6

NATURAL AND AGRICULTURAL RESOURCES

THE PLAN: GOALS, OBJECTIVES, POLICIES AND IMPLEMENTATION RECOMMENDATIONS
# TABLE OF CONTENTS

- Natural and Agricultural Resources Overview ........................................................................................................... 6-1
- Natural and Agricultural Resource Issues ....................................................................................................................... 6-1
  - Land Resources .......................................................................................................................................................... 6-1
  - Water Resources ......................................................................................................................................................... 6-2
  - Wildlife Resources ....................................................................................................................................................... 6-3
  - Mineral Resources ....................................................................................................................................................... 6-3
  - Air Quality ................................................................................................................................................................. 6-4
  - Efficient and Sustainable Use of Natural Resources .................................................................................................. 6-5
  - Agricultural Resources .................................................................................................................................................. 6-5
- Natural Resources Goals, Objectives, and Policies .......................................................................................................... 6-7
  - Land Resources .......................................................................................................................................................... 6-7
  - Water Resources ......................................................................................................................................................... 6-9
  - Wildlife Resources ....................................................................................................................................................... 6-12
  - Mineral Resources ....................................................................................................................................................... 6-14
  - Efficient and Sustainable Use of Natural Resources .................................................................................................. 6-15
  - Agricultural Resources .................................................................................................................................................. 6-16
- Natural and Agricultural Resources Implementation Recommendations .................................................................................. 6-19
NATURAL AND AGRICULTURAL RESOURCES OVERVIEW

Madison’s setting in a beautiful natural landscape of lakes and gently rolling hills surrounded by rich farmland makes its citizens especially appreciative of the importance of natural and agricultural resources. While the visual character of cities is established predominantly by the built environment, the preservation of important natural features not only adds variety and significant amenity to the urban landscape, it is also critical to maintaining a healthy environment and ecological balance. Conservation of natural resources is also an essential element in creating and maintaining sustainable development patterns and lifestyles. And, although Madison is an urban community, its actions have an important influence on efforts to preserve agricultural land and support the local agricultural economy.

This chapter of the Comprehensive Plan considers issues and opportunities related to natural and agricultural resources, and presents goals, objectives, policies and implementation recommendations to guide the City in conserving and promoting effective management of these critical elements of our environment. Additional information and recommendations regarding protection of natural resources are also found in other chapters of the Comprehensive Plan, including Chapter 7, Parks and Open Space, and Chapter 10, Utilities.

SUMMARY OF NATURAL AND AGRICULTURAL RESOURCE ISSUES

Madison citizens care about their community and the larger environment, and many issues related to natural and agricultural resources were identified during the Comprehensive Planning process. Natural and agricultural resources issues are interrelated with many other planning issues, and recommendations that address and influence these issues are found in many of the chapters of the Comprehensive Plan. The focus of the Natural and Agricultural Resources chapter is more directly on the goals of protecting and preserving the natural environment and of maintaining the region’s strong agricultural base, even as the region’s urbanized areas are also growing and expanding.

LAND RESOURCES

Land is a limited resource, and the land needs of a growing population and economy—for cities, towns, farms and ranches, lumber, mining, recreation—not only compete with each other, but also encroach upon the natural environment and may have direct and indirect negative impacts upon it. Both urban and rural development should utilize land efficiently and balance more intensive uses with the preservation and restoration of sensitive natural communities and resources. Important natural land resources in the City include wetlands,
floodplains, woodlots and a wide variety of soil types—some that are suitable for urban developments and some that are more suitable for other uses. Tools that the City uses to protect and preserve land include the Comprehensive Plan, and other City plans, as well as Dane County planning tools such as Environmental Corridor designation and mapping, the Dane County Land and Water Resource Management Plan, the Dane County Land and Water Resource Management Cost-Share Program, and a number of federal programs.

The following choices, decisions and factors will be considered:

- How will the City balance the desire to protect and preserve sensitive natural lands with the desire to accommodate future growth and development?
- How can the City and Dane County work together to prevent soil erosion and to protect ground and surface water from contamination caused by development and agriculture?

**WATER RESOURCES**

The Madison area’s rivers, streams, wetlands, floodplains, lakes and groundwater aquifers, are the foundation of the region’s ecological system. Madison area and City residents use water for many purposes, including drinking, washing, irrigation of crops, gardens and lawns, recreation, transportation, and waste transmission and processing. These uses put a strain on the supply and quality of Madison’s water resources, and the City must plan to carefully and strategically monitor, protect and improve water quality and supply if it is to preserve and sustain the area’s current and future ecological system while serving a growing population.

The following choices, decisions and factors will be considered:

- Water quality is a regional issue. How can the City work with the County and Watershed Associations to strategically plan for the protection and improvement of water quality? There are a number of different natural resource plans in the City and County that could be better integrated and could work together with the Comprehensive Plan to effectively protect and improve water quality. The City water resources plan (stormwater management plan) should be overlaid onto the land use plan and it should be integrated with the parks/open space plan. A regional watershed plan could serve as the overarching guidance mechanism.
- Land development can both reduce groundwater infiltration and contaminate the water that does infiltrate. How can Madison continue to grow and develop while also maintaining groundwater infiltration and preventing contamination?
- To what extent does the community want to accommodate lifestyle preferences that generate excessive stormwater run-off and damage our water resources?
Natural & Agricultural Resources

• How can we reduce urban run-off into streams, rivers, lakes and wetlands? What sorts of creative and innovative technologies should the Comprehensive Plan consider, such as rain gardens; regulation of fertilizer and herbicide use; bioretention technologies to help ensure that only cool, clean runoff enters streams, rivers, lakes and wetlands; bioinfiltration technologies for roadways; and City purchase of sensitive floodplain and wetland habitats?

Wildlife Resources

Many species of wildlife can coexist very successfully within and on the fringes of urban communities if community plans recognize and maintain the necessary habitat and conditions. Some are common in most urban areas, but others are less common, and their continued presence not only adds richness to urban life but may be essential to maintaining ecological linkages within the larger region. Currently, nearly 60 different threatened or endangered wildlife species and habitats are found in the Six Mile-Pheasant Branch Creeks and Yahara River-Lake Monona Watersheds, as described in Volume I, Chapter 6 - Natural and Agricultural Resources Background Information. The Comprehensive Plan process is an important tool for planning how to identify, protect and preserve threatened and endangered wildlife species.

The following choices, decisions and factors will be considered:

• What types of wildlife are appropriate in urban environments, and what are their habitat needs?
• How will the City balance urban development with wildlife preservation and protection?
• How will the City manage wildlife habitats within private and public development?
• How will the City preserve and manage important woodlands and grasslands that have been protected from development?

Mineral Resources

There are several active and inactive mineral extraction sites in the City. While these quarry operations provide essential materials for urban development, road building and similar activities, their operations may also create conflicts with adjacent landowners and residents as the other residential or commercial uses grow nearer or surround them.
The following choices, decisions and factors will be considered:

- How can development be guided to avoid locations with potential negative impacts from existing mineral extraction activities?
- How can the City work with quarry operators to minimize potential negative impacts on adjacent uses?
- What planning needs to be done to ensure that mineral extraction sites within the urban area can be used for other urban activities once the quarry operation ceases?

**AIR QUALITY**

Madison’s air quality currently meets or exceeds the Clean Air Act National Ambient Air Quality Standards for all criteria air pollutants considered to be harmful to public health and the environment. However, ozone levels are just below the NAAQ standard, and it is important that Madison devise ways of reducing emissions of ozone-forming pollutants. According to the Madison Department of Health, there have been increases in asthma and other respiratory diseases in recent years due to outdoor and indoor air pollution. Emissions from transportation sources contribute significantly to ozone formation, and as Madison’s population grows, there will be more vehicles on the roads. Therefore, Madison should begin now to develop ways of reducing transportation emissions to prevent it from exceeding the NAAQ standard for ozone.

The City of Madison adopted a Climate Protection Plan in 2000, which it updated in January 2002. This Plan shows that greenhouse gas emissions increased 75.3 percent between 1990 and 1996, and that per capita greenhouse gas emissions increased from 20 tons in 1990 to 24.9 tons in 1996. In 1996, the majority of greenhouse gas emissions were the result of energy production for heating, cooling and lighting buildings and homes (80.3 percent), followed by transportation (15.4 percent). This data help illustrate the importance of controlling greenhouse gas emissions.

The following choices, decisions and factors will be considered:

- To what extent does the community want to continue relying on highly polluting energy sources?
- The Climate Protection Plan of 2002 offers useful direction for the City and perhaps it should be part of the Comprehensive Plan’s approach to reducing greenhouse gas emissions.
EFFICIENT AND SUSTAINABLE USE OF NATURAL RESOURCES

Many natural resources are limited in supply, and that supply is dwindling. Other resources are renewable, and even expandable, but may still be used up if the demand for those resources outstrips the pace of renewal. Many renewable resources require other resources for their production. The growing world population and economy is putting increasing demands on this resource base. In order to meet current needs without compromising the ability of future generations to meet their own needs, ways to use resources more efficiently and to use resources in a way that can be sustained indefinitely over time must be developed. While natural resource sustainability is a global problem, to a large extent the solutions will be the cumulative effect of many local actions.

AGRICULTURAL RESOURCES

Madison is essentially an urban place, but it still has an important role in protecting and supporting local agricultural activities and in the preservation of Dane County’s valuable farmland. During this comprehensive planning process, many issues were identified related to farmland preservation, support for regional farmers and locally grown food, community gardens, and farmers’ markets.

While Madison is expected to continue to accommodate a portion of its growth by expanding at its edges for the foreseeable future, the quality and character of that growth helps to preserve agricultural land in two important ways. By promoting careful redevelopment within older City neighborhoods and compact, relatively high-density, mixed-use new neighborhoods at the urban edge, Madison requires less new land per household to accommodate its growth than do other urban communities in the region—and far less than the suburban developments out in the rural areas. By creating vibrant and engaging urban neighborhoods with a range of diverse activities and amenities Madison can provide an attractive and competitive alternative to the homes on large country lots that are currently responsible for one-half of the annual loss of Dane County farmland.

While most of the 597 acres of agricultural land that were in Madison in 2004 will eventually be developed, some agricultural uses are permanent features of the urban fabric. These include Troy Gardens, a Community Supported Agriculture farm, and about 13 acres of community garden land in the City, comprising approximately 1,600 individual plots. There are also a number of farmers’ markets in the City that sell produce from the Madison area and the larger region, and a recently-developed food preparation center serving several local restaurants and institutions. Interest in community-based agriculture is continuing to grow and needs to be addressed in the Comprehensive Plan.
The following choices, decisions and factors will need to be considered:

- Does the community want to preserve some open space for commercial farming activities within the City of Madison as the City expands?
- Does the City want to promote local food system planning through such things as Community Supported Agriculture Farms or preparation and distribution sites for locally produced food?
- Does the City want to further promote community gardening by encouraging additional sites in the City or allowing community gardening as a permitted use in the zoning ordinance?
- What can the City do to promote the sale of food grown in Dane County?
**Natural Resources Goals, Objectives, and Policies**

The following goals, objectives and policies provide the basic framework for natural and agricultural resources policy decisions. A goal is a statement that describes in general terms a desired future condition. An objective is a statement that describes a specific future condition to be attained. A policy is a course of action or rule of conduct to achieve the goals and objectives of the Plan.

The goals, objectives and policies reflect previously adopted plans and policy documents, as well as the ideas, comments, and concerns expressed by numerous groups and individuals at community open houses, small group meetings and through a community survey.

**Natural Resources Goal:** Acknowledge that the natural environment is an integrated unit of interacting land, water, and air resources and ensure that the health and stability of this resource system are maintained.

**Land Resources**

Goal: Regard land as an irreplaceable resource and ensure that its use does not impair its value for future generations.

**Objectives and Policies for Protecting Land Resources**

**Objective 1:** Balance land development proposals with the preservation and restoration of natural communities and resources, including grasslands, wetlands, woodlands and soils.

**Policy 1:** Fully implement the natural resource protection elements of the City of Madison and Dane County Parks and Open Space Plans.

**Policy 2:** Continue to map, designate, and protect environmental corridors from any new development.

*Note: According to the now dissolved Dane County Regional Planning Commission, an environmental corridor is a continuous open space system based on natural features and environmentally important lands such as streams, lakes, shorelands, floodplains, wetlands, steep slopes, woodlands and parks, and other publicly owned or controlled land.*
Policy 3: Approve development proposals only at locations where site and soil characteristics are suitable for the proposed development.

Note: Site and soil characteristics that affect suitability for development include such factors as slope, load-bearing capacity, permeability, and depth to water table.

Policy 4: Implement the land use recommendations in the Comprehensive Plan to improve land use patterns and encourage compact, walkable, higher-density, mixed-use neighborhoods that make more efficient use of land.

Policy 5: Recognize the interrelationship of adjacent landscape types and avoid breaking valuable ecological linkages.

Policy 6: Use all practicable methods for increasing vegetative cover within urban areas, including amendments to existing ordinances and regulations.

Objective 2: Preserve and enhance lands of significant natural value.

Policy 1: Protect lands having significant natural values within the City limits and in outlying areas; cooperate with other governmental units and agencies to acquire or control valuable environments near the edges of the City where there are multiple political jurisdictions.

Policy 2: Work with the County to develop and promote a county-wide system of open space corridors as a framework to protect the natural environment and scenic values, provide outdoor recreation opportunities and preserve for posterity the nature and diversity of our natural heritage.

Policy 3: Identify unique, high quality natural environments and work with property owners, as well as City agencies and commissions, to protect these environments.
Policy 4: Ensure that development projects include provisions for identifying and protecting important natural areas to the greatest extent possible.

Policy 5: Create a single source for coordinating the collection and dispersal of environmental information via reports, lectures, graphic displays and multimedia presentations examining, explaining or demonstrating various areas of environmental importance.

WATER RESOURCES

Goal: Protect, improve and rehabilitate the quality and quantity of groundwater in the Madison area.

Objectives and Policies for Water Resources

Objective 3: Coordinate land use and environmental planning practices to preserve the quality and quantity of Madison area groundwater, and groundwater recharge areas.

Policy 1: Evaluate potential groundwater and hydrologic impacts when making any land use or siting decisions in the City.

Policy 2: Require new development to be located in areas that minimize potential adverse impacts on groundwater.

Policy 3: Explore innovative methods of improving water quality and waste disposal by coordinating land use patterns with applications of new technology.

Policy 4: Identify and protect important water recharge areas.

Objective 4: Protect, preserve and rehabilitate surface water quality in the Madison area.

Policy 1: Require new development to utilize natural drainage patterns and measures to minimize or entrap pollutants before they enter surface waters and encourage that stormwater drainage in existing development be improved to help reduce the volume of runoff and polluted runoff.

Policy 2: Protect shoreland and floodplain areas throughout the community and emphasize their value to the community as potential focal points of natural beauty and recreation.
Policy 3: Identify and inventory wetlands and woodlands, and preserve them as essential components of the hydrologic system and valuable wildlife habitat; restore degraded wetland resources where possible.

Policy 4: The City of Madison and Dane County will work together to maintain or enhance the designation of all current Outstanding Resource Waters, Exceptional Resource Waters, and Class I and Class II Trout Streams through 2045.

Note: Wisconsin Administrative Codes NR 102.10 and NR 102.11 list Outstanding Resource Waters (ORW) and Exceptional Resource Waters (ERW). ORW’s have excellent water quality and high-quality fisheries and they do not receive wastewater discharges; point source discharges will not be allowed in the future unless the quality of such discharges meets or exceeds the quality of the receiving water. ERW’s also have excellent water quality and valued fisheries but may already receive wastewater discharges or future discharges.

Policy 5: The City of Madison and Dane County will work together to continue conservation efforts on 303 (d) water bodies, which are impaired waters that do not presently meet their designated use.

Note: U.S. Environmental Protection Agency (EPA) requirements specify that states list 303d water bodies, which are impaired water bodies that do not meet water quality standards. The Wisconsin Department of Natural Resources (DNR) is responsible for developing this list. The 303d list prioritizes where water quality improvement efforts will be focused (list included in Dane County Land and Water Resource Management Plan, August 2003).

Policy 6: Improve programs and management strategies designed to prevent and reduce contaminated street runoff and stormwater from all sources.

Policy 7: Help reduce pollution in stormwater run-off by limiting the use of pesticides and herbicides on City-owned property.
Policy 8: Encourage landowners to reduce the quantity of stormwater runoff and to improve the quality of this runoff by providing education and incentives.

Policy 9: Create stormwater management basins, based on sound hydrologic and engineering investigation, to retain and/or detain stormwater laden with sediments from entering the Yahara River or its tributaries and the area lakes.

Policy 10: Locate stormwater facilities on hydric soils where stormwater can be retained and mixed with groundwater before being released into creeks and drainageways that flow into area lakes and rivers.

Objective 5: Develop and implement policies and programs to help conserve the region’s water.

Policy 1: Reverse the current trend of regional water table draw-down by 2045.

Policy 2: Implement water conservation and decrease per-capita water consumption through development of standards for new development and incentives for existing development.

Policy 3: Promote water conservation through education programs.
WILDLIFE RESOURCES

Goal: Protect and preserve area wildlife resources.

Objectives and Policies for Wildlife Resources

Objective 6: Protect and preserve native, endangered, threatened and unique plants and animals, wildlife habitats, and native ecological communities in the Madison area.

Policy 1: Identify threatened and endangered species that need protection in the Madison area.

Note: One resource that could be used to implement this policy is the Nature Conservancy’s Natural Heritage Inventory. The Nature Conservancy developed the Natural Heritage Inventory methodology to collect, process and manage data on the occurrences of natural biological diversity. The Wisconsin Natural Heritage Inventory Working List records which elements are tracked in Wisconsin. This list is revised as species’ populations change and as knowledge about their status and distribution in Wisconsin increases. A list for the Madison area is included in “Volume I Chapter 6 Natural and Agricultural Resources, Background Information” of this Plan.

Policy 2: Support the Wisconsin Department of Natural Resources current efforts to develop a Comprehensive Wildlife Conservation Plan and help to implement the Plan in the Madison area.

Note: The Wisconsin Department of Natural Resources (DNR) is in the process of developing a Comprehensive Wildlife Conservation Plan for the state. This is a federally funded effort to help states prevent species and habitats from becoming endangered. The DNR intends to complete the plan sometime in 2005.

Policy 3: Consider impacts on wildlife habitat, potential locations of rare plant and animal species and archeological sites when reviewing proposed land use changes.
**Policy 4:** Emphasize the management of natural communities, or environments of similar landscape features and species, rather than focusing on single species in isolation.

**Policy 5:** Encourage the restoration of indigenous plant communities and wildlife habitat in all private and public developments.

**Policy 6:** Establish at least one open space corridor that connects each significant natural area to at least one other significant natural area, where possible.

**Policy 7:** Encourage management and preservation of existing woodlands as an economic land use, as wildlife habitat, as an erosion control measure, and as a means of preserving the natural beauty of Madison and Dane County.

**Policy 8:** Establish and maintain sufficient interconnected greenways that allow for wildlife movement among habitats.

*Note:* By providing interconnected greenways between larger habitat areas, including natural preservation areas and public parkland, the effective range available to many species is enhanced. Potential barriers to interconnectivity created by streets and highways can often be reduced through a method such as culverts beneath roadways. This technique can provide safe passage for smaller species of wildlife in situations where a crossing would otherwise be hazardous.

**Objective 7:** Eliminate, reduce or mitigate the effect of exotic and invasive species on area land and water resources.

**Policy 1:** Encourage landscaping with non-invasive, native species.

**Policy 2:** Develop new public/private construction and public facility maintenance guidelines to prevent introduction or translocation of exotic and invasive species.

**Policy 3:** Promote local government and general public awareness and education about invasive species that may present environment, economic or social risks and teach the public how to prevent the transportation of invasive species from one land and water habitat to another.
MINERAL RESOURCES

Goal: Identify and protect the City’s non-metallic mineral resources.

Objectives and Policies for Mineral Resources

Objective 8: Avoid allowing new land uses in locations that will interfere with existing active mineral extraction operations.

Policy 1: Identify mineral, sand and gravel resources and control urban development in proximity to these resources in such a way that they can be extracted in the future without creating land use conflicts.

Policy 2: Encourage and assist reclamation of identified, non-operating mining sites.

Policy 3: Require reclamation plans for all mineral extraction sites prior to granting zoning approvals for such uses.

Policy 4: Require that short-term resource extraction or waste disposal is conducted to maximize public benefits and minimize detrimental environmental effects.

Policy 5: Require that the land be restored to an attractive and usable condition after the extractive or disposal usage is terminated.
**Efficient and Sustainable Use of Natural Resources**

**Goal:** Balance the City’s need for economic growth and environmental health through sustainable use of natural resources.

**Objectives and Policies for Efficient and Sustainable Use of Natural Resources**

**Objective 9:** Reduce City government use of scarce and non-renewable resources and actively support similar efforts throughout the community.

**Policy 1:** Madison should become a national leader in energy efficiency and renewable energy. This effort could include strategies for:

- Maintain an easily walkable neighborhood size (approximately one-quarter mile from neighborhood center to edges).
- The City of Madison should lead by example and promote sustainable building and design for its own existing and future buildings and operations. Sustainable practices include energy efficient heating, lighting & cooling, daylighting, building orientation, and recycled building materials.
- Enact polices and incentives to promote sustainable energy and building design in the private sector.
- Partner with organizations that promote sustainable building and design through partnerships that facilitate educational programs, educating city staff, businesses, and residents, and communicating successful public and private initiatives that promote sustainable practices.

**Policy 2:** Actively support efforts to decrease City employee use of non-renewable energy resources by making more fuel efficient and cleaner burning motor vehicles and alternative transportation modes accessible.

**Policy 3:** Implement the 2001 Green Fleet Plan goals and actions for municipal transportation to include: rewriting purchasing guidelines, implementing minimum fuel efficiency and emissions standards for new vehicles; and, implementing an employee trip reduction plan that promotes mass transit, biking, and alternative methods of transportation to the car.

*Note:* The City established the Green Fleet Program to conduct a comprehensive fleet inventory and to purchase smaller and more efficient new vehicles where possible, some alternative fuel vehicles, and to create “driving for efficiency” training.
**Policy 4:** Encourage and support the use of alternatively powered government vehicles including staff cars, maintenance vehicles, and Metro buses. Some possible alternatives could include bio-diesel, hybrid electrics, and hydrogen.

**Objective 10:** Work with businesses and industries to reduce their use of scarce and non-renewable resources and to reduce pollution.

**Policy 1:** Encourage businesses and industries to use renewable power sources for heating, cooling and lighting.

**Policy 2:** Develop ways to reduce pollution through various environmental controls, working with businesses and industries that have the potential to generate high levels of pollution.

**Agricultural Resources**

**Goal:** Maintain the region’s status as one of the nation’s most productive and economically viable food production areas.

**Goal:** Maintain existing agricultural operations in the City and encourage new, smaller farming operations such as Community Supported Agriculture Farms.

**Objectives and Policies for Agricultural Resources**

**Objective 11:** Encourage the preservation of farming operations within the City where it is economically feasible and compatible with surrounding land uses.

**Policy 1:** Identify, map and maintain a database of agricultural operations in the City.

**Policy 2:** Coordinate with the County to educate farmers with operations in the City about incentive programs that will help them continue farming or to sell their land to farmers with interest in smaller-scale agricultural operations such as farmette development and Community Supported Agriculture farming.

**Note:** Applicable incentive programs that are being expanded and promoted by Dane County include the Dane County Farmland Trust Fund with its Purchase of Agricultural Conservation Easements (PACE) and establishing a countywide transfer of development rights (TDR) framework for towns, villages and cities that wish to join.
Objective 12: Identify areas on the City’s periphery suitable for long-term preservation for diverse agricultural enterprises and community separation.

Policy 1: Cooperate with adjoining towns and villages and Dane County to protect identified long-term preservation areas for the benefit and use of current and future generations.

Policy 2: Encourage unique agricultural uses, such as apiaries, orchards, vineyards, and other agricultural uses that are compatible with urban land uses.

Objective 13: Promote the sale of foods grown in Dane County.

Policy 1: Support Dane County’s efforts to promote and develop direct-marketing alternatives for agricultural foods and products.

Policy 2: Support Dane County’s efforts to educate the general public on the value that agriculture production and business adds to the Dane County economy.

Policy 3: Support Dane County’s efforts to help entrepreneurs plan, start and grow new enterprises that capture value from agriculture.

Policy 4: Support Dane County’s efforts to establish and maintain a Food Council to coordinate issues and policies relating to locally grown foods.
Objective 14: Protect existing community gardens in the City and establish additional areas for new community gardens.

Policy 1: Expand community gardening opportunities in the City; consider using City surplus property and parkland to do this.

Policy 2: Strive to create one community garden site for every 2,000 households in the City.

Policy 3: Design aesthetically pleasing community gardens appropriate to the neighborhoods where they are located.

Policy 4: Extend leases of community gardens on City-owned property to five years.

Policy 5: Establish permanent community gardens on City-owned land or in City parks where possible.
**NATURAL AND AGRICULTURAL RESOURCES IMPLEMENTATION RECOMMENDATIONS**

This section describes the major actions involved in implementing the Natural and Agricultural Resources Element. Table 1 is intended to guide City staff and the Common Council in setting priorities for capital budgeting and staff allocation. It is expected that this table will be reviewed annually and revised, as necessary, to establish new priorities. Ongoing actions are those actions that are already underway and should continue. Priority 1 actions should be implemented immediately; Priority 2 are those actions that are mid-term and should be implemented within five years of adoption of the Comprehensive Plan; and Priority 3 actions will be implemented over a longer period of time, 10 years and beyond. As conditions change over time, these actions may be reprioritized to better meet the community’s needs.

<table>
<thead>
<tr>
<th>Priority</th>
<th>Action</th>
<th>Lead and Coordinating Agencies</th>
</tr>
</thead>
</table>
| ongoing  | Work closely with the County to continue conservation efforts on 303 (d) water bodies, which are impaired waters that do not presently meet their designated use. | Planning Unit
Dane County Land and Conservation Department |
| ongoing  | Continue to work with the Dane County Land and Conservation Department in the implementation and administration of the Dane County Erosion Control and Stormwater Management Ordinance. | Department of Planning and Development
Dane County Land and Conservation Department |
| ongoing  | Work with Dane County on farmland preservation efforts that are consistent with City plans and policies. | Department of Planning and Development
Dane County
Intergovernmental planning organizations |
| ongoing  | Continue to monitor stormwater discharge through the stormwater permitting program and report on existing activities like street sweeping, leaf collection and salt use. | City Engineering
United States Environmental Protection Agency (US EPA) |
### Table 1 Natural and Agricultural Resource Implementation Actions

<table>
<thead>
<tr>
<th>Priority</th>
<th>Action</th>
<th>Lead and Coordinating Agencies</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><strong>ongoing</strong></td>
<td>Wisconsin Department of Natural Resources (WDNR)</td>
</tr>
<tr>
<td></td>
<td>Continue to work in conjunction with the 18 other participating Dane County municipalities to enforce the stormwater discharge permit agreement with the WDNR and continue to implement the Joint Storm Water Permit Group Information and Education Plan.</td>
<td>Participating Dane County municipalities</td>
</tr>
<tr>
<td></td>
<td></td>
<td>WDNR</td>
</tr>
<tr>
<td></td>
<td></td>
<td>US EPA</td>
</tr>
<tr>
<td>1</td>
<td>Implement Land Use Element policy recommendations, which encourage more efficient ways of using land in order to reduce impacts to natural and agricultural resources.</td>
<td>Department of Planning and Development</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Plan Commission</td>
</tr>
<tr>
<td></td>
<td><strong>ongoing</strong></td>
<td>City Zoning and Planning Units</td>
</tr>
<tr>
<td></td>
<td>Continue to monitor the effectiveness of and amend as necessary the floodplain and shoreland zoning regulations of the City of Madison and Dane County.</td>
<td>County Zoning</td>
</tr>
<tr>
<td>1</td>
<td>Devise a woodland and wetland protection plan for the City.</td>
<td>Department of Planning and Development</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Wisconsin Department of Natural Resources</td>
</tr>
<tr>
<td>1</td>
<td>Work with County, State, and Federal government programs to secure funding and technical assistance to implement streambank buffers, wetland restoration, and other water quality protection and preservation activities.</td>
<td>Department of Planning and Development</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Dane County Land and Conservation Department</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Wisconsin Department of Natural Resources</td>
</tr>
<tr>
<td></td>
<td></td>
<td>US Army Corps of Engineers</td>
</tr>
<tr>
<td>2</td>
<td>Work closely with the City Architect and Engineering Department to implement energy</td>
<td>City Engineering</td>
</tr>
</tbody>
</table>

*City of Madison Comprehensive Plan*
<table>
<thead>
<tr>
<th>Priority</th>
<th>Action</th>
<th>Lead and Coordinating Agencies</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>conservation recommendations for construction, heating, lighting and cooling of municipal buildings from the Mayor’s Energy Task Force Advisory Report.</td>
<td>Inspection and Planning Units, Mayor’s Office</td>
</tr>
<tr>
<td>2</td>
<td>Amend the Zoning Code to include a Green Building Ordinance that specifies energy conserving building materials and construction techniques for all new sites and structures.</td>
<td>Inspection and Planning Units, City Engineering</td>
</tr>
<tr>
<td>2</td>
<td>Develop public education programs to educate citizens about the Lower Rock River Basin and how their actions significantly affect the water resources in the basin, and to educate citizens about the harmful affects of pesticide and herbicide runoff into storm drains.</td>
<td>City Engineering, Dane County Land and Conservation Department</td>
</tr>
<tr>
<td>2</td>
<td>Expedite City removal and replacement of dead trees, increase public planting of trees and other vegetation, adopt regulations that require trees and vegetation be incorporated into private development plans (tree islands in parking lots for example), and devise programs and policies that would encourage increased voluntary tree planting by City residents.</td>
<td>City Engineering, Department of Planning and Development</td>
</tr>
<tr>
<td>2</td>
<td>Secure additional community garden sites either through long-term leases or through ownership as permanent public assets by City government, non-profit organizations, homeowner associations, and public institutions like universities and colleges, hospitals and religious institutions.</td>
<td>Department of Planning and Development</td>
</tr>
<tr>
<td>ongoing</td>
<td>Continue the City’s Environmental Initiatives Program.</td>
<td>City Engineering</td>
</tr>
<tr>
<td>2</td>
<td>Support the efforts of Dane County to establish and operate a Dane County Food Council that coordinates issues and policies relating to locally grown foods.</td>
<td>Dane County, Mayor’s Office</td>
</tr>
</tbody>
</table>