff, remove sediment and enhance infiltration.

6. To design transportation surfaces that account for and minimize stormwater runoff.

6.1 Minimize subdivision roadway length by using a roadway layout with the least pavement length suitable for the site's topography and other planning goals.

6.2 Minimize road width by narrowing road sections and/or reducing on-street parking to one side of the street or eliminating it altogether.

7. To design buildings and lots that account for and minimize stormwater runoff.

7.1 Reduce the impervious rooftop area by minimizing the building footprint of buildings by using vertical space rather than horizontal layouts or utilizing green roof technology by using sod or vegetative "green roofs" rather than conventional roofing materials.

7.2 Reduce impervious surfaces by using shared driveways, limiting driveway width, using pervious pavement, and reducing building setbacks.

7.3 Reduce overall impervious area on commercial sites by providing compact car spaces, eliminating excessive or unnecessary spaces, utilizing shared parking, minimizing stall dimensions, incorporating efficient parking layouts, establish maximum parking area requirements, and using pervious materials in spillover parking areas.

8. To establish standards and/or guidelines for the quantity and quality of water runoff that are flexible and that recognize the unique characteristics of each project site, to obtain maximum protection of the watersheds in the region.

8.1 Encourage local governments to adopt and/or create erosion control and stormwater ordinances or polices.

8.2 Encourage agricultural producers and landowners to implement conservation practices on their property that provide both erosion and sediment control and manage stormwater runoff.

8.3 Encourage landowners to utilize federal, state, and local resources to help with design, assessment, and cost-share opportunities for landowners to install conservation practices.

9. To reduce flood damages by promoting basin wide programs stressing non-structural measures, such as floodplain regulations, flood-

proofing, flood forecasting, and watershed treatment, in conjunction with other structural measures, where necessary, to protect the lives and property of residents.

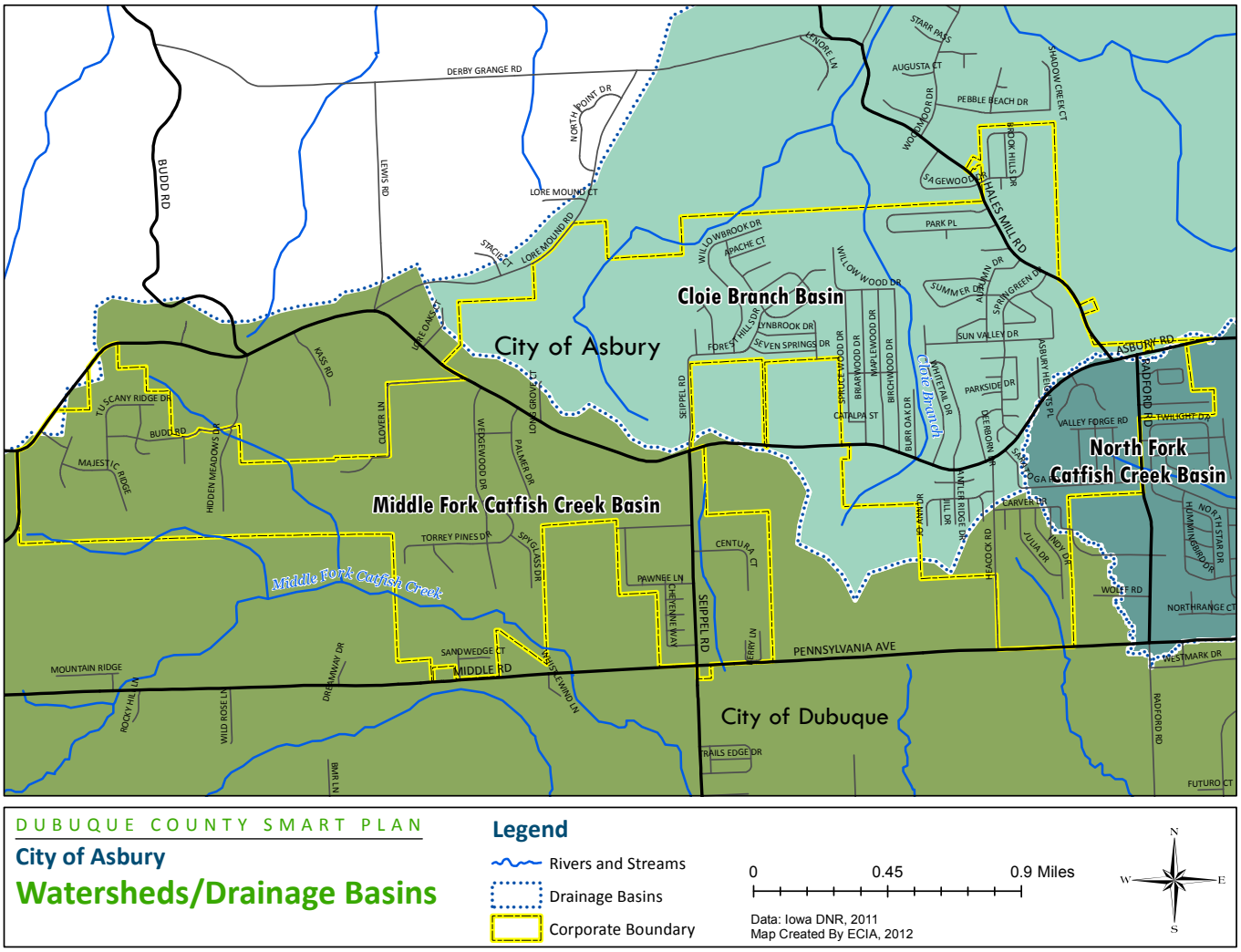
9.1 Locate future development outside of flood hazard areas where feasible, and where development is allowed in the floodplain, require it to be elevated, floodproofed and located outside the floodway.

9.2 Ensure that local flood management programs meet or exceed regulatory requirements of the Federal Emergency Management Agency, and applicable state regulations.

9.3 Design local flood management programs to allow public and private options, while protecting life and property from storm water runoff generated by one-hundred year storm events.

9.4 Stress retention of natural drainage patterns and construction of detention systems to help ensure development activity will not add substantially to the flood problem.

Map 10.1 - Drainage Basins/Watershed



Hazard Mitigation

Chapter 10

Mitigation is defined as taking sustained actions to reduce or eliminate the long-term risks to people and property from hazards. An effective hazard mitigation strategy must permeate all aspects of a community. The goal of this chapter is to help consortium members exceed federal hazard mitigation planning requirements by integrating hazard mitigation into all aspects of local government operations including:

- Vision and goal setting
- Zoning, subdivision, and building codes
- Reviewing and preparing development agreements, redevelopment plans, and site review.
- Capital budgeting.

To achieve this goal, communities will need to ensure that all public and private stakeholders including those outside of the public safety field are actively engaged in the hazard mitigation process. Emergency managers, elected officials, city managers, planning commission members, public works employees, transportation planners and engineers, GIS managers, environmental professionals, parks and recreation officials, and economic development directors should all be educated on hazard mitigation issues and be actively engaged in the planning process. The challenge for those developing hazard mitigation plans is to synthesize the information from these groups, put it into a plan, and outline a path to implementation.

FEMA

As part of the US Department of Homeland Security, the Federal Emergency Management Agency (FEMA) oversees and coordinates the response to disasters that go beyond the capacity of state and local governments. FEMA's mission is to support our citizens and first responders to ensure that as a nation we work together to build, sustain, and improve our capability to prepare for, protect against, respond to, recover from, and mitigate all hazards.

Iowa Homeland Security and Emergency Management Division

The Iowa Homeland Security and Emergency Management Division (HSEMD) coordinates hazard mitigation and preparedness activities on the state level. HSEMD was created in 1965 as the State Civil Defense Agency. Following the September 11th terrorist attacks the HSEMD's mission was expanded to include Iowa's homeland security efforts. HSEMD provides technical assistance, training, exercise facilitation, communications and other support necessary for establishing and maintaining local capabilities. HSEMD ensures consistency and compliance with various federal and state requirements and regulations.

Dubuque County Emergency Management Agency

Local emergency management in Iowa is structured as a commission form of government established in Chapter 29 (C)of Iowa Code. County emergency management commissions are composed of a member of the board of supervisors or its appointed representative, the sheriff or the sheriff's representative, and the mayor or the mayor's representative from each city within the county. The emergency management commission establishes the agency and hires and emergency management coordinator who is responsible for the development of the countywide emergency operations plan, coordination of emergency planning activities, providing technical assistance to communities throughout the county. The emergency management coordinator is also responsible for establishing local mutual aid arrangements, and coordinates with Iowa Homeland Security and Emergency Management to ensure the emergency management and response communities have adequately planned and are well-equipped, trained, and exercised.

Emergency management commissions are responsible for 11 specific responsibilities. They are:

- Hazard analysis and risk assessment
- Resource management
- Planning
- Direction, control and coordination
- Damage assessment
- Communication and warning
- Operations and procedures
- Training
- Exercises
- Public education and information
- Agency administration.

County emergency management agencies are responsible for developing countywide emergency operations plans. The plans include three parts: an operations plan, a mitigation plan, and a recovery plan. The operations plan assigns responsibilities to organizations and individuals for carrying out specific actions at projected times or places during an emergency or disaster. The mitigation plan establishes interim and long-term strategies to eliminate hazards or reduce their impact. The recovery plan identifies the short-term and long-term strategic priorities, processes, vital resources, and acceptable time frames and procedures for restoration.

Emergency Management Plans

The Dubuque County Emergency Management Agency is the primary emergency planning entity in the county, but state and federal law requires that other agencies also prepare for emergency situations. Police departments, fire departments, airports, and public health officials produce emergency plans. Figure 10.1 includes a list of the emergency management plans that are currently active in Dubuque County and the agencies responsible for producing the plans.

Figure 11.1 - Emergency Management Plans and Responsible Agencies

Plan	Agency
Dubuque Severe Weather Plan	Dubuque County EMA
Dubuque County Emergency Operations Center Plan	Dubuque County EMA
Dubuque County Comprehensive Emergency Management Plan	Dubuque County EMA
Dubuque County Mass Casualty / Mass Fatality Plan	Dubuque County EMA & Dubuque County Medical Examiner's Office
Dubuque County Public Health Preparedness Plan	Dubuque County Public Health
City of Dubuque Evacuation Plan	City of Dubuque Police Department
Traffic Incident Management Plan	Dubuque County Multi-Disciplinary Safety Team & Dubuque Police Department
Dubuque County Winter Storm Plan	Dubuque County Engineer

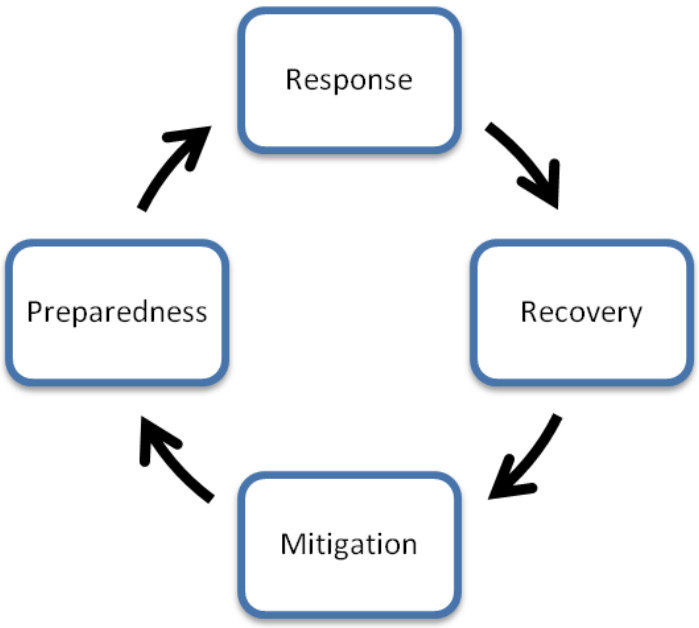
Figure 10.2 - Emergency Management Plans and Responsible Agencies

Plan	Agency
Multiple Fatality Plan	Medical Examiner's Office
Dubuque County Multi Jurisdictional Hazard Mitigation Plan	Dubuque County EMA
Biological/Chemical Threat Agent (BCTA) Protocol	Dubuque Fire Department Hazmat Team
Iowa Emergency Alert System Plan	Iowa Homeland Security & National Weather Service
Dubuque Regional Airport Emergency Plan	Airport Operations
Source: Dubuque County Emergency Management Agency	

Mitigation is one of four phases in the cycle of emergency management. The four phases are interdependent, with each phase contributing to better performance in the next one. "Understanding of the cyclical pattern of disasters can help shape community awareness that hazards are always present, that the next disaster is a matter of time, and that mitigation planned and implemented during the lull between events can pay serious dividends in reducing future death and destruction."1 Figure 10.2 illustrates the cycle of emergency management.

Mitigation. This phase includes any activities that prevent an emergency and reduce the likelihood of occurrence, or reduce the damaging effects of unavoidable hazards. Mitigation activities should be considered long before an emergency.

Figure 11.2 - The Cycle of Emergency Management



Source: FEMA

Preparedness. This phase includes preparations made to save lives and to help response and rescue operations. Evacuation plans, stocking food and water, and holding disaster drills are examples of preparedness. Preparedness activities take place before an emergency occurs.

Response. This phase includes actions taken to save lives and prevent further property damage in an emergency situation. During the response phase preparedness plans are put into action. The response phase includes the mobilization of necessary emergency services and first responders to the disaster area. Response activities take place during an emergency.

Recovery. This phase includes actions taken to return to a normal or an even safer situation following an emergency. Recovery efforts are primarily concerned with actions that involve rebuilding destroyed property, re-employment, and the repair of other essential infrastructure. Recovery activities take place after an emergency.

Dubuque County Multi-Jurisdictional Hazard Mitigation Plan

The Dubuque County Multi-Jurisdictional Hazard Mitigation Plan (MJHMP) provides the basic Hazard Mitigation strategy for all municipalities in Dubuque County. In the past each incorporated city and county in Iowa were required to complete their own hazard mitigation plan, but regulations were recently changed requiring that all municipalities within a county be included in a multi-jurisdictional plan.

1 *Schwab, James C. "Hazard Mitigation: Integrating Best Practices into Planning" American Planning Association. May 2010.*

The Disaster Mitigation Act of 2000 requires all local governments to assess their risks to natural hazards and identify actions that can be taken in advance to reduce future losses. The law requires all local governments and districts to have an approved Multi-Hazard Mitigation Plan to be eligible for federal disaster assistance and hazard mitigation funding programs.

To assist Dubuque County in the preparation of the mitigation plan, HSEMD awarded a contract to Dubuque County, who in turn contracted with East Central Intergovernmental Association (ECIA). ECIA's role is to assist Dubuque County with the completion of a FEMA-approved multi-jurisdictional local hazard mitigation plan. The Dubuque County MJHMP was last updated in 2012.

Analysis Hazards and Risks

The primary purpose of the MJHMP is to identify hazards, analyze the risk associated with each hazard, and estimate the community's vulnerability to each hazard. Hazards are ranked using the Hazard Risk Analysis Ranking system. The system awards a score of 1-4 for each of the following categories: Historical Occurrence, Probability, Vulnerability, Maximum Geographic Extent, Severity, and Speed of Onset. The scores are summed and hazards are ranked based on their total score, which can range between 6 and 24. Hazard rankings are done in two groups, countywide hazards and community specific hazards. Figure 10.3 shows the results of the countywide ranking.

Figure 11.3 - Hazard Analysis Risk Assessment Results For Countywide Hazards

Hazard	Total Score	Rank
Severe Winter Storm	21	1
Windstorm	18	2
Thunderstorm & Lightning	17	3
Extreme Heat	15	4
Tornado	15	5
Hailstorm	15	6
Drought	14	7
Grass or Wild Land Fires	9	8

Once each of the eight identified countywide hazards have been assessed, scored, and ranked, the eight hazards are prioritized into one of three categories to provide guidance in the establishment of goals, objectives, timetables and mitigation alternatives. The Priority Group 1 Hazards are candidates for immediate focus in the emergency plan because of their high risk. Priority Group 2 hazards are those that have a known risk, but their focus in the plan will have mitigation activities in the next 1-3 years. Those noted in Priority Group 3 have an acceptable level of risk and will not be addressed further. No action items were formulated to address Group 3 hazards. Countywide Hazard Priorities are listed in Figure 10.4.

Figure 11.4 - Hazard Priority Lists for Countywide Hazards

Priority Group 1	Priority Group 2	Priority Group 3
Severe Winter Storm	Hailstorm	Drought
Windstorm		Grass or Wild Land Fire
Thunderstorm & Lightning		
Extreme Heat		
Tornado		

Each participating jurisdiction independently ranked the six hazards that are considered to vary from city to city. The six community specific hazards are: dam failure, flash flood, landslide, levee failure, river flood and sinkholes. In Figure 10.5, the six hazards are identified with their risk analysis score on a scale of 6 - 24, or with a UNL for unlikely to occur. Some cities found that their risk is only to county-wide hazards and not to the six hazards considered to be site-specific. The hazards were ranked as either "unlikely to occur" (UNL) or given numerical scores using the Hazard Risk Analysis Ranking system.

Hazard Descriptions

The following section contains a brief description of severe winter storms, flooding, and severe storms. These three hazards were ranked high in the countywide and community specific Hazard Analysis Risk Assessment. The Dubuque County MJHMP contains a more detailed description of each hazard.

Figure 11.5 - Hazard Analysis Risk Assessments Results for Community Specific Hazards						
City	**Dam Failure**	**Flash Flood**	**Landslide**	**Levee Failure**	**River Flood**	**Sinkholes**
Uninc. Co.	UNL	19	10	UNL	13	9
Asbury	UNL	9	UNL	UNL	UNL	UNL
Balltown	UNL	UNL	UNL	UNL	UNL	UNL
Bankston	UNL	12	UNL	UNL	UNL	10
Bernard	UNL	15	UNL	UNL	UNL	UNL
Cascade	UNL	13	UNL	19	10	UNL
Centralia	UNL	10	UNL	UNL	UNL	UNL
Dubuque	9	17	11	15	16	9
Durango	UNL	24	UNL	UNL	24	UNL
Dyersville	UNL	20	UNL	UNL	18	UNL
Epworth	UNL	17	UNL	UNL	UNL	12
Farley	UNL	16	UNL	UNL	UNL	UNL
Graf	UNL	16	UNL	UNL	UNL	UNL
Holy Cross	UNL	UNL	UNL	UNL	UNL	UNL
Luxemburg	UNL	15	UNL	UNL	UNL	UNL
New Vienna	UNL	14	UNL	UNL	6	UNL
Peosta	UNL	19	UNL	UNL	UNL	UNL
Rickardsville	UNL	13	UNL	UNL	UNL	UNL
Sageville	UNL	24	UNL	UNL	24	UNL
Sherrill	UNL	14	UNL	UNL	UNL	UNL
Worthington	UNL	13	UNL	UNL	20	UNL
Zwingle	UNL	UNL	UNL	UNL	UNL	UNL
UNL – Unlikely to Occur						

Severe Winter Storm

Overall vulnerability to severe winter storms relative to other hazards is considered high, with significant potential impact to the general population and/or built environment and significant exposure of assets. Winter storms typically involve snow and ice, occasionally accompanied by high winds, which can cause downed trees and power lines, power outages, accidents, and road closures. Transportation networks, communications, and utilities infrastructure are the most vulnerable physical assets in the planning area and affect the jurisdiction equally. The most significant damage during winter storm events occurs when freezing rain and drizzle accumulate on utility poles and power lines causing widespread power outages.

During heavy snow and ice events, the threat to public safety is typically the greatest concern. Lower income and elderly populations are more at risk in cases of power outages during severe winter storms. These storms also impact the local economy by disrupting transportation, school and commercial activities. Travelers on roadways and highways in Dubuque County, particularly along remote stretches of road, can become stranded, requiring search and rescue assistance and shelter provisions. Agriculture and livestock are also vulnerable to extreme cold temperatures and heavy snow.

Buildings that have tree limbs hanging over them are more vulnerable to damage by falling limbs. Utility power poles and lines are the critical facilities that are most vulnerable. Potential losses to the electric line infrastructure are difficult to quantify. Roads and bridges covered with ice make travel treacherous and slow emergency vehicles. Businesses experience losses as a result of closure during power outages. Schools also often must close.

Winter Storm Mitigation and Preparedness

Although future residential or commercial buildings built to code should be able to withstand snow and ice loads from severe winter storms, the increased number of developments will place additional demands for utility infrastructure on the current systems. The MJHMP recommends investment in utility infrastructure, including burial of electric utilities and the addition of poles in areas prone to ice accumulation. Some communities in Dubuque County are now deploying GPS technology as part of their snow and ice removal strategy. GPS locators are placed in snow plow trucks and can be linked to the city's GIS system. The GPS improves efficiency of snow removal service, and helps keep employees safe by monitoring their location. These actions should decrease future losses.

Flash and River Flooding

Floods are among the most frequent and costly natural disasters in terms of human hardship and economic loss. Eastern Iowa has experienced numerous flood events and loss of millions of dollars in property and crop damage over the past 25 years.

There are several different types of potential flood events in Dubuque County including river and flash flooding. Flash flooding can best be characterized as an event occurring with little or no warning time where water levels rise at an extremely fast rate. Flash flooding results from intense rainfall over a brief period, sometimes combined with rapid snowmelt, ice jam release, frozen ground, saturated soil, or impermeable surfaces.

Flooding caused by rivers, creeks and other tributaries overtopping their banks due to large amounts of precipitation, was also identified as being a risk to several of the Dubuque County jurisdictions. Summer floods result from above normal precipitation over an extended period of time and/or extremely heavy rainfall. Spring floods typically result from the rapidly melting of snow and rain. River floods are typically forecast well in advance, but in some cases, residents may have as little as 24 hours warning. Damages from river floods may include any property as heavy rains of this magnitude create heavy ground saturation and commonly flood basements. Depending on the month and maturity of crops, they may cause significant crop damages as well.

Historically, the Mississippi River has flooded the City of Dubuque's low-lying riverfront properties many times over the last 150 years. In 1973 a 6.4 mile long earthen and concrete floodwall system has protected Dubuque from numerous Mississippi River flood events since. Those flood events include four of the ten highest flood crests ever measured, including Dubuque's second highest ever crest of 25.40 feet in 2001. Only Dubuque's Hamm Island and Catfish Creek valley lie outside the protection of Dubuque's floodwall.

In July 2010, Dubuque County experienced severe flooding. The City of Durango reported heavy downpours, thunder and lightning. Water came over Highway 52 and the worst came from the north, from the area of the City of Sherrill and "raged" down Highway 52. As water came over the highway, it poured into doors and into homes. There are twelve houses in Durango and 3 or 4 of those are presently considering FEMA buyouts.

The City of Dyersville has a long history of dealing with flash and river flood events. In 2009, the City of Dyersville was awarded $3,336,800 through the Hazard Mitigation Grant Program which has provided the City with the funding to acquire 27 properties that have severe flood damage. To date, 11 of the properties have been acquired and the process continues. In 2009 the City was also awarded a Community Development Block Grant in the amount of $1,100,000 for the acquisition of an additional 10 properties. That process also continues and is expected to be completed by Fall 2012.

Flooding Mitigation and Preparedness

Communities can help reduce flooding by implementing Low Impact Development techniques (LID). LID techniques focus on maintaining predevelopment hydrologic conditions by managing runoff at the source using uniformly distributed stormwater management facilities. Instead of conveying and treating stormwater in large facilities located at the bottom of drainage areas, LID addresses stormwater through small, cost-effective landscape features located at the lot level. Examples of LID techniques include limiting impervious surfaces and avoiding sensitive areas. For more information on LID see the Watershed Chapter.

Communities can also help mitigate flood damage by

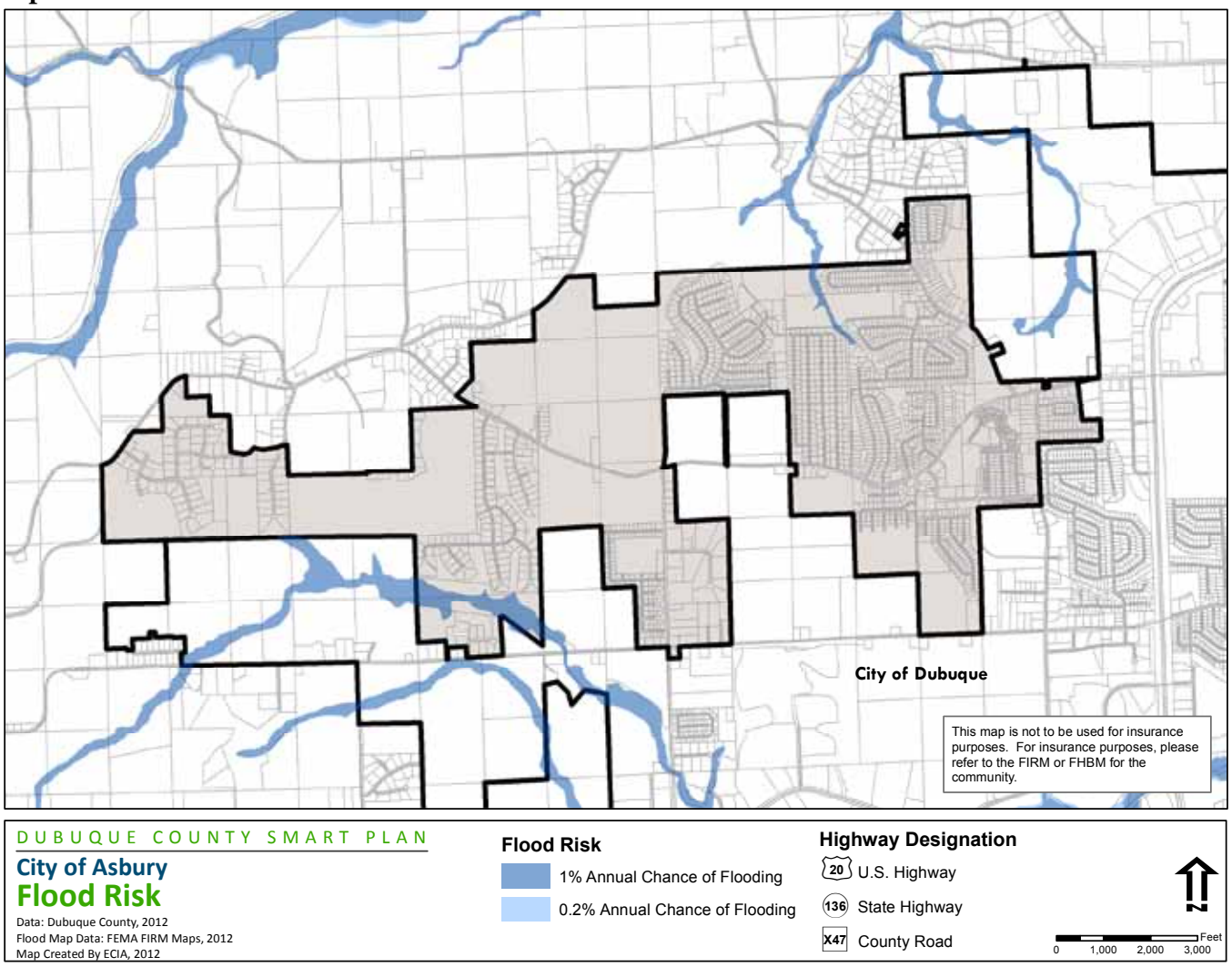
limiting development in the floodplain. The risk of flooding to future development in Dubuque County should be minimized by the floodplain management programs in the region. Many Dubuque County communities have chosen to participate in the National Flood Insurance Program (NFIP). Communities across the United States participate in the NFIP by adopting and enforcing floodplain management ordinances to reduce future flood damage. In exchange, the NFIP makes federally backed flood insurance available to homeowners, renters, and business owners in these communities. Flood risk can be further reduced by strengthening floodplain ordinances beyond minimum NFIP requirements. FEMA produces maps of areas that are at risk of flooding. Map 10.1 shows areas of Asbury that are at risk of flooding.

Other mitigation actions include elevation of structures in the hazard path, acquisition of structures in the hazard path, raising, grading, or resurfacing roads, reinforcing culverts to counteract washouts, and adding lift stations. Some communities in Dubuque County have portable Hesco barriers that are filled with sand and can be deployed to protect property and vital infrastructure during a flood.

Severe Storms

Thunderstorms, lightning, tornado, hailstorms, and windstorms are relatively common in Iowa, including Dubuque County particularly in the spring and summer. All areas of Dubuque County are vulnerable to severe storms. Most severe storms cause little damage, but some can be life threatening and cause extensive damage to buildings, trees, utilities, and crops. Tornadoes are relatively common in Iowa, including Dubuque County, particularly in spring and summer. The potential for tornadoes to occur is county-wide and Iowa is known to have a long history of having a higher rate of tornadoes per square mile than any other state. Lightning can cause damage to electronic equipment located inside buildings. Communications equipment and warning transmit-

Map 11.1 - Flood Risk



ters and receivers could be knocked out by lightning strikes. Hail can cause significant damage to buildings, utilities, and crops.

Severe Storm Mitigation and Preparedness

Severe storms affect the entire planning region, including all above ground structures and utilities. Future development projects should consider severe storm hazards at the planning, engineering and architectural design stage with the goal of reducing vulnerability. Many Dubuque County communities already have development and building codes that address severe storm mitigation. Storm warning systems are effective method to prepare for severe storms. Warning systems can be as simple as encouraging citizens to purchase NOAA weather radios, but can also include television audio and video overrides as well as outdoor warning sirens. Any warning system should have a plan for how and when it is used and how it is maintained and tested.

Man-made Disasters

Man-made disasters result from hazards that have an element of human intent, negligence, or error; or involve the failure of a man-made system. Examples of man-made hazards include technological hazards such as structural collapse, industrial hazards, hazardous material spill, and power outage. Man-made hazards can also be caused by societal problems that result in war, terrorism, and rioting. Transportation is also a source of man-made hazards. Aviation, rail, and road disasters can result in loss of life, property damage, and long term impacts on mobility within a region.

In Dubuque County transportation represents a potential man-made hazard. US highways 20, 52, 61, and 151 and the CN and CP railways are important regional commerce routes that can also pose some risk for accidents that produce, chemical spills, fire, and explosions. The highways also represent important evacuation routes that need to remain open during an emergency. The region also has many bridges. The heavily traveled US 61/151 Bridge and the Julien Dubuque Bridge need to be inspected and maintained regularly. Other potential man-made hazards in Dubuque County include levee failure, industrial accidents, and fires.

Man-made Mitigation and Preparedness

Mitigation and preparedness activities or man-made disasters can differ based on the type of disaster. Many man-made disasters, such as the 2007 I-35W bridge collapse in Minneapolis, are the result of flaws in design, maintenance, and construction without any assistance from the natural environment. The best strategy to prevent these types of disasters is to make infrastructure inspection and maintenance a top community priority. Communities can do this by including projects recommended in hazard mitigation plans in their capital improvement plans. If the infrastructure is not under the community's direct control, the community will need to work with other government agencies, such as the Iowa DOT, or private companies, such as gas pipeline operators, to ensure that proper inspection and maintenance are completed.

In other cases, structures in normally good condition are pushed beyond their limits by unusual events, such as the railroad bridge collapse in Cedar Rapids during the flood of 2008. Regular inspection and maintenance can limit weaknesses and make structures more resilient to these events, but it is impossible to design a structure that will withstand every possible event. In these cases, it is important for communities to develop contingency plans so that the community can continue to function during a disaster. The Dubuque County Multi-Disciplinary Safety Team with local law enforcement and the City of Dubuque maintain local evacuation and incident management plans. The evacuation plan lists primary evacuation routes and secondary routes that are to be used if a primary route becomes impassible. The incident management manual outlines a program designed to aid agencies in rerouting traffic in the event of a road closure. Both plans should be reviewed and updated to keep the region prepared for a disaster.

Information technology and communications systems are an important consideration for disaster preparedness. If a municipal building is destroyed or power is lost thousands of important documents and other data can be lost. Communities in Dubuque County can protect their information by locating facilities outside of the flood plain, installing battery backup systems and emergency generators, and using offsite storage. Good communications are important to emergency response especially during

a disaster. Dispatch systems should be protected and redundant so service can remain on line during a disaster. Communities should also work with nearby municipalities to ensure that their communications systems are compatible so communications can be maintained during emergency response.

Implementation

The goals, actions, and timelines will be discussed with directions given by the Board of Supervisors, City Councils, Mayors, and school district Superintendents for inclusion of these mitigation measures into their budgets for implementation. The region will continue to include mitigation projects in the Capital Improvements Plan and the Comprehensive Land Use Plan for implementation on a planned basis whenever feasible. Land use decisions will incorporate the findings of the MJHM Plan. Figure 10.6 includes a list of the top three hazard mitigation priorities for each community. A complete list of projects can be found in the Dubuque County MJHMP.

Figure 11.6 - Top Hazard Mitigation Priorities

Rank	Mitigation Action	Estimated Cost	Completion Date	Participating Jurisdictions
All Jurisdictions				
1	Continue to add needed infrastructure to mitigate flood damage.	Unknown	Ongoing	ALL
2	Train personnel as weather spotters.	Staff Time	Ongoing	ALL
3	Maintain or consider NFIP membership as required.	Unknown	Ongoing	ALL
Asbury				
1	Continue to use City Hall as a storm shelter and to consider the building of a safe room in conjunction with any new city building projects for the safety of current and future Asbury citizens.	NA	Ongoing	Asbury/City Council
2	Continue to make the Fire Station available as a shelter space to persons in need on a temporary basis during periods of extreme heat.	NA	Ongoing	Asbury/Fire Dept
3	Continue to keep all seven backup generators in good repair and available.	$12,600/yr	Ongoing	Asbury/Public Works

Goals and Objectives

1. **Increase capabilities within Dubuque County entities to mitigate the effects of hazards by enhancing existing or designing and adopting new policies that will reduce the damaging effects of hazards.**

   1.1 Reduce repetitive property losses due to flood, wildfire, winter storms, and other hazards.

   1.2 Protect critical facilities, infrastructure, and utility systems.

   1.3 Encourage the incorporation of mitigation measures into repairs, redevelopment, and capital improvement projects for governments, businesses, education institutions, and the public.

   1.4 Identify funding opportunities for future mitigation measures.

2. **Protect the most vulnerable populations, buildings, and critical facilities within Dubuque County through the implementation of cost effective and technically feasible mitigation projects.**

   2.1 Educate property and business owners on affordable mitigation and preparedness measures that can be taken to reduce property loss.

   2.2 Assure that vulnerable buildings and critical facilities within Dubuque County are cataloged and that vulnerability assessments are completed for each identified facility.

   2.3 Assure that vulnerable populations such as the elderly, homeless, low income or those with limited English proficiency are included in educational programs regarding preparedness or mitigation.

   2.4 Enhance the capabilities to collect, analyze, update, and exchange data and information to support risk assessment and mitigation needs.

3. **Improve the level of responder, government, business, and citizen awareness and preparedness for disaster.**

   3.1 Identify and develop needed training and exercises for targeted responder, government and citizen audiences.

   3.2 Strengthen outreach and partnerships with the private sector, nonprofit organizations and the public.

   3.3 Improve public understanding of hazards and risk by providing public awareness, preparedness, and mitigation information through various channels of communication.

4. **Develop programs to assure that response agencies, governments, educational institutions, and local businesses are able to operate during times of disaster.**

   4.1 Promote the development of emergency response plans, including continuity of operations plans, among local response agencies, governments, educational institutions and local businesses.

   4.2 Provide education, training, and exercise opportunities for local entities to prepare for and test their ability to operate during times of disaster.

5. **Coordinate a multi-jurisdictional approach to integrate hazard mitigation and land use planning.**

   5.1 Create maps to identify hazardous areas.

   5.2 Incorporate hazard mitigation into zoning, subdivision, and building codes where applicable.

   5.3 Develop policies and ordinances to steer development away from hazardous areas.

   5.4 Review land for potential hazards before subdivision approval.

   5.5 Consider providing incentives for building in non-hazardous areas.

   5.6 Preserve and enhance protective features of the natural environment including wetlands, vegetation on steep slopes, and other natural areas that promote ground water infiltration.

   5.7 Retrofit buildings and facilities at risk in redeveloping areas.

6. Coordinate future transportation plans with appropriate hazard mitigation plans including the Regional Evacuation Plan and the Incident Management Manual.

6.1 Ensure that roads and bridges remain passable in an emergency.

6.2 Identify alternative routes if roads and bridges become impassible.

6.3 Train all personnel in emergency response procedures and protocols, and conduct annual refresher training.

6.4 Establish an ongoing means of communication with fire, sheriff, and police departments and the County EMS to ensure sharing of crime and security information among all concerned.

6.5 Work with safety teams and County EMS regarding security and emergency preparedness plans.

6.6 Define transit systems role in non-transit emergencies.

6.7 Review evacuation plans in the region, focusing on transit security plans.

Land Use

Chapter 12

Land use planning is one of the most important and complex tasks for local governments. Transportation, economic development, housing, community facilities, and utilities are all related to land use. In planning for land use, communities must implement policies that may not produce benefits for many years. Communities must also resist projects and policies that may provide benefits today, but may cause problems in the future. The goal of this chapter is to help communities plan for a sustainable future by producing land use policies and ordinances that promote economic development, good quality of life, and allow government to provide services in the most efficient manner possible over the long term.

Vision Statement

The City of Asbury is a vibrant, growing community that provides its residents with a range of housing opportunities, access to quality educational and recreational opportunities, access to the amenities and job markets of the greater Dubuque County region. Asbury desires to continue its history of growth and development employing a well-managed approach that assures the concurrency of infrastructure, provides a mix of housing types, attracts clean industry and commercial businesses, and provides superior recreational facilities.

Land Cover

Figure 12.1 provides the breakdown of land within the City that is agricultural, commercial and residential. Of the total land area within the City, agricultural uses account for approximately 477 acres (35%), commercial uses account for 33 acres (2%) and residential uses account for 860 acres (63%). Map 2.1" Existing Land Use" provides a further breakdown of the land uses in Asbury.

Asbury Land Use Trends

The City gained approximately 603 housing units between 2000-2010. In terms of land use, there appears to be a great increase in residential land consump-

Figure 12.1 - Land Cover by Use

Land Use	Acres	Percent
Agricultural	597.47	39.73%
Commercial	33.73	2.24%
Residential	872.47	58.02%
Total	1,503.67	100%

Figure 12.2 - Changes in Housing Units, 2000-2010					
	2000		2010		
	Number	Percent	Number	Percent	Percent Change 2000-2010
Total units	860	100.0	1463	100.0	70.1
1 unit detached	688	80.0	1214	83.0	76.4
1 unit attached	36	4.2	116	7.9	222.2
2 units	21	2.4	49	3.3	133.3
3 or 4 units	72	8.4	73	4.9	1.3
5 to 19 units	23	2.67	18	1.23	-0.78
Mobile Home	20	2.3	0	0	-100.0

Source: 2000 Census STF-1 AND 2010 QT-H1

tion overall with 70 percent more units between 2000-2010. Figure 12.2 provides a breakdown of change in housing units by type between 2000 and 2010.

Building Permits

Building permits must be acquired through the Building Official except in cases where the permit applicant is requesting to rezone. In this instance, the applicant must wait for official action by the Planning and Zoning Commission before acquiring a building permit. A Building Code Commission exists to hear and decide appeals from the acts, decisions or orders of the Building Official.

Land Divisions / Subdivisions

There is an existing subdivision ordinance within the City of Asbury Code of Ordinances (Chapter 166). The ordinance requires adherence to the regulations set forth within the chapter for subdividers of land resulting in three or more parcels. These include properties located up to two miles outside the municipal boundaries of Asbury, where the City may exercise extraterritorial review. Subdividers are required to submit preliminary and final plats to the Zoning Administrator for review by the city engineer and the Planning and Zoning Commission. A complete list of submission requirements is located within the chapter. The subdivider is required to install and construct all improvements required to service properties located within the subdivided area including roads, sidewalks, sewer and water, and curb and gutter.

Equalized Values

According to the Dubuque County Assessor, the total assessed value of property in the City for 2010 was $288,051,517. This represents an 8% increase in property value from 2009 ($265,304,579).

Land Use Conflicts

The planning process identified no land use conflicts between existing uses within the City. Asbury has been developing more planned unit developments to provide both control and flexibility within developments. This practice is likely to continue into the future.

Figure 12.3 - Land Use Projections (Total Acres)					
Land Use	2005	2010	2015	2020	2025
Residential	860	872	988	1,100	1,220
Agricultural	477	597	481	337	204
Commercial	33	33	33	65	78
Light Industrial	--	--	--	--	--

Source: Based on current proportions of identified land uses to projected residential demand

Land Use Projections

Steady household growth is projected in Asbury during the next 20 years. The residential land use requirements through year 2035 are shown in Figure 12.3. The calculations utilize an estimated residential acreage consumption of .75 units/acre as estimated in 2005. Commercial development is expected to grow proportionally with residential increases. If the current ratio of commercial to residential land use holds constant, there will be 78 additional acres of commercial land developed by 2025. Agricultural land is expected to decrease with conversion of farmlands to other uses. A nominal amount of light industrial development may occur.

Recommended Land Use Plan

Map 2.2 " Future Land Use" shows the location of desired future land use patterns for the city and the planning area outside the corporate limits. As a general planning principle, there shall be an orderly transition of uses to avoid conflicts between land uses.

Low Density Residential

Areas designated for homes with one family.

Medium Density Residential

Areas designated for residential structures meant for single family and duplexes.

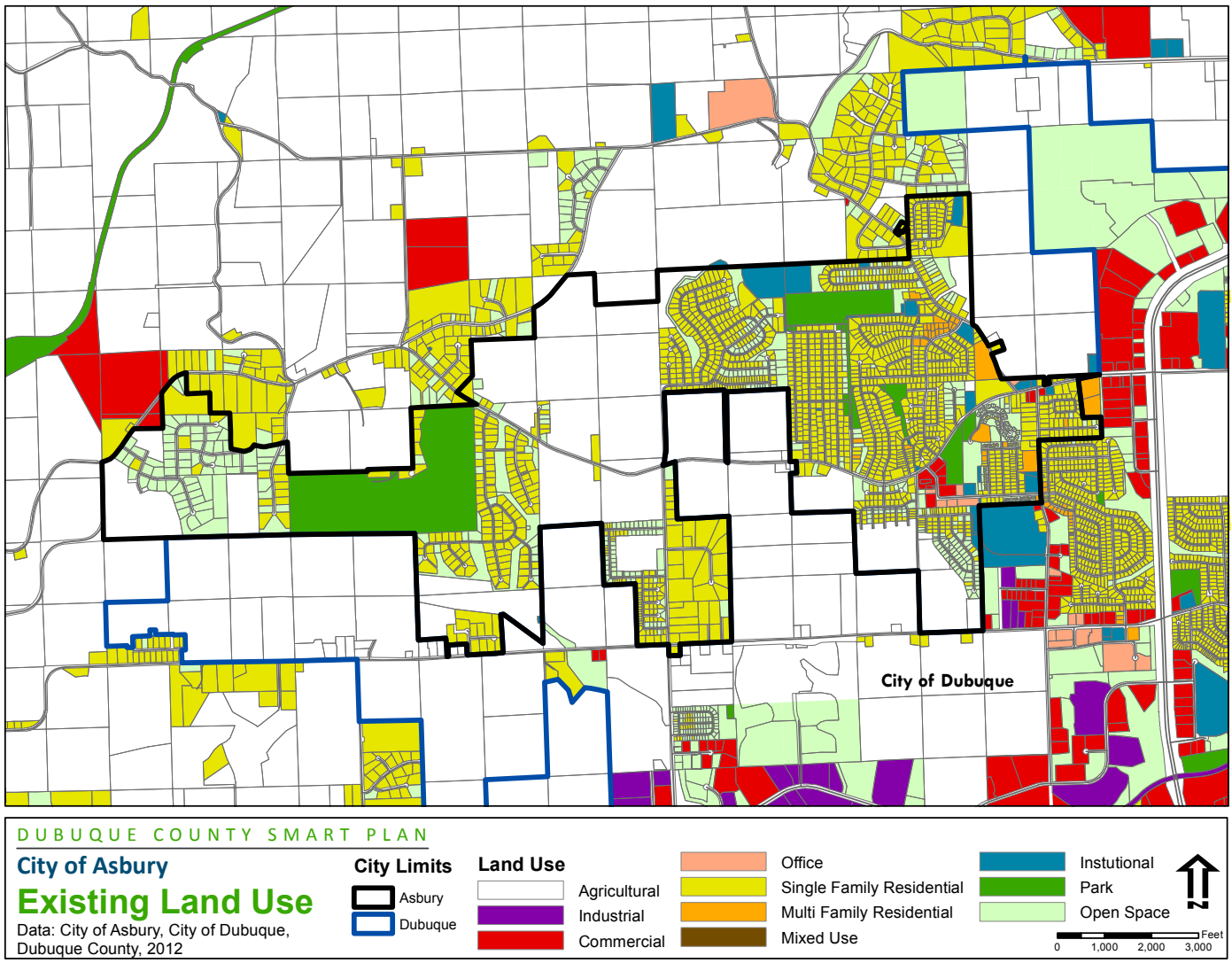
High Density Residential

Areas designated for residential areas that contain several units per structure. This area includes owner-occupied condominiums and rental apartments.

Commercial

Areas designated for retail, sales, service, and office uses. Access to these developments is available by walking, biking and the automobile.

Map 12.1 - City of Asbury Existing Land Use



Light Industrial

Areas designated for corporate office facilities, light manufacturing and warehousing uses. Light Industrial properties have higher development standards, restrictions on outdoor storage, and each parcel should have a minimum size requirement. It is anticipated that additional efforts to maintain the aesthetics of a development will be required in the site planning process.

Parks and Greenspace

Public and private areas designated for passive and active recreational use, preservation of wild life areas and protection of environmentally sensitive areas.

Public/Quasi-Public

Areas designated for governmental, educational, religious, or medical property uses. Other quasi-public organizations such as public utility facilities are included in the category.

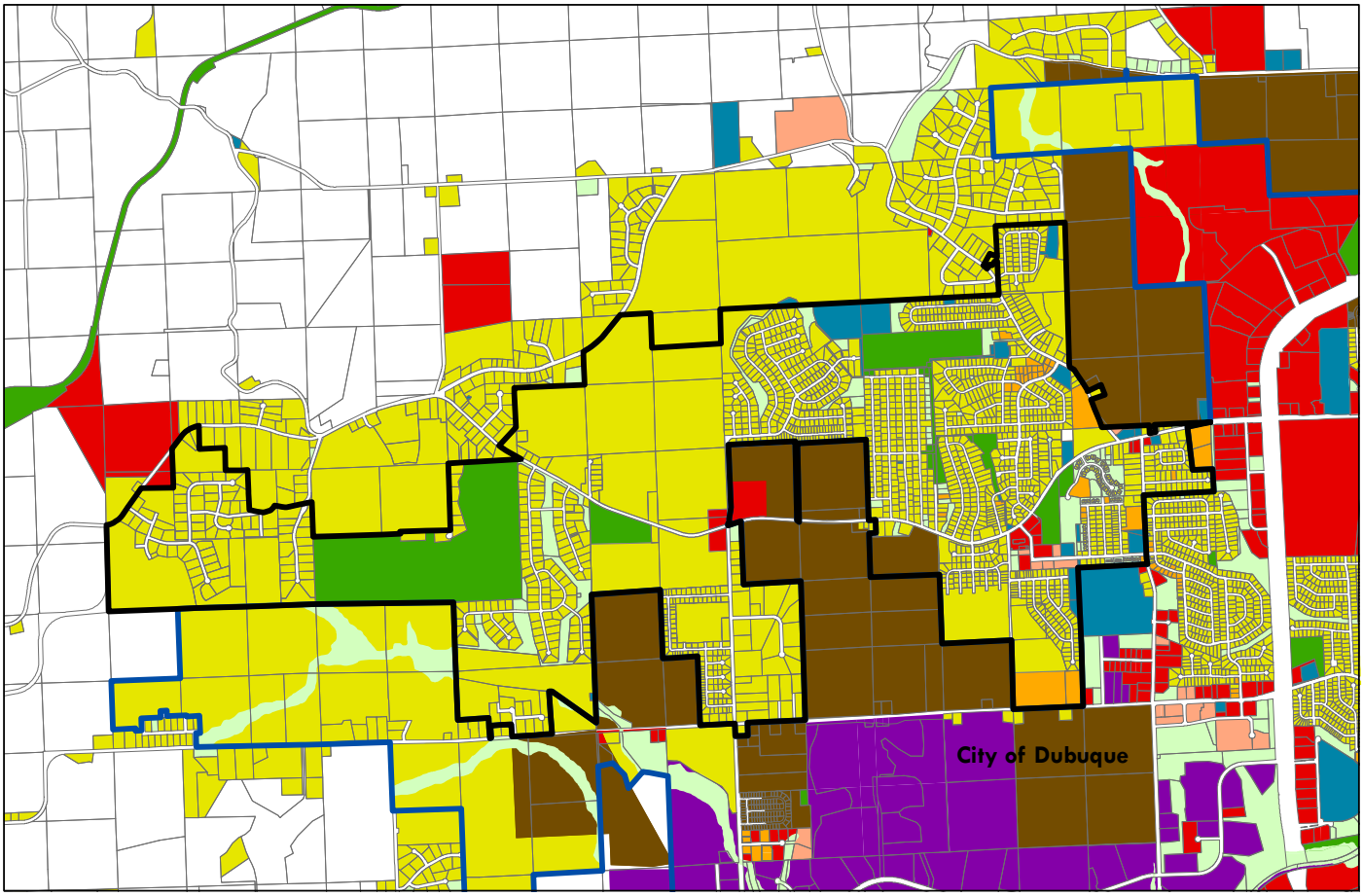
Land Use Recommendations

This section provides recommendations on how the City can more effectively control the pattern of land development in the future.

Recommendations:

1. Work cooperatively with neighboring cities and towns on annexation issues and inform adjacent jurisdictions of pending annexation.
2. Recognize environmental constraints when reviewing proposed developments. This includes slopes, depth of bedrock, and floodplain zones.
3. Encourage creative developments through planned unit developments located in both developing and redeveloping locations within the City and its Planning Area.
4. Explore creative reuse of structures and locations to enhance the usability of lots. This may

Map 12.2 - City of Asbury Future Land Use



require rezoning outdated parcels to better fit the changing image of certain areas within Asbury, or amending current regulations to allow for a wider range of mixed uses or other market-driven demands.

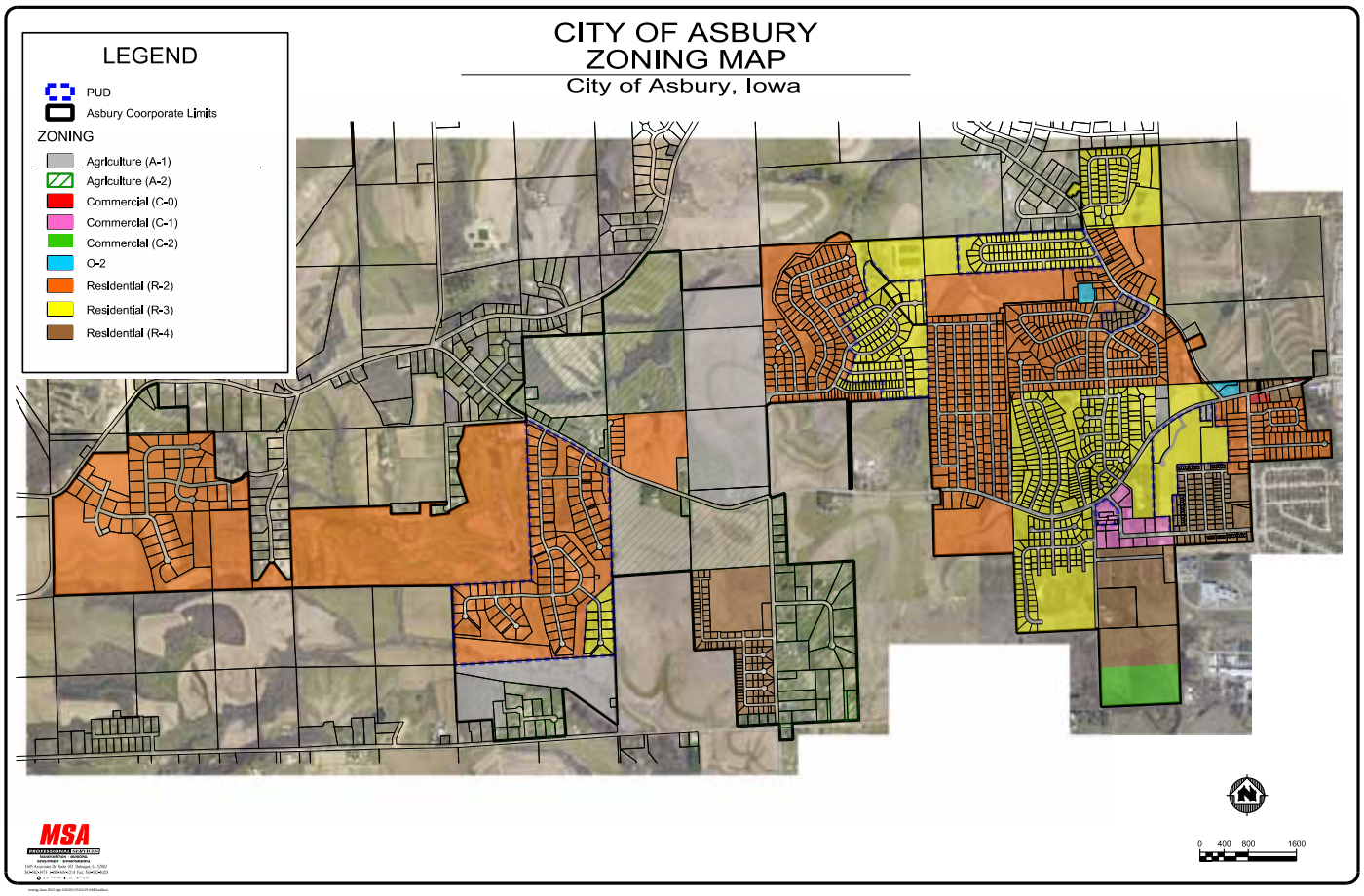
Land Use Programs

Zoning Regulations. The City of Asbury's Zoning Ordinance was adopted in 1992. It includes descriptions and requirements for agricultural, commercial, office and residential zones. The code is sufficient for current land use needs. Map 12.3 displays each of the zoning districts in the City.

Historic Preservation. Historic preservation is one of the most important land use issues for maintaining the rural character of Asbury. Adoption of a historic preservation ordinance, that encourages proper redevelopment of historic structures, including appropriate design and materials, would help maintain historic structures that help identify Asbury.

Extraterritorial Controls. To ensure orderly development and use of land in areas adjacent to a municipality, Iowa law provides extra-territorial platting jurisdiction for areas within two miles of the corporate limits exclusive of areas that are within another municipality's corporate limits. The extraterritorial platting jurisdiction allows municipalities to require plat approval of any subdivision within its extraterritorial jurisdiction. Also, under Iowa law, municipalities are allowed to cooperate in planning for the growth and development of the lands within the extraterritorial area. This includes the ability to establish municipal boundaries and determine in advance the provision of municipal services. The City may consider these agreements with the City of Dubuque.

Map 12.3 - City of Asbury Zoning



Source: City of Asbury. Map created by MSA

Regional Land Use Trends

Changes in land use patterns are the result of a complex mix of market forces, regulations, public and private investments, and global economic conditions. While it is difficult to quantify the impact of any one factor on land use, a general understanding of the underlying causes of these trends can help communities understand their past and plan for their future.

Residential Growth - After declining during the farm crisis of the 1980s, the City of Asbury and population rebounded in the 1990s. In the two decades since the 1990 census, the city has grown from a populatio of 2,013 to a 2010 census population of 4,357. Maps 12.3 and 12.4 show the current distribution of residents and jobs in Dubuque County.

Asbury has grown in size. Since 2000, Asbury has annexed a total of 463 acres of land. Map 12.5 shows annexation sin Dubuque County since 1990.

The overall development trend in recent history has been outward growth and expansion of developed areas.

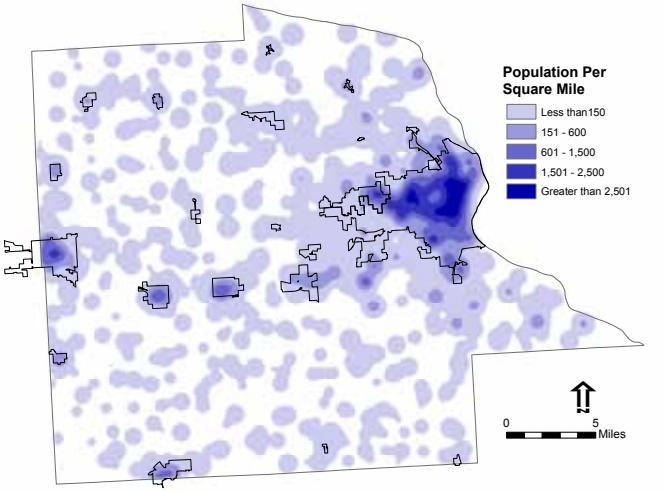
Existing Land Use - The Smart Planning Consortium created maps that depict the existing land uses in the City of Asbury. Map 12.1 depicts existing land use conditions in the City of Asbury.

Causes of Land Use Trends

Identifying trends is a good first step for land use planning. The next step is understanding the driving factors behind the trends. The tread of low density development in the City of Asbury and Dubuque County was part of a national trend driven by post war prosperity and the rise of the automobile as the dominant mode of transportation. These changes in the economy and technology were combined with changes to development patterns, transportation, and zoning codes to alter how cities in the United States were built.

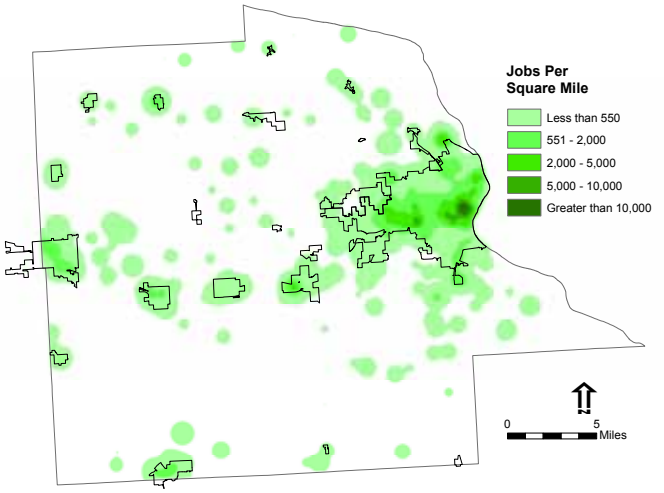
Development Patterns – The methods by which municipalities grow have changed. Prior to World War II, areas mapped for development included each of the essential town-making elements – streets, parks, housing, commercial and civic build-

Map 12.4 - Population Per Square Mile



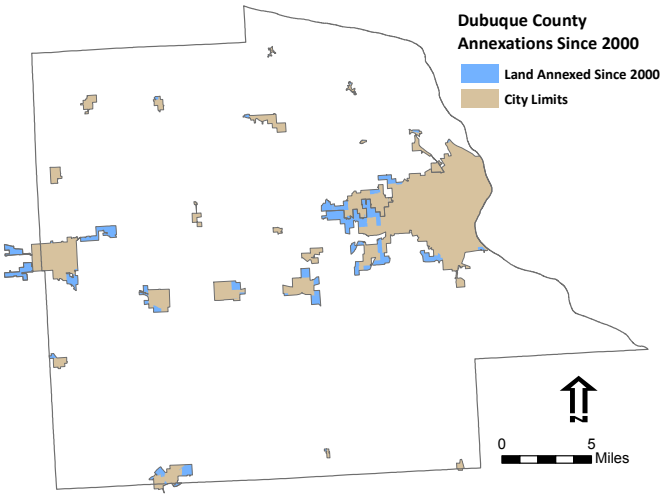
Data: US Census Bureau Center for Economic Studies, 2012

Map 12.5 - Jobs Per Square Mile



Data: US Census Bureau Center for Economic Studies, 2012

Map 12.6 - Dubuque County Annexations



Data: Dubuque County and Iowa DOT.

ings. Growth was mixed-use, compact, and building design varied. Prior to World War II, new buildings were often occupied by their builder. This resulted in an increase in the variety of building forms, often representing regional European origins, within neighborhoods. Since World War II the prevalence of entire neighborhoods developed by single builders has become the norm. To control costs and decrease construction timelines, developers have chosen to use repetitive residential building blueprints within a community. In addition, the expansion of commercial chains has resulted in the repetition of commercial building blueprints from one community to the next.

Transportation Investments - Traffic engineering and public works manuals routinely prescribe wide thoroughfares designed for a single transportation mode, the automobile. Solutions to traffic congestion often revolve around building additional vehicle lanes, promoting faster speeds, and pushing land development further from urban cores until congestion increased and the process was repeated. Transportation manuals also prescribe a hierarchical road network that forces drivers along a limited number of arterial roads, limiting connectivity, dispersion, and flexibility of route choice. Connective grids, on the other hand, are designed to calm traffic, slowing vehicle speeds and making streets smaller and hence more walkable. They also provide a choice of alternative driving routes when one is blocked. In addition, the proliferation of Complete Street policies by municipalities, has led transportation planners and engineers to routinely design and operate the entire right of way to enable safe access for all users, regardless of age, ability, or mode of transportation.

Zoning Codes - The first zoning ordinance in the United States was adopted in 1916 by the City of New York, NY to combat public health issues from poor living and working conditions, industrial pollution, and to protect access to sunlight. In the 1920s the Hoover Administration advocated for states to adopt the Standard State Zoning Enabling Act (SZEA), which authorized the adoption of zoning ordinances to regulate and restrict the erection, construction, reconstruction, alteration, repair, or the use of buildings, structures, or land to promote the health, safety, morals, and general welfare of the community. A city's authority to enact zoning regulations was first upheld by the US Supreme Court in 1926 under Euclid vs. Amber, thus giving rise to term "Euclidean Zoning", the traditional form of zoning adopted and still in use by most communities in the United States. Euclidean Zoning is also referred to as Traditional Zoning or Use-Based Zoning. The main feature of Traditional Use-Based Zoning is the segregation of land uses into three main categories: residential, commercial, and industrial.

Traditional zoning ordinances have brought order to our development patterns, but have drawn criticism for creating sprawl by segregating land uses and promoting large lot sizes. This separation has made our development patterns inefficient, forcing residents to drive longer distances to get to their jobs, schools, shops, and services which increases congestion, air pollution, and green house emissions.

Recommendations

The final step of good land use planning is to identify issues created by the current trend and implement changes to alter the trend and correct the issues.

Traditional Development Pattern - Many of the recommendations for correcting the region's land use problems are not new ideas. In fact mixed-use development, grid street patterns, complete streets, and higher density are based the design go pre World War II development. Many communities can look at the traditional development pattern used in older parts of their cities to improve the sustainability of their town.

The traditional development patterns of the pre WWII era are used as an example for good land use planning because they have stood the test of time. During the early part of the 20th Century most buildings were constructed by immigrants who used traditional European styles. These development patterns had been created over thousands of years of experimentation, and have been used and sustained themselves over time. Builders at this time needed to be masters of efficiency. They need to extract the most value possible out of the land available, and they did so without many of the advantages of we have today. The City of Asbury and Dubuque County communities can use design ideas from other communities and traditional neighborhoods to improve the sustainability of their community.

Mixed Uses – Standard zoning codes are based on

separating property uses. The community is divided into areas for residential, commercial, and industrial. Euclidian zoning codes were first created in the 1920's to prevent negative impacts by separating incompatible land uses. Zoning codes were intended to separate factories that emitted heavy pollution and noise from residential areas. While these industrial uses still exist today, may commercial land uses can coexist with residential uses without negative impact. Mixed use areas also provide many benefits. Residents of mixed use neighborhoods have more opportunities to walk because their job, shopping, entertainment, and schools are located nearby. Increased walking will result in reduced traffic congestion and vehicle emissions, and improved public health

Environmental - Traditional zoning codes were not intended to create sprawl or obstruct traditional villages, towns, or urban neighborhoods. Their primary concern was to protect the public health and safety by separating dangerous or noxious industrial operations from residential areas, and controlling density for health purposes. But in hindsight, at least since the nature of industry has changed in the 20th Century (due in-part to both federal regulations and self-policing resulting from the Environmental Movement), traditional use-based zoning has actually had a negative impact on the public health overall. In our present development pattern, we must drive from place to place, enduring the stresses of congested traffic and wasted time, while polluting our air and depleting natural resources. Meanwhile, we walk much less than we would if our daily needs and destinations were close by. The health benefits of walking have been thoroughly documented.

Form Based Codes

Form Based Codes are a type of land development regulatory tool (i.e. zoning code) that places greater emphasis on the physical form of the built environment with the end goal of producing a specific type of place. Form-based codes can help a community support mixed uses, diverse housing options, and open space while also paying attention to design details such as streetscapes and façades. Because they are simpler to envision than conventional codes, form-based codes provide a community with a certain level of predictability about the public realm, whether applied to new or existing development. Form-based codes can be a helpful tool for communities looking to preserve small-town character.

Form based codes use the transect concept to arrange zoning districts based on a geographical cross section of a region. Such a cross-section can be used to identify a set of habitats that vary by their level and intensity of development and character, a continuum that ranges from *natural-to-rural-to-urban*. In the Summer of 2012 the Consortium participated in a planning process to develop a Rural Model Smart Code for the region. Figure 12.2 is a model transect that was developed for the Rural Model Smart Code.

Code Coordination - Communities in Dubuque County must work together for the updated zoning and subdivision codes to have the greatest affect. Under Iowa State Code communities are given extra-territorial subdivision review. This gives communities the ability to review subdivisions applications

Figure 12.4 - Dubuque County Model Transect

Source: Dubuque County Rural Model Smart Code

within two miles of their city boundary. This extra-territorial review can help cities by allowing them to require new rural subdivisions within two miles to meet their development standards. Extraterritorial review also can have a negative impact. New subdivisions may choose to locate outside to the two mile review zone to avoid building to city standards. This leap-frog development can drive additional sprawl in the rural areas of the county. Combating leap-frog development will require coordination of development polices with the county.

Complete Streets - Spread out auto-dependant development patterns can place a heavy burden on non-drivers. Medical issues, age restrictions (Under 16), and financial limitations can prevent people from driving, but low density single use development requires a car to get to daily needs such as work, school, or shopping. In addition to long distances, safety can also be an issue for pedestrians and cyclists. Roadways are designed to move a large number of vehicles as fast as possible. The roads have gotten somewhat safer, but pedestrian fatalities have fallen at only **half** the rate of motorist fatalities, dropping by just over 14 percent between 2000 and 2009, compared to 27 percent for motor vehicle fatalities.[1]

Neighborhoods that have a grid-like street network equipped with sidewalks and bike lanes encourage residents to walk or bicycle to their destinations by reducing travel distances and improving safety. Compact and mixed-use developments are also important components of walkability, ensuring that essential destinations are centrally located and accessible. Walking and bicycling benefit public health, reduce pollution, and create more livable neighborhoods. From economic, environmental, community, and public health perspectives, the development pattern of communities should allow for safe and convenient walking and bicycling opportunities. Distances between rural communities certainly make walking and bicycling more challenging. A good trail system that links neighborhoods with rural routes and downtown destinations in nearby communities can serve as a recreational or tourism resource as well as a commuter route that is protected from higher-speed roads. Trail systems, such as the Heritage Trail, also provide economic and social benefits to adjoining areas.

Maximize Return on Investment - One of the biggest problems with low density development is the strain it can place on a City's budget. This strain

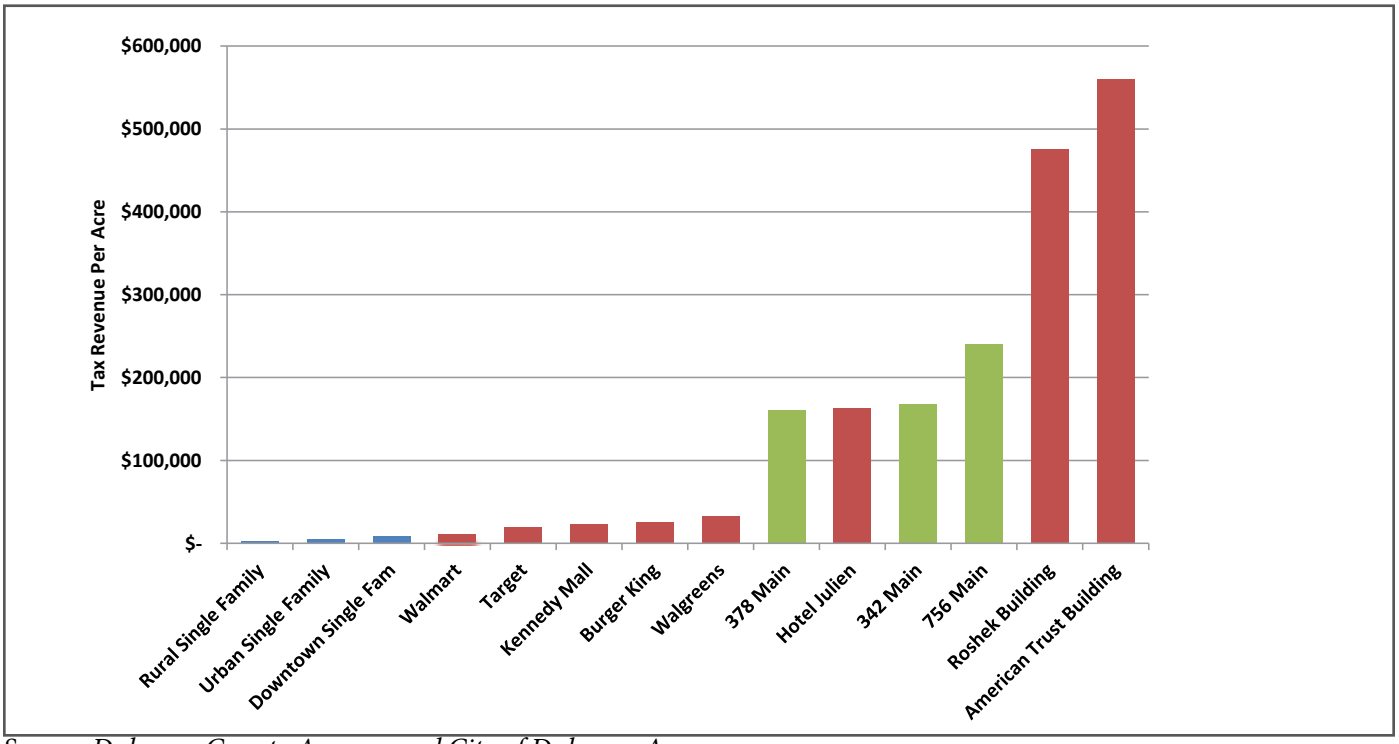
Figure 12.5 - Tax Revenue Per Acre

Property	Total Tax	Total Acres	Tax Revenue Per Acre
Downtown Single Family	$ 838	0.09	$ 9,311
Urban Single Family	$ 2,106	0.45	$ 4,680
Rural Single Family	$ 3,852	1.3	$ 2,963
378 Main	$ 8,044	0.05	$ 160,880
342 Main	$ 13,476	0.08	$ 168,450
756 Main	$ 14,440	0.06	$ 240,667
Burger King	$ 24,006	0.92	$ 26,093
Walgreens	$ 38,408	1.15	$ 33,398
American Trust Building	$ 78,362	0.14	$ 559,729
Target	$ 159,536	8.17	$ 19,527
Hotel Julien	$ 297,722	1.83	$ 162,690
Roshek Building	$ 318,530	0.67	$ 475,418
Walmart	$ 385,682	33.7	$ 11,445
Kennedy Mall	$ 1,094,672	46.55	$ 23,516

Source: Dubuque County and City of Dubuque Assessor

1 http://t4america.org/resources/dangerousby-design2011/

Figure 12.6 - Tax Revenue Per Acre



Source: Dubuque County Assessor and City of Dubuque Assessor

may not be noticeable during good economic times, but can come back to hurt communities during a downturn. The current economic climate has forced several communities across the United States into bankruptcy. Since 2010, seven municipalities including Harrisburg, PA, San Bernardino, CA, and Stockton, CA have filed for bankruptcy. There are numerous reasons behind these cities' financial problems including rising pension costs, but low density development can also play a role in a city's financial problems. Cities spend more providing services such as water, sewer, and roads to a spread out subdivision built far away from existing infrastructure than they do when providing the same services to a less spread out neighborhood. New development can be an initial sign of prosperity, but inefficiencies multiplied over several new subdivisions over a few decades can hurt a community in the long run.

Communities can help improve their fiscal situation by investing in development patterns that maximize return on investment. Communities invest in the installation and maintenance of infrastructure to stimulate private sector investment and development, which creates value in the local economy. The value created is taxed and the tax revenue is used in part to pay for the maintenance of the infrastructure. A community that wants to get more value out of its investment should consider investing in the most productive types of development. Tax revenue per acre is the most accurate measure of a building's productivity because it provides a direct comparison between different properties and accounts for differences in a property's size. See the Public Infrastructure and Utilities chapter for an extended discussion of tax revenue, infrastructure, and return on investment. Figure 12.6 shows a comparison of 14 properties in the City of Dubuque. Several properties including the Kennedy Mall and Wal-Mart pay large amounts of property tax, but take up large amounts of space. Other buildings in the downtown area pay small total amounts of tax but are compact multistory buildings that pay more tax per acre than the Figures 12.5 and 12.6 show that the high density urban development provides a high return on infrastructure investment. Investing in land uses that use infrastructure most efficiently by adopting smart planning principles can help communities keep property taxes and utility rates low. Many communities would spend great amounts of time and effort to attract one large factory to their town, but updating existing infrastructure and attracting several new businesses to their downtown may be a more practical and financially productive solution for economic development.

Low Impact Development – Due to recent flooding in the area, water quality and stormwater manage-

ment are important issues for the City of Asbury. Change in land use especially urbanization dramatically affects the hydrologic cycle by altering the relative percentage of precipitation that contributes to groundwater, evapotranspiration, and runoff relative to the natural ground cover. Specifically, urbanization increases runoff by decreasing the amount of water that infiltrates into the ground and is taken up and transpired by plants. This is because water cannot infiltrate into, and plants cannot grow on, impervious surfaces such as pavement and rooftops. Decisions about lot layout, building density, location of public rights-of-way, protection of sensitive areas, and preservation of open space all have an impact on the quality and quantity of stormwater runoff.

Communities can help improve water quality and prevent flooding by incorporating Low-Impact Development (LID) and Conservation Subdivision Design into their local ordinances. Low Impact Development is a site design strategy with a goal of maintaining predevelopment hydrologic conditions by managing runoff at the source using uniformly distributed stormwater management facilities. Instead of conveying and treating stormwater in large facilities located at the bottom of drainage areas, LID addresses stormwater through small, cost-effective landscape features located at the lot level. Conservation subdivision designs are characterized by common open space and clustered compact lots. The purpose of a conservation subdivision is to protect sensitive and valuable open space, habitat and other environmental resources while allowing for the maximum number of residences under current community zoning and subdivision regulations.

Invest In Existing Downtowns and Traditional Neighborhoods - Infrastructure can be a barrier to redevelopment of an older neighborhood. In some cases, communities have diverted maintenance funding away from existing neighborhoods in favor of constructing new infrastructure for new development. Communities can help attract private sector investment in an existing neighborhood by maintaining and updating existing infrastructure.

Communities can employ a "fix-it-first" approach to infrastructure spending in order to help existing places thrive. A fix-it-first approach means that communities will prioritize public funding to repair, restore, and conduct preventive maintenance on existing infrastructure, including buildings, roads, and water and sewer lines, before building new infrastructure. This approach can encourage and attract development in areas that are already served by existing infrastructure, making existing communities more vibrant and saving on future maintenance costs.

Buildings can also be an issue for existing neighborhoods. Many older neighborhoods have unoccupied buildings that were built for a specific purpose that is no longer economically viable. These vacant spaces can be an excellent opportunity for adaptive reuse. Communities can invest in adapting these older buildings for a new modern use while preserving a historical asset for the community.

Communities can revitalize older, traditional business districts by encouraging historic preservation. Well preserved private homes, examples of rural traditions such as barns, or important downtown structures enable both residents and visitors to feel a sense of place. Federal and state tax credit programs facilitate diverse preservation efforts. The Main Street Four-Point Approach of the National Trust for Historic Preservation provides a useful framework for redevelopment efforts, specifically in older downtowns. This approach focuses on strategically combining historic preservation efforts with marketing the businesses in historic downtown areas as a way to generate additional economic investment. The strategy embraces distinctive architecture, fosters a pedestrian-friendly environment, promotes local business ownership, and creates a sense of community

Protect Open Space and Working Lands - Rural communities are integrally linked with their surrounding landscapes. Growth in rural areas requires that communities preserve the landscapes that community members say they value. These include farmland, forests, and natural areas—the elements that are part of the sense of place for rural communities. These uniquely rural resources are best protected when there is a supportive economic climate that values working lands and a development climate that promotes the conservation of the natural landscape. Land development and population growth are signs of economic progress in many communities, but these indicators are often at odds with the working farms, natural landscapes, and scenic vistas that characterize rural areas and define their sense

of place. When the agriculture, forest, and amenity-driven economies are encouraged to prosper, there is less pressure to convert land to developed uses in a haphazard manner. With strategic and early planning, a community can prioritize which land is most important to conserve and which land can accommodate the projected need for future growth.

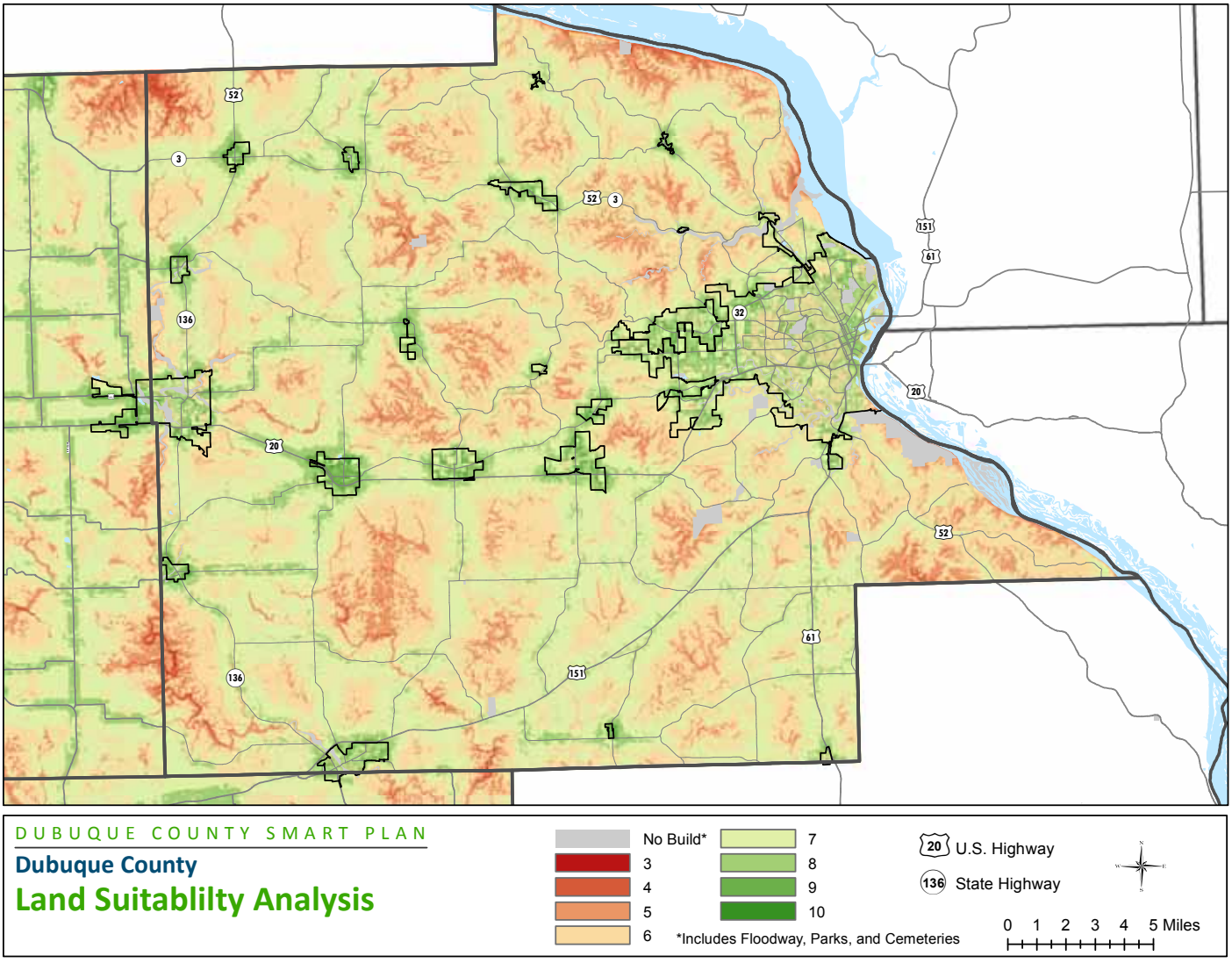
Identify Appropriate Areas for New Growth – New growth is necessary for the continued economic development of a community. However, as we have explored in this chapter, location and type of growth are very important to future quality of life and economic success of a community. The Smart Planning Consortium has developed a Land Suitability Analysis and Future Land Use Maps to help communities plan for new growth. The Land Suitability Analysis (LSA) is a technical tool that uses existing data to estimate the most appropriate areas for new development. The Future Land Use Maps use information from the LSA and input from community members to create a plan for the future development of their community.

Land Suitability Analysis - To aid in the future Land Use planning process, the Consortium conducted a Land Suitability analysis. The objective of the LSA was to use a Geographic Information Systems (GIS) overlay analysis to identify areas appropriate areas for new development based on several factors. The overlay analysis uses mathematical processes to apply a common set of values to diverse and dissimilar inputs to create an integrated analysis. The Results of the anaysis are displayed in Map 12.6.

Factors used in the analysis were:

- Avoid Steep Slopes
- Avoid High Value Agricultural Land
- Build Near Existing Highways
- Build Within Existing City Limits
- Avoid 100 Year Flood Plain
- Avoid Parks and Conservation Areas

Map 12.7 - Land Suitability Analysis



Data: Iowa DNR, Dubuque County, Iowa DOT.

Goals and Objectives

1. **To keep the Land Use Plan and Future Land Use Map current with changing growth conditions in the region.**

   1.1 Review the Land Use Plan and Future Land Use Map annually to ensure planning documents remain useful guides for growth and development.

   1.2 Consider prompt review and possible amendment of the Land Use Plan and Future Land Use Map should development conditions significantly change.

   1.3 Integrate pertinent development data into Geographic Information System to expand and keep current on-going development trend analysis for planning purposes.

   1.4 Adopt or amend zoning, subdivision, flood plain, and health regulations necessary to fully implement the goals, objectives, and policies of the adopted City of Asbury Comprehensive Plan.

2. **To plan for the future and orderly development within a regional context.**

   2.1 Consider the regional setting and economy when assessing the opportunities and constraints for land development.

   2.2 Encourage intergovernmental partnerships to minimize the negative impact of city/county urban fringe development on regional watersheds, ecosystems, and rural infrastructure through compact and contiguous development with storm water management.

   2.3 Encourage intergovernmental cooperation to develop policies for development of fringe areas, to enhance development, and avoid unregulated sprawl.

   2.4 Promote corridors of green along natural and roadway corridors.

   2.5 Encourage cooperative regional planning with all levels of government, to develop a strategic plan for fringe area development that may include annexation.

   2.6 Encourage the city to establish mutual agreements to plan, facilitate, coordinate, and resolve possible conflicts of proposed development within municipal fringe areas.

   2.7 Recognize that transportation and land use are directly related and encourage appropriate land use and transportation planning.

3. **To protect and enhance the viability, livability and affordability of residential neighborhoods while integrating multifamily development throughout the region.**

   3.1 Encourage inclusive neighborhoods that allow a diverse mix of residents and housing types.

   3.2 Encourage connecting and interrelating neighborhoods with greenbelts or other pathways, commercial nodes, or public facilities.

   3.3 Encourage preservation of historic and aesthetic character and function of established neighborhoods.

   3.4 Encourage protection of existing residential areas from encroachment by incompatible development and land uses by supporting the preservation of the environmental quality of residential areas.

   3.5 Encourage neighborhood identity, planning, and pride of place.

   3.6 Support protection of historic neighborhoods from inappropriate development, inconsistent with existing historic development.

4. **Ensure that opportunities for convenient and concentrated commercial development are provide to support both the local and regional market.**

   4.1 Encourage expansion commercial opportunities where infrastructure can support growth.

   4.2 Promote opportunities for neighborhood commercial centers that assure compatibility with residential property.

   4.3 Support annexation of land suitable for commercial development if necessary.

   4.4 Lessen negative impacts to residential areas

which are located near commercial area.

4.5 Encourage development of community design standards.

5. Balance open space and environmental preservation with the community's development needs.

5.1 Encourage protecting and preserving existing open space and park land.

5.2 Encourage expansion of green spaces in suitable locations to encourage livability and enhance aesthetics.

5.3 Encourage parks, green space, trails and similar park/open space uses easily accessible to residents at neighborhood level.

5.4 Provide common open/green space and landscaping into all new development.

5.5 Support protection and enhancement of wetlands, waterway corridors, floodplains, and other sensitive land areas.

6. Ensure that the physical character and form of the city reflects the built environment and is compatible with the natural environment.

6.1 Consider defining and enhancing gateways and focal points to create a sense of place.

6.2 Promote protection and preservation of historic buildings and natural environment.

6.3 Promote quality in the design and construction of new public and private development.

6.4 Preserve natural areas and wildlife corridors that contribute to the character of the area.

7. Encourage redevelopment opportunities within the city in an effort to revitalize unused or underused property.

7.1 Encourage redevelopment or adaptive reuse of vacant or underutilized buildings and sites.

7.2 Promote in-fill development, where appropriate, to encourage more compact urban form and avoid needless and costly sprawl while providing appropriate parking levels.

7.3 Promote development and redevelopment that maximizes existing infrastructure.

7.4 Strive to prevent slum and blight.

7.5 Promote affordable commercial space for small start-up, new or growing businesses.

7.6 Encourage reinvestment in our existing neighborhoods (i.e., smart growth).

8. Provide physical accessibility throughout the City and adjacent communities.

8.1 Encourage and facilitate accessibility by walking, cycling and/or public transit.

8.2 Encourage new development concepts that by design enable people to walk to work, school, day care, shopping, and recreation.

8.3 Facilitate, where possible, enhanced accessibility within existing development.

8.4 Encourage the development of pathways that link the city together in a cohesive manner.

8.5 Assure the provision of access to persons with disabilities.

9. Promote principles of good urban design as part of all development.

9.1 Create a balanced pattern of related urban land uses.

9.2 Ensure that adjacent land uses are compatible with regard to such factors as smoke, noise, odor, traffic, activity, and appearance.

9.3 Provide adequate amounts of land in a variety of sites suitable for each type of urban use, and allowing for anticipated change and growth based on economic forecasts.

9.4 Utilize land that is adequately drained, relatively free of shallow bedrock, and reasonably level for urban purposes.

9.5 Provide adequate water supply and sanitary waste disposal to developed areas.

9.6 Support enhancement of the aesthetics of new and existing development with design, landscaping, parking and signage.

9.7 Encourage environmentally compatible and

sensitive design that fits the development site.

9.8 Encourage energy conservation efforts in building design, materials, and orientation.

9.9 Encourage land conservation practices in density and building patterns to encourage compact urban form versus sprawl.

9.10 Encourage flexible development that promotes commercial development to meet community design standards instead of developers dictating design.

9.11 Strive to create and redevelop buildings which compliment the size and style of surrounding buildings.

Intergovernmental Collaboration

Chapter 13

The success of the Smart Plan will rely on the ability of the City of Asbury to collaborate with local, county and state government to achieve a common goal. Historically, the communities have good working relationships. Communities are able to cooperate to complete projects of mutual interest. Communities also work together to share information, resources, and are active in several regional organizations. However, communities could also be taking advantage of many opportunities for collaboration in economic development, environmental and agricultural protection, and resource sharing. This chapter will outline current collaboration efforts and profile several regional organizations that facilitate collaboration. The chapter will also discuss past conflicts between Dubuque County municipalities and identify opportunities for collaboration. Recommendations included in this chapter will allow communities to prevent and resolve conflicts and help all Dubuque County communities continue to work together to achieve their goals for the future.

Benefits of Collaboration

Asbury has taken advantage of the many benefits through strong regional partnerships and intergovernmental collaboration. Some of the benefits of intergovernmental Collaboration include**:**

Cost Savings - Cooperation can save money by increasing efficiency and avoiding unnecessary duplication. Cooperation may enable the city to provide residents with services that would otherwise be too costly. Examples include shared library services, police and fire protection recycling of household hazardous waste, and shared government buildings (such as the Dubuque County Emergency Responder Training Facility).

Address Regional Issues - By communicating and coordinating their actions, and working with regional and State agencies, local communities are able to address and resolve issues which are regional in nature. Examples include the construction and maintenance of highways, provision of transit service, and planning and construction of facilities for stormwater management.

Early Identification of Issues - Cooperation enables jurisdictions to identify and resolve potential conflicts at an early stage, before affected interests have established rigid positions, before the political stakes have been raised, and before issues have become conflicts or crises.

Reduced Litigation - Communities that cooperate may be able to resolve issues before they become mired in litigation. Reducing the possibility of costly litigation can save a community money, as well as the disappointment and frustration of unwanted outcomes.

Consistency - Cooperation can lead to consistency of the goals, objectives, plans, policies, and actions of neighboring communities and other jurisdictions.

Predictability - Jurisdictions that cooperate provide greater predictability to residents, developers, businesses, and others. Lack of predictability can result in lost time, money, and opportunity.

Understanding - As jurisdictions communicate and collaborate on issues of mutual interest, they become more aware of one another's needs and priorities. They can better anticipate problems and work to avoid them.

Trust - Cooperation can lead to positive experiences and results that build trust and good working relationships between jurisdictions.

History of Success - When jurisdictions cooperate successfully in one area, the success creates positive feelings and an expectation that other intergovernmental issues can be resolved as well.

Service to Citizens - The biggest beneficiaries of intergovernmental cooperation are citizens for whom government was created in the first place. They may not understand, or even care about, the intricacies of a particular intergovernmental issue, but all residents can appreciate their benefits, such as cost savings, provision of needed services, and a strong economy.

Current Collaboration

Local governments in Dubuque County are constantly working together and with regional, state, and federal government agencies to provide the highest level of service to their citizens.

Intergovernmental Agreements

The City works with other local government entities using a combination of formal and informal agreements to provide services to their citizens. Formal municipal agreements are generally referred to as 28E agreements as they are permitted under chapter 28E of the Iowa Code. The chapter permits "state and local governments in Iowa to make efficient use of their powers by enabling them to provide joint services and facilities with other agencies and co-operate in other ways of mutual advantage." [+] Examples of 28E agreements in the City of Asbury include:

Catfish Creek Watershed Management Authority – The CCWMA's mission is to improve water quality, reduce water quantity, promote groundwater recharge, and to protect, promote, and preserve ground water resources within the watershed. CCWMA members include Dubuque County; and the cities of Asbury, Dubuque and Centralia; and the Dubuque Soil and Water Conservation District.

Mutual Aid Agreements – Mutual aid agreements provide the procedures for sharing of resources between communities. The City has entered into agreements for sharing fire response, ambulance services, law enforcement and criminal investigations. The Dubuque County Emergency Management Agency is responsible for establishing local mutual aid agreements, and coordinates with Iowa Homeland Security and Emergency Management to ensure emergency management and response for communities is adequately planned and is well-equipped, trained, and exercised.

Asbury also has mutual aid agreements for maintaining transportation and other public works facilities. These 28E agreements define responsibilities for road maintenance, landfill operation and maintenance, and building and facilities maintenance, among others.

The Iowa Secretary of State maintains an online database of 28E agreements. The database can be used to find information on 28E agreements for the City of Asbury. The database is located at: http://sos.iowa.gov/28E/Controller.aspx?cmd=SOSSearch.

Informal Collaboration

In addition to formal 28E agreements, Asbury also works together through a variety of informal agreements and community organizations. Dubuque County city clerks meet quarterly to discuss city issues and learn about new programs. Communication between city clerks leads to sharing and trust between communities.

Regional Organizations

ECIA

The East Central Intergovernmental Association is a membership sponsored organization of local governments in Cedar, Clinton, Delaware, Dubuque, and Jackson counties. Cooperative effort, through

ECIA membership, provides greater resources to local governments than they would be able to afford individually. The sharing of resources and discussion of common concerns vastly improves the quality and consistency of solutions to local and regional problems. Costs are held at a level that allows all local governments in the region to participate.

ECIA provides numerous planning, technical, and management resources to assist local governments in reaching and implementing decisions. Services provided by ECIA cover six broad categories: Community Development, Economic Development, Transportation Planning, Housing Assistance, Employment and Training and Rural Transit Services.

Transportation

The Dubuque Metropolitan Area Transportation Study (DMATS) is the regional agency that plans for the future of the regional transportation network. The agency is lead by a policy board that is made up of representatives from local municipalities. Policy board members work together to allocate funding to projects that will help maintain and improve the regional transportation system.

Smart Planning Consortium

The Smart Planning Consortium is s regional organization in Dubuque County that was created to develop this plan After the completion of the Smart Plan the Smart Planning Consortium will continue to exist and will remain active in the County. The primary objectives of the consortium will be to ensure the implementation of the Smart Plan and see that the members review and revise the plan as necessary. The consortium will also serve as a facilitator for collaboration between communities. Communities will meet to discuss issues and identify potential areas for collaboration on regional and local projects. For example, planning improvements for Heritage Trail is a large-scale project that would benefit many communities across the region and would require regional coordination. A Main Street program is a local project, but many communities may have similar programs and could share resources and provide advice on how to complete the project. Communities could also participate in regional tourism promotion efforts that would promote local tourist attractions in a regional context.

Conflicts

Asbury works with other communities to provide the best services possible to their citizens; however conflicts between communities have arisen in the past. Land use and land development issues may be the cause conflicts between municipalities. Land is an essential commodity for community growth and is in limited supply. The result can be a competitive atmosphere that may result in conflict. For the most part, Asbury takes a cooperative approach to new development. This section discusses some of the past conflicts that have occurred and provides methods for improving conflict resolution.

City - County Conflicts

City-County conflicts may stem from rural developments outside of the City in the unincorporated area of the county. When developments are approved just outside of incorporated cities, communities may miss out on opportunities to use their excess utility capacity and expand their tax base. New residents may also increase demand on public facilities such as city streets and parks without contributing to the full expenses of these facilities. Greater traffic volumes on city streets will hasten roadway deterioration and require the addition of traffic control devices, all of which increases the communities' expense with little return.

There are also rural development situations adjacent to a city boundary, when the County assumes that the city would automatically annex the area following development. Such annexations do occur occasionally, but just as often, they do not because the city does not have any extra utility capacity or cannot afford to extend utility lines.

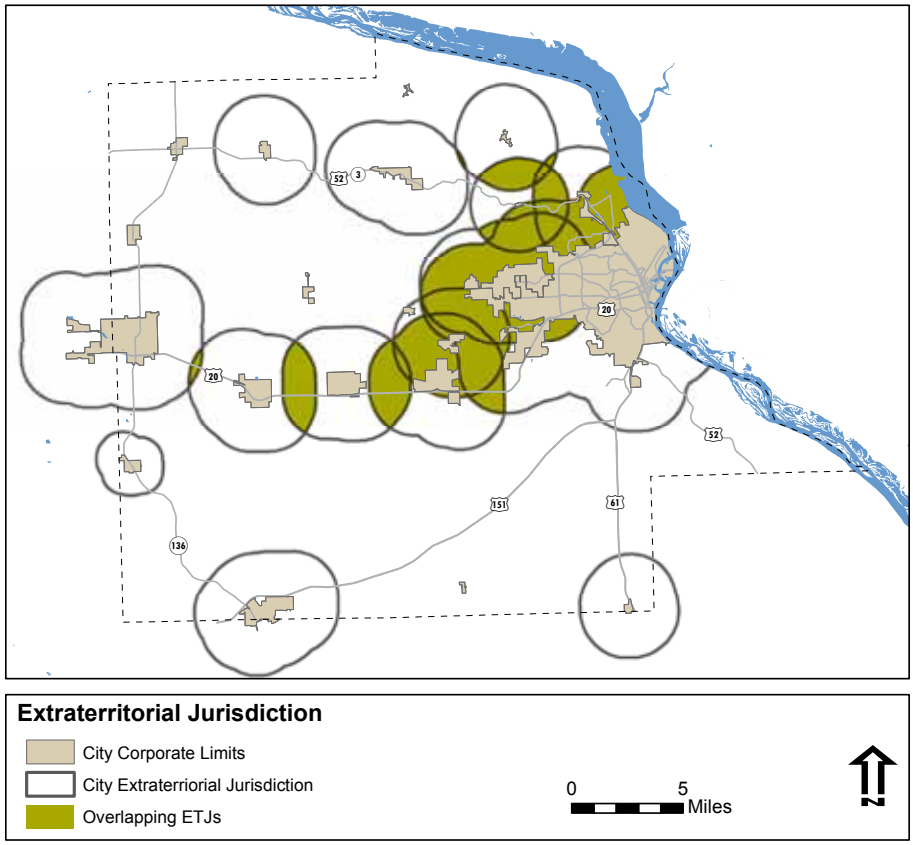
Iowa Code gives cities that have adopted subdivision ordinances the option to review subdivision plats that that are within two miles of their city's boundaries. Many cities have adopted an extra territorial subdivision review ordinance and are notified of subdivision applications. But some cities do not carefully consider these notices from the County. Cities that have not adopted subdivision review authority outside their boundaries will not be notified about subdivision plats and new developments.

City – City Conflicts

Annexation is an issue that has created conflicts between cities all over the United States. Cities annex land to provide space for new development. As a city grows it may find itself in competition with another city over a parcel of land. Asbury is directly adjacent to the City of Dubuque sharing both east and south boundaries.

Conflicts related to specific areas of potential annexation have occurred in recent times between the Cities of Asbury and Dubuque. In this case, Dubuque feels it should be able to annex areas near Asbury because Dubuque is able to provide water and sewer utilities to these areas. Asbury believes that many of these same areas are more "geographically appropriate" to become part of Asbury, squaring off the City's boundary and provide direct access to Middle Road, a main arterial.

Map 13.1 - Extraterritorial Subdivision Review Boundaries



Source: Dubuque County

Development conflicts between cities can also occur in unincorporated areas that are under a city's extraterritorial subdivision review authority. Several communities within the county have overlapping subdivision review boundaries. Development conflicts between cities can arise in these overlap areas. Cities with overlapping subdivision review boundaries can establish agreed on subdivision regulations through a 28E agreement. If no agreement is in place then the city that is closest to the boundary of the subdivision shall have authority to review the subdivision. Currently, no cities in Dubuque County have subdivision review agreements in place. Map 13.1 highlights the overlapping two mile subdivision review boundaries within Dubuque County.

Resolving Conflicts

If conflicts do occur, communities may use a dispute resolution process that provides a low cost flexible approach to resolving disputes. The process works to resolve actual and potential conflicts between governmental entities through open dialog and cooperative initiatives. The principal benefits of government entities utilizing an alternative dispute resolution process to resolve conflicts include:

- Saving time and legal expenses
- Having greater control over the dispute resolution process
- Resolving conflicts in a more creative way than might be possible if it were left to a decision by a judge or jury
- Greater privacy in resolving disputes than is afforded in a courtroom
- Responding to conflict in a rational and courteous manner can increase communication, foster positive intergovernmental relationships, provide an opportunity for learning and broaden perspectives and solutions.

Figure 13.1 shows an example dispute resolution process. The intent of the process is to resolve as many conflicts as possible at the lowest steps on the ladder. If the dispute is not resolved at the lower stages the

dispute moves up the ladder. It is in the best interest for all parties involved to resolve the dispute at the lower stages on the ladder, as both the cost and duration of the process increase at the higher stages and the involved parties have less control over the outcome.

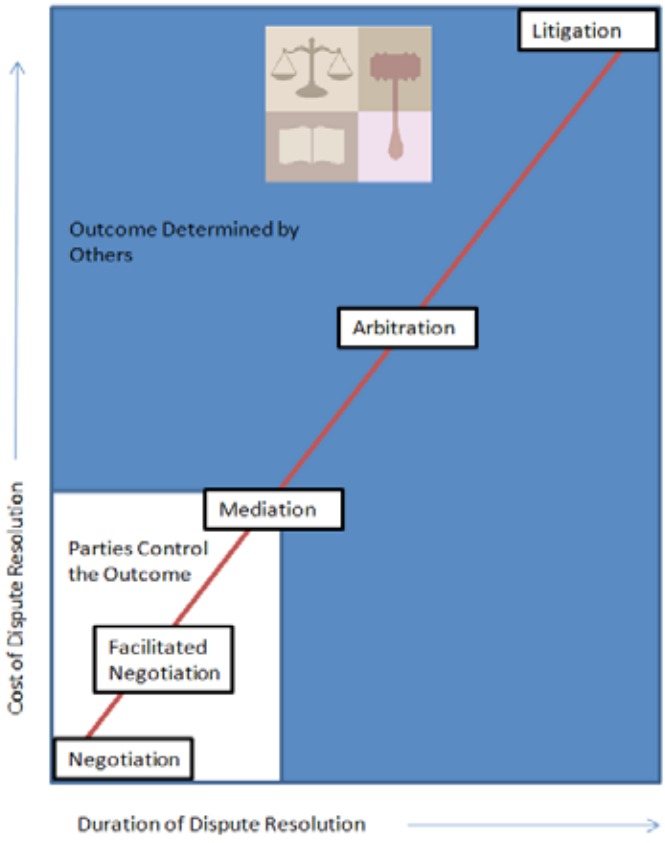
Preventing Conflicts

In most cases, communities may avoid the dispute resolution process by establishing agreements and developing consistency in their local polices. Working closely with other communities will help all parties involved identify and resolve potential conflicts at an early stage, before affected interests have established rigid positions, before the political stakes have been raised, and before issues have become conflicts or crises.

Municipal Agreements

Currently land development conflicts are resolved as they arise, but his process can be highly contentious and does not always produce the most efficient results. Communities may avoid these issues by entering into agreements that will improve the land development process and provide the best opportunity for orderly planning, development and the provision of municipal services.

Figure 13.1 - Dispute Resolution Ladder



Source: Washington County, WI Comprehensive Plan: 2035

Communities may prevent many annexation conflicts by establishing an annexation agreement before problems arise. Under the agreement both sides delineate future annexation areas for each community and agree to annex only the land within their area. The agreement can also lay out easement agreements for future utility extensions.

Communities can also use 28E agreements to eliminate extra territorial subdivision review difficulties by creating an agreed upon set of subdivision regulations to be used in the ETJ overlap zone. Communities could also establish a boundary that delineates areas where each community has subdivision review authority. A subdivision review agreement can be done as part of an annexation agreement or as a standalone agreement.

Annexation and subdivision review agreements may eliminate conflicts and may expedite the subdivision approval process by eliminating the need for ad hoc negotiations between cities. Agreements between cities will also make the subdivision review process easier for the county. Subdividers will know the city's regulations they will need to meet based on a map with clearly defined annexation and subdivision areas. Overall, the agreements provide added clarity and predictability to the land development process.

Development Codes

Zoning and subdivision codes, or development codes, are important tools that provide communities with the opportunity to establish land use patterns that are logical, orderly, attractive, and convenient. Carefully planned and thoughtfully developed communities are instantly recognizable, as private investment is encouraged and protected in such environments. Similarly, public resources can be expanded more efficiently as a result of sound planning enforced by effective development codes. Development codes will be a key part of the implementation of the Smart Plan. Implementation through development codes is vital because as a comprehensive plan the Smart Plan on its own has no legal authority.

Currently zoning, subdivision, and building codes and the process required to comply with these codes

vary greatly across municipalities within Dubuque County. Differences in these development codes can be very confusing for builders and developers, and can also promote urban sprawl by allowing developers to leapfrog into unincorporated areas with less restrictions on development.

Regional implementation of development codes can address some these issues. While the codes and processes are different, intent behind most of them is very similar. If the cities and the county adopt similar development codes, all municipalities will be on an equal playing field which will limit instances of development jumping into rural areas to avoid regulation. Regional code implementation will also encourage new economic development by reducing the complexity of subdividing and building in Dubuque County by establishing similar codes across the county. This could also open development codes to smaller communities that could benefit from having development codes in place but do not have the means to administer and enforce a code. Smaller communities with similar codes could pool their resources to share the burden of code implementation.

Goals and Objectives

1. **Strengthen relationships with Dubuque County governments by strengthening communication and identifying opportunities for sharing information.**

   1.1 Promote better understanding among all levels of government on the roles and responsibilities of each.

   1.2 Formally invite groups, agencies, or entities to public meetings where the topics discussed are of known importance to the invitee.

   1.3 Encourage communities to become/remain active on regional committees and boards.

   1.4 Encourage communities to communicate development proposal details to surrounding jurisdictions on a timely basis.

2. **Minimize land use conflicts between neighboring jurisdictions including issues concerning annexations, urban and rural development, code compliance, and fringe area development.**

   2.1 Establish fringe area development agreements to resolve conflicts between the city and the county.

   2.2 Establish fringe area development agreements to resolve conflicts between adjacent cities.

   2.3 Encourage local governments to adopt a rural model smart code that will promote consistency of development.

   2.4 Encourage cooperative land use polices that protect agricultural land and open space and allow for cost effective service delivery by encouraging new development to locate within the city and established urban fringe areas.

3. **Encourage Dubuque County communities to coordinate economic development efforts.**

   3.1 Coordinate regional promotion of local tourist attractions.

   3.2 Coordinate local business recruitment and retention activities on a regional scale.

   3.3 Cooperate with local educational institutions to coordinate training/skill requirements to meet the needs of local employers.

   3.4 Plan for new housing and maintain existing housing, transportation, communication, and utility systems to foster walkable cities and promote economic development.

   3.5 Develop regional strategy to provide adequate supply of vacant, development-ready land for residential, commercial, and industrial use in each community.

   3.6 Cooperate with businesses, educational institutions, community organizations, and governments to provide information to local businesses.

   3.7 Plan and promote multijurisdictional economic development projects that foster cooperation instead of competition.

4. **Encourage the City to coordinate the planning, programming, and use of personnel, equipment, services, facilities, and infrastructure with other Dubuque County communities.**

   4.1 Cooperate with businesses, educational institutions, community organizations, and governments to identify and pursue federal, state, and private funding to help accomplish region-wide goals.

   4.2 Encourage development to locate within existing city limits and establish urban fringe areas where adequate public utilities are planned or can be provided.

   4.3 Promote the integration of sound, affordable housing throughout the region.

   4.4 Encourage city participation in school district site selection and facilities planning efforts.

   4.5 Continue to work with DMATS and Iowa DOT to plan for transportation infrastructure expansion and maintenance.

   4.6 Encourage intergovernmental coordination when selecting sites for community facilities, such as police stations, fire stations, administration buildings, libraries, schools and hospitals.

5. **Support the coordination of regional agriculture and natural resource protection efforts.**

   5.1 Cooperate on regional stormwater management planning, education, and enforcement of stormwater and erosion control ordinances.

   5.2 Support efforts to improve air quality by reducing emissions from both point and non-point sources.

   5.3 Promote the protection, preservation, and enhancement of the city's natural areas.

   5.4 Support watershed planning to improve water quality and prevent flooding.

   5.5 Preserve prime agricultural land using infill development and sensible agriculture preservation policies.

6. **Continue the dialog on comprehensive planning, land use regulation, and boundary issues between local governments in Dubuque County.**

   6.1 Work cooperatively with local municipalities to make revisions to zoning, subdivision, building, and other municipal codes.

   6.2 Review Smart Plan annually and update the plan in a timely manner.

Implementation

Chapter 14

Many of the challenges facing the City of Asbury are not new. Issues including commercial development, land use and diversified housing options were identified in the city's 2006 Comprehensive Plan. The fact that many of the same issues persist today demonstrates the complexity of these problems, but it also indicates that while many of these issues have been included in plans, they have not filtered into community budgets, capital improvement plans, and zoning and building codes. The intent of a comprehensive plan is to cast a wide net and touch on all topics relevant to the future development of the community. On its own, a comprehensive plan has no legal authority, it is merely an agreed upon road map for the future of the community. To achieve its goals, a community must actively work to incorporate the recommendations of the comprehensive plan into its budgets, policies, and ordinances.

The City's Smart Planning Committee has identified thirteen projects that will put the goals and objectives of the Smart Plan into practice. The recommended projects are listed on the following pages. Each project has a table that identifies the project name, the party responsible for completing the project, and a general timeline. Project timelines have been classified as short-term (less than one year), medium-term (one to five years), and long-term (more than five years). Projects with an ongoing timeline are those projects without a specific end date. Following the table a brief description of the project is included. Projects are not ranked or listed in any specific order.

1. Multi-Jurisdictional Hazard Mitigation Plans		
Responsible Parties	**Elements**	**Time**
Asbury	Hazard Mitigation	Ongoing
County	Intergovernmental Coordination	
Other Dubuque County Cities	Watershed	
	Public Participation	

Project Description

The Dubuque County Multi-Jurisdictional Hazard Mitigation Plan (MJHMP) provides the basic Hazard

Mitigation strategy for all municipalities in Dubuque County. Through the MJHMP, communities identify hazards, analyze the risk associated with each hazard, and estimate the community's vulnerability to each hazard. Communities then develop a list of projects that will mitigate the risk from hazards and prepare the community to take action in the event of an emergency. The Communities should continue to update Dubuque County MJHMP and implement mitigation projects through their land use plans and capital improvement budgets.

2. Maintain and Update Smart Plan		
Responsible Parties	**Elements**	**Time**
Asbury	Intergovernmental Coordination	Ongoing
Planning and Zoning	Issues and Opportunities	
	Public Participation	
	Land Use	

Project Description

The Smart Plan is a comprehensive plan that is intended to guide regional development over the next 20 to 30 years. For the plan to remain relevant, it must be reviewed and updated periodically to reflect the changing conditions in the city. The City should develop a process to evaluate and update the information provided in the plan.

3. Strategic Planning for Economic Development		
Responsible Parties	**Elements**	**Time**
Asbury	Intergovernmental Collaboration	Ongoing
Planning and Zoning	Implementation	
	Economic Development	

Project Description

Collaboration is vital to the economic success of the region. In Dubuque County, regional economic development is guided by the Comprehensive Economic Development Strategy (CEDS). The CEDS is produced by the East Central Intergovernmental Association (ECIA) and includes Cedar, Clinton, Delaware, Dubuque, and Jackson counties. The goal of the CEDS is to coordinate economic development activities in the region. ECIA provides assistance to local governments, development corporations, chambers of commerce, businesses, and individuals in the ongoing implementation of the CEDS. Communities should actively participate in the development the CEDS, and work to implement the goals and objectives of the CEDS on both local and regional levels.

4. DMATS Long Range Transportation Plan		
Responsible Parties	**Elements**	**Time**
Asbury	Transportation	Ongoing
DMATS	Economic Development	
	Intergovernmental Coordination	
	Public Participation	

Project Description

A long-range transportation plan (LRTP) focuses on transportation related issues in a specific area over a 20-year period. The DMATS plan covers the Dubuque metropolitan area including the cities of Dubuque, Asbury, and Peosta. The primary objective of the LRTPs is to set the long-term transportation priorities for the region. The plans provide a view of the current transportation trends in the region and aid in projecting

potential changes for the area into the future. Asbury works with DMATS to attain the goals and objectives of the Smart Plan and the LRTP.

5. Catfish Creek Watershed Management Plan		
Responsible Parties	**Elements**	**Time**
Asbury	Watershed	Medium
Dubuque SWCD	Hazard Mitigation	
CCWMA	Land Use	
	Agriculture and Natural Resources	

Project Description

The Catfish Creek Watershed Management Authority (CCWMA) was established in the summer of 2012 to tackle concerns with water quality and flooding on a watershed level. The CCWMA seeks to promote working together across jurisdictional boundaries to solve problems within the watershed. The CCWMA has been tasked with creating a Watershed Management Plan (WMP) for the Catfish Creek Watershed. A WMP takes a long-term, comprehensive approach to identify water quality problems, propose solutions, and create a strategy for putting these solutions into action.

6. Flood Plain Management Ordinances		
Responsible Parties	**Elements**	**Time**
Asbury	Watershed	Ongoing
County	Hazard Mitigation	
	Agriculture and Natural Resources	
	Catfish Creek WMA	

Project Description

Protecting life and property from flood hazards is an important issue for the City of Asbury. The City utilizes a floodplain management ordinance to minimize losses due to flooding by limiting development in the floodplain. An adopted floodplain ordinance is required to be eligible for the National Flood Insurance Program and for certain types of State post disaster assistance. The City will continue to enforce the floodplain management ordinance.

7. Smart Zoning Code		
Responsible Parties	**Elements**	**Time**
Asbury	Community Character	Medium-Term
Planning and Zoning	Public Participation	
Building Code Commission	Housing	
	Land Use	
	Economic Development	
	Hazard Mitigation	
	Watershed	

Project Description

Zoning ordinances are a primary tool for implementing a comprehensive plan. The adoption of the City of Asbury Smart Plan may necessitate changes to local zoning ordinances. For example, the Smart Plan recommends the use of mixed-use development to promote walkable, economically vibrant communities, but mixed-uses may be limited by traditional Euclidian zoning that separates different land uses. Communities

can encourage mixed-uses by updating their zoning code using a form-based zoning approach that places more emphasis on design and density of new development rather than the traditional Euclidian zoning approach with its primary emphasis on separation of uses.

8. Regional Sustainability Indicators		
Responsible Parties	**Elements**	**Time**
Asbury	Implementation	Short-Term
Planning and Zoning	Public Participation	
University of Iowa	Intergovernmental Collaboration	
	Land Use	

Project Description

The City is working in partnership with the University of Iowa School of Urban and Regional Planning to create a set of regional sustainability indicators that will allow the City to track the Implementation of the Smart Plan. As part of the University's "Iowa Initiative for Sustainable Communities", graduate students will work to define the most important performance metrics for the Smart Planning Principles. The project will identify available data at the county-wide level, as well as local level data for the city. Specifically the project will seek to identify models for projecting land development needs in relation to population changes and job projections. Once complete, this project will provide the consortium with a model for collecting data, measuring progress, and reporting that progress to the community.

9. Capital Improvement Program		
Responsible Parties	**Elements**	**Time**
City Department Heads	Public Infrastructure and Utilities	Medium-Term
City Engineer	Community Facilities	
Financial Planner	Transportation	
	Economic Development	
	Public Participation	

Project Description

Capital Improvement Programs (CIP) are short range plans, usually 5 to 10 years, that identify capital projects and equipment purchases, provide a planning schedule, and identify financing options. The CIP is very important for implementation because it essentially provides a link between the goals and objectives of a comprehensive plan and the municipality's budget. To successfully implement goals and objectives of the Smart Plan communities should consider the recommendations of the plan during their CIP process.

10. Storm Water Management Ordinances		
Responsible Parties	**Elements**	**Time**
Asbury	Watershed	Ongoing
Storm Water Committee	Hazard Mitigation	
	Land Use	
	Intergovernmental Collaboration Issues and Opportunities Agriculture and Natural Resources	

Project Description

Protecting water quality and preventing flooding is an important challenge facing the City. Asbury has estab-

lished ordinances for erosion control and stormwater. Erosion control ordinances are utilized to minimize erosion and sedimentation during construction and other land disturbing activities. Stormwater ordinances limit flooding post development by requiring the installation of infiltration based stormwater control. The City will continue to enforce stormwater ordinances.

11. Fringe Area Agreements		
Responsible Parties	**Elements**	**Time**
Asbury	Intergovernmental Collaboration	Medium-Term
Planning and Zoning	Land Use	
	Issues and Opportunities	

Project Description

Fringe area agreements are formal agreements between the City of Asbury and other cities that address land development issues in unincorporated areas that are near city boundaries. The City may use Fringe Area Agreements to establish an orderly transition from rural to urban uses, protect environmental resources by directing development to targeted growth areas, and to accomplish successful intergovernmental coordination. Fringe Area Agreements can improve the land development process and provide the best opportunity for orderly planning, development and the provision for municipal services.

12. Building Codes		
Responsible Parties	**Elements**	**Time**
Asbury	Intergovernmental Collaboration	Ongoing
Building Code Commission	Housing	
	Community Character	

Project Description

A building code is a set of rules that specify the minimum acceptable level of safety for constructed objects such as buildings. Building codes provide minimum standards to insure the public safety, health and welfare and to secure safety to life and property from all hazards related to buildings. Building codes can also be a way for communities to incorporate green building techniques in their community. Building code administration is an opportunity to protect the health and safety of residents and to protect property values. The City will work to incorporate green building techniques in to the current codes and continue to enforce the building code ordinance.

13. Park and Recreation and Outdoor Space Plan		
Responsible Parties	**Elements**	**Time**
Asbury	Intergovernmental Collaboration	Medium-Term
Building Code Commission	Transportation	
	Community Character	
	Public Participation	
	Economic Development	

Project Description

Continue to develop a long-term plan for the design and use of current park and recreation facilities, preserve natural, cultural and historic resources and develop a bike and pedestrian plan to identify routes and facilities for multi-modal transportation options.