



Columbia County Comprehensive Plan 2030

Adopted September 19, 2007 / Amended November 12, 2013

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1.0 ISSUES AND OPPORTUNITIES

1.1 INTRODUCTION - BACKGROUND

In the fall of 1997, the UW Cooperative Extension office and Columbia County Planning and Zoning office began a needs assessment process to gather information to use in deciding whether to pursue a land use Plan for Columbia County. The needs assessment process included the collection of demographic data, interviews and surveys of citizen advisory committees and town, village, and city officials, and a series of listening sessions to gather information from concerned citizens. In 1998, graduate students from the University of Wisconsin-Madison Department of Urban and Regional Planning assisted Columbia County with its needs assessment process and developed the Columbia County Planning Advisory Report. The Planning Advisory Report provided models for the types of planning that Columbia County could choose to pursue, outlined specific recommendations for implementing a Plan, and presented the results from a countywide citizen survey on planning.

Over the past few years, the County has implemented many of the recommendations of the report, gathered statistical information, created maps, and has restructured the Planning & Zoning Department. In the spring of 2003, the Columbia County Planning & Zoning Department held a meeting with Town Board and Planning Commission members to discuss the County planning process and offer planning assistance to towns. As a result of the meeting, 15 towns in Columbia County contracted with the County to develop comprehensive plans consistent with Wisconsin Statute 66.1001. Information gathered from the development of the 15 town comprehensive plans along with the county survey, public meetings, and other statistical data were used to develop the County Comprehensive Plan. Reference was also made to existing town plans, studies, reports, etc. from all towns in the county including those that did not contract with the county to prepare comprehensive plans.

1.2 THE PURPOSE OF PLANNING

Development in Columbia County is the result of hundreds of decisions each year by unrelated individuals about how the land is to be used. Generally these decisions conform to tradition, but each has the potential to conflict with neighboring uses and each represents a step toward the land use pattern for the future. Without a plan, landowners have no guidance in making land use decisions and property owners have no protection from decisions that may not be in their best interest.

Wisconsin Statutes, Section 59.69 provides that it is a function of the County Planning and Zoning Department, under direction of the County Board, to prepare a county development plan. The plan's general purpose is in guiding and accomplishing a coordinated, adjusted and harmonious development which will in accordance with existing and future needs, best promote public health, safety, morals, order, convenience, prosperity, or the general welfare, as well as efficiency and economy in the process of development.

Wisconsin Statutes, Section 66.1001, further defines a county development plan as a Comprehensive Plan and outlines the content of a Comprehensive Plan and a local unit of government's responsibilities in developing this Plan. This legislation, often referred to as "Smart Growth", requires that a community that engages in land use regulations develop and adopt a Comprehensive Plan (Plan). The Plan must contain nine elements as specified in the statutes.

Wisconsin Statutes, Chapter 91, also requires the County to prepare and adopt a new Farmland Preservation Plan, which under Section 91.10(2) shall be included as a part of its comprehensive plan and be consistent with the remainder of the comprehensive plan. Under Section 91.10(3), the County must follow the comprehensive plan adoption/amendment procedures in Section 66.1001(4) to adopt a new

Farmland Preservation Plan. In 2013, the County Board adopted the Columbia County Farmland Preservation Plan as an element of its comprehensive plan and simultaneously amended this Columbia County Comprehensive Plan 2030 to assure consistency.

Land and the public services provided to the people who live on the land, are too expensive to use them unwisely. Limited resources must be used in the most beneficial and least wasteful manner. Planning attempts to apply a rational process of analysis and forethought to the development process. It attempts to guide the use of resources in an efficient, effective, and healthful manner.

The Plan is advisory, but since 2010 all amendments to County zoning ordinances (including rezonings) and land division ordinance needed to be consistent with this Plan under Section 66.1001. The Plan is a guide for public and private decisions concerning land use. It is not an ultimate design, but represents thought and analysis at a point in time. Therefore, it requires periodic reconsideration and updating. The Plan is long range and general, not something to be imposed in a narrow and rigid manner.

1.3 OVERALL VISION, GOALS, AND OBJECTIVES

The vision, goals, and objectives of a comprehensive Plan direct the Plan implementation activities and the development of Columbia County. They are the core of the Columbia County Comprehensive Plan. They reflect the deliberations of the Columbia County Comprehensive Plan Advisory Committee (CPAC) based on the comments and opinions of the people of Columbia County.

The vision is the purpose for which planning is done and provides the direction to guide all future decisions. The vision is a general statement that guides the planning process in a generally accepted direction. The overall vision provided below is an overarching statement that provides guidance and direction to all of the elements in the Comprehensive Plan. In addition to the overall vision, each element of this Plan contains a vision that provides guidance and direction to that particular element of the Plan.

Goals are statements of conditions that are intended to be maintained or achieved at some time in the future. Goals do not have specific time frames and usually cannot be specifically measured. The overall goals provided below are a compilation of all the goals from the nine elements of this Plan.

Objectives are actions that need to be taken in order to achieve one or more goals. Objectives usually have an associated time frame and frequently must occur in a defined sequence. Objectives are normally measurable, and should be regularly reviewed to assess progress in implementing the Plan. The overall objectives provided below are a compilation of all the objectives from the nine elements of this Plan.

A vision statement rarely changes unless the philosophy of the population changes. Goals seldom change unless they have been achieved, and then usually only to maintain the condition that has been achieved. Objectives change frequently. Objectives are regularly achieved, and then are removed. Completion of some objectives often suggests new objectives that were not originally considered, and these should be added. Attempts to implement objectives sometimes reveal that they cannot be achieved, or that achieving them would not have the desired result. In these cases, these objectives should be modified or replaced. A thorough review of the goals and objectives should be conducted annually.

1.3.1 Overall Vision Statement

The following is the overall Vision Statement for the Columbia County Comprehensive Plan 2030:

Columbia County will continue to have a high quality of life and be an exceptional place to live, work, and engage in recreation. The County will continue to find balance among economic

development, the preservation of agriculture, the protection of natural and cultural resources, and the recognition of private property rights. Well-planned development, supported by appropriate infrastructure and an efficient transportation system, will ensure a vibrant and sustainable economy and provide a strong quality of life for its citizens.

1.3.2 Overall Goals and Objectives

The following is a combined list of the vision, goals and objectives from all nine elements of the Columbia County Comprehensive Plan 2030:

Element #1 Issues and Opportunities (Population)

Population Vision

- ◆ Growth levels sustainable within the limits of County resources.

Goal 1: Moderate and steady population growth.

- Objective 1:* Growth is matched by adequate jobs and housing .
Objective 2: Quality of life is maintained.

Goal 2: Provide opportunities to live, work, and recreate in Columbia County.

- Objective 1:* Encourage young adults to remain in the County.
Objective 2: Increase local employment opportunities.
Objective 3: Allow expansion of existing agricultural operations.
Objective 4: Encourage high quality schools and educational opportunities in the County.
Objective 5: Increase awareness and encourage utilization of higher education and continuing education opportunities in the County.

Element #2 - Housing

Housing Vision

- ◆ Residences set in attractive, safe, and appropriate environments for all County residents.

Goal 1: Provide for planned and orderly housing development.

- Objective 1:* Encourage rehabilitation and proper maintenance of older homes.
Objective 2: Encourage infill of vacant lots in existing subdivisions.
Objective 3: Encourage new development to be sited near or adjacent to existing development, when appropriate.
Objective 4: Require connectivity between adjacent housing developments for both vehicular and pedestrian traffic.
Objective 5: Encourage residential development in areas served by public sanitary sewer, when appropriate.
Objective 6: Encourage new housing areas to be predominantly single-family homes or duplexes in unsewered areas.
Objective 7: Limit the amount of multi-family housing in unsewered areas.
Objective 8: Discourage the development of additional mobile home parks in unsewered areas.
Objective 9: Require that all new housing meet applicable codes and required standards of construction.
Objective 10: Consider smaller lot sizes and increased density in areas of the County with sanitary sewer service, where appropriate.

Objective 11: Consider larger lot sizes and lower densities in unsewered areas of the County, where appropriate.

Objective 12: Encourage clustered residential development.

Objective 13: Discourage residential development on prime agricultural lands and near active farms.

Objective 14: Enforce County Zoning and Subdivision Ordinances in a manner consistent with the County Comprehensive Plan.

Goal 2: A cooperative approach involving the towns, county, state and private entities to meet current and future housing needs.

Objective 1: Regularly meet with officials from all County municipalities to discuss and review housing needs and plans.

Objective 2: Seek input of appropriate governmental entities and property owners in areas affected by housing development plans.

Objective 3: Meet with State officials as needed.

Goal 3: A full range of housing opportunities available for Columbia County's current and future residents.

Objective 1: Promote an adequate supply of appropriate housing for all who work in Columbia County.

Objective 2: Promote all types of residential development including multi-family, affordable housing, elderly housing, and group living quarters in proportion to the demand for such housing, in appropriate areas, and subject to development standards.

Objective 3: Examine the need for emergency housing in the County.

Objective 4: Plan for the future housing needs of an aging population.

Goal 4: Appropriate regulations to implement the Comprehensive Plan.

Objective 1: Review all Columbia County Land Use Ordinances and recommend changes to implement the Comprehensive Plan.

Objective 2: Provide adequate enforcement of all County regulations regarding housing.

Objective 3: Encourage the development of County-wide standards for storm water management and erosion control.

Objective 4: Monitor new technology related to private sanitary sewer systems and implement the technology as appropriate.

Element #3 - Transportation

Transportation Vision

- ◆ A safe, efficient, and well-planned transportation system that incorporates and encourages multiple modes of travel.

Goal 1: A safe and well maintained system of roads and highways.

Objective 1: Improve existing safety-deficient roadways in the most economical and efficient manner to reduce accident potential.

- Objective 2:* Maintain and upgrade existing roadways before developing new major highways.
- Objective 3:* New parcels requiring access onto State Highways or major County Trunk Highways should be discouraged.
- Objective 4:* Encourage the Wisconsin Department of Transportation to improve existing highways to include passing and turning lanes where appropriate and necessary.
- Objective 5:* Develop a means to objectively determine the environmental and economic impacts of proposed transportation improvements and use this evaluation system to evaluate road projects in the County.
- Objective 6:* Work with the City of Portage and the Wisconsin Department of Transportation to examine the feasibility of providing a State Highway 33 bypass of the City of Portage to facilitate the movement of through traffic.
- Objective 7:* Develop a capital improvement plan for Columbia County that includes County highway improvement projects and prioritizes them according to need.
- Objective 8:* Work with the Wisconsin Department of Transportation to assure that their transportation improvements in Columbia County are consistent with the goals and objectives of the Columbia County Comprehensive Plan.
- Objective 9:* Develop naming convention standards for all roads in Columbia County to prevent the duplication of road names and achieve a logical hierarchy.

Goal 2: An appropriate set of standards for all roads and highways.

- Objective 1:* Develop an access management plan for arterial and collector highways.
- Objective 2:* Work with the Wisconsin Department of Transportation to ensure adequate access control management on state highways in the county.
- Objective 3:* Limit access points on Major Corridors to a five hundred (500) foot minimum spacing.
- Objective 4:* Limit access points on Minor Corridors to a three hundred (300) foot minimum access spacing.
- Objective 5:* Require private driveways accessing interior parcels to have a minimum corridor width of sixty-six (66) feet and to remain clear of development of any type to the rear lot line of the parcel.
- Objective 6:* Discourage the development of new private roads.
- Objective 7:* Require new development to have safe access to a paved public road.
- Objective 8:* Encourage cul-de-sacs to be less than one thousand (1,000) feet in length.
- Objective 9:* Encourage the adoption of adequate town road standards in all the towns and to require developers to build any new town roads to those standards.
- Objective 10:* Require that road improvement projects have a high aesthetic quality and a positive visual relation to the surrounding landscape and that the projects minimize the disruption of natural, historical, and cultural resources.
- Objective 11:* Require traffic impact analysis studies for large developments along important highway corridors.
- Objective 12:* Discourage residential development near Primary Corridors.

Goal 3: Roads and highways that are properly classified and under the appropriate jurisdiction.

Objective 1: Work with the Wisconsin Department of Transportation to change the official Functional Classification of Highways Map in accordance with the Proposed Functional Classification Map in this Plan.

Objective 2: Transfer highway jurisdiction, as opportunities arise, in accordance with the Proposed Functional Classification of Highways Map in this Plan: roads classified as local to the Towns; roads classified as collectors to the County Highway Department; roads classified as arterials to the State Department of Transportation.

Goal 4: Adequate development and full utilization of all modes of transportation in the County.

Objective 1: Pursue a bicycle and pedestrian plan for the County that designates and signs bicycle routes throughout the County utilizing low traffic volume roads, recommends the construction of paved shoulders with bike lanes on specific segments of roadway, and proposes the construction of a system of multi-use trails separated from roadways.

Objective 2: Evaluate roads in the County that have potential to be designated as Rustic Roads and work with the Wisconsin Department of Transportation to designate qualifying roads.

Objective 3: Support the development and continued improvement of a high quality airport in the City of Portage to meet air transportation needs of those living and working in Columbia County.

Objective 4: Seek opportunities to assist and expand the railroad systems operating in Columbia County, including opportunities and initiatives to improve freight service, expanded AMTRAK service, and develop high-speed rail service.

Objective 5: Preserve abandoned rail corridors as multi-use trails so that they are available for future transportation uses, if needed.

Objective 6: Discourage development proposals requiring new rail crossings and eliminate existing crossings whenever possible to improve safety.

Objective 7: Require an appropriate buffer for residential development in areas adjacent to active rail lines.

Objective 8: Review the needs of specialized transit programs throughout the County, such as transportation services for the County's elderly and handicapped, and prepare a plan for the continued improvement of these services.

Objective 9: As roads are reconstructed and new roads are built, consider the needs of agricultural equipment, horse drawn vehicles, and heavy trucks in the design of the road to ensure that the road is properly constructed to accommodate all likely users.

Objective 10: Encourage the development and utilization of alternative forms of transportation and fuels, when appropriate.

Element #4 - Utilities & Community Facilities

Utilities & Community Facilities Vision

- ◆ Adequate utilities and community facilities to meet the needs of County residents with new development providing for its own infrastructural needs so as to not burden existing taxpayers.

Goal 1: A full range of community services and infrastructure that meet the needs of County residents.

- Objective 1:* Direct more intensive development to areas where a full array of utilities, community facilities, and public services are available.
- Objective 2:* Consider the impacts that the development of community facilities and utility systems have on land use, transportation, and natural and cultural resources.
- Objective 3:* Encourage the installation of public sewer and water systems where appropriate for new and existing development.
- Objective 4:* Continue to enforce County ordinances regulating private on-site wastewater treatment systems (POWTS) and authorize the use of new technologies when appropriate.
- Objective 5:* Work with telecommunication service providers to expand local calling areas within the County.
- Objective 6:* Encourage the improvement of wireless communication services in the County.
- Objective 7:* Encourage the collocation of wireless facilities in the County to limit the number of new communication towers constructed.
- Objective 8:* Promote the extension of energy services, such as gas and electric service, to areas of the County not presently served when appropriate.
- Objective 9:* Explore the utilization of environmental impact fees to protect and preserve the natural environment of the County.
- Objective 10:* Encourage the expansion and diversification of the health care industry serving Columbia County in anticipation of an aging population.
- Objective 11:* Ensure that law enforcement agencies in the County have the proper facilities and equipment to operate effectively.
- Objective 12:* Ensure that a full range of fire, rescue, and emergency medical services are available to serve the people of Columbia County.
- Objective 13:* Assist fire, rescue, and emergency medical services in shortening emergency response times when possible.
- Objective 14:* Plan for the future needs of Columbia County administrative facilities.

Goal 2: Support high quality educational opportunities for all County residents

- Objective 1:* Encourage the timely expansion or contraction of public school facilities in anticipation of fluctuations in the school age population.
- Objective 2:* Continue to support the technical and vocational school system serving Columbia County.
- Objective 3:* Support efforts to improve services provided by libraries in the County.

Goal 3: Protect public health through proper solid waste disposal.

- Objective 1:* Encourage municipalities to continue to utilize County facilities for the composting and disposal of solid waste.
- Objective 2:* Continue to support recycling and Clean Sweep programs in the County.

Goal 4: A high quality county-wide system of park and recreational lands that helps preserve significant natural, cultural, or historical resources and meets the needs and demands of the citizens of Columbia County and its visitors.

- Objective 1:* Consider forming a County Park and Recreation Department.
- Objective 2:* Update the County Park, Outdoor Recreation, and Open Space Plan every five years using SCORP guidelines to maintain eligibility for grants from the state.
- Objective 3:* Solicit input and resources from interested residents, organizations, municipalities, and others regarding planning, development, operation, and new acquisitions of the County Park System.
- Objective 4:* Develop site plans for all County parks that illustrate future development plans for the facility and implements the recommendations of the Americans with Disabilities Act.
- Objective 5:* Design park and recreational facilities with the natural environment in mind by considering the project's impacts on the environment.
- Objective 6:* Identify and acquire upland woods that are threatened by development pressures, important natural and historic areas, and shoreline areas of appropriate size to become County parks.
- Objective 7:* Utilize, where practical, a multi-jurisdictional approach to acquiring and developing park and open space areas.
- Objective 8:* Coordinate and utilize the resources and expertise of different County departments, staff, and officials, particularly where projects meet mutual goals and objectives.
- Objective 9:* Retain tax delinquent lands acquired through foreclosure that would be an appropriate addition to the County Park System.
- Objective 10:* Support the continued development of the Ice Age National and State Scenic Trail.
- Objective 11:* Continue to support the County's snowmobile trail system.
- Objective 12:* Work to preserve lands for recreational uses along the Wisconsin and Fox River Systems.
- Objective 13:* Incorporate parks, recreation areas, and trails as a key component of Columbia County's overall tourism and economic development strategies.

Element # 5 - Agricultural, Natural, and Cultural Resources**Agricultural, Natural, and Cultural Resources Vision**

- ◆ Columbia County's agricultural, natural, and cultural resources are regarded as irreplaceable resources to be protected for future generations.

Goal 1: Preserve the most productive agricultural areas of the County.

- Objective 1:* Preserve and protect the best agricultural soils by developing and implementing appropriate land use regulations.
- Objective 2:* Focus new development in areas, on sites, and in forms (e.g., clusters) that will not adversely impact productive farmland in the County.
- Objective 3:* Review residential and other development proposals for potential impacts and encroachments on the land needed for agriculture.
- Objective 4:* Maintain the integrity of the agricultural (farmland preservation) zoning district by restricting the uses in this district to those related to agriculture.
- Objective 5:* Limit non-farm development on prime agricultural soils.
- Objective 6:* Implement a density-based standard for limited housing on lands planned for farmland preservation, including modest incentives for clustering of smaller lots as opposed to large residential parcels.
- Objective 7:* Encourage the owners of farmland to follow best practices to minimize impacts to the County's natural resources.
- Objective 8:* Support animal agriculture in the County, considering the management of large herds using livestock siting rules from the State of Wisconsin.
- Objective 9:* Encourage efforts to slow and reduce the fragmentation of agricultural lands.
- Objective 10:* Support the continuation and enhancement of State income tax credits to those farmers who wish to take advantage of that program.
- Objective 11:* Support town and farmer initiatives to preserve farmland via approaches that go beyond farmland preservation zoning.
- Objective 12:* Encourage the continued growth of the agricultural economy in Columbia County.

Goal 2: Maintain, preserve, and enhance Columbia County's natural resources, scenic views, and unique natural features.

- Objective 1:* Develop adequate storm water management plans and erosion control regulations to protect surface and groundwater resources throughout the County.
- Objective 2:* Encourage the development of natural buffer areas along watercourses and drainage ways.
- Objective 3:* Discourage the application of chemicals and land spreading along watercourses and drainage ways.
- Objective 4:* Identify environmental corridors consisting of a buffer along water bodies, FEMA Floodplains, WDNR mapped wetlands, publicly owned lands and parks, slopes over 12 percent, shallow soils, and adjacent woodlots.
- Objective 5:* Protect the integrity of the environmental corridors from the negative impacts of development.
- Objective 6:* Develop appropriate land use regulations to provide protection to the sensitive natural resource areas included in the environmental corridors.
- Objective 7:* Consider the impacts of development on the habitat of rare, threatened, or endangered species or natural communities.
- Objective 8:* Consider the development of an ordinance that prohibits the construction of new structures in the FEMA 100-year floodplains and limits the rebuilding of structures that are seriously deteriorated, damaged, or destroyed.
- Objective 9:* Discourage concentrated animal numbers in the FEMA 100-year floodplains, but encourage other forms of agriculture.
- Objective 10:* Protect wetlands from siltation and runoff by encouraging a buffer area around all WDNR designated wetlands.
- Objective 11:* Prohibit further draining or filling of wetlands.

- Objective 12:* Discourage agricultural cultivation in wetlands.
- Objective 13:* Encourage the proper management of forestlands in the County and discourage parcel fragmentation and clear cutting of any existing woodlots, when appropriate.
- Objective 14:* Control development in areas that possess valuable wildlife habitat.
- Objective 15:* Protect the integrity of the designated State Natural Areas in the County.
- Objective 16:* Inventory the locations of commercially viable non-metallic mineral resources in the County and consider the locations of these resources during the review of development proposals.
- Objective 17:* Support the development of outdoor recreation areas for use as public hunting grounds, wildlife preserves, and waterfowl production areas.
- Objective 18:* Consider alternative methods to protect the natural environment.
- Objective 19:* Develop policies that will preserve the rural character, open space, and scenic views of the County.
- Objective 20:* Accommodate both active and passive recreational uses of streams, rivers, and lakes. Encourage more passive uses during the early morning and later in the day. Discourage more active and noisy uses during these times.

Goal 3: Preservation of the County’s historic and cultural resources.

- Objective 1:* Require a site evaluation by a State approved archeologist for development proposals on or near a known archeological or burial site.
- Objective 2:* Prohibit development on identified archeological and burial sites.
- Objective 3:* Evaluate the impacts of development proposals on historic buildings and sites in Columbia County and mitigate those impacts whenever possible.
- Objective 4:* Create and maintain an inventory of the remaining historic and archaeological sites and structures throughout Columbia County.
- Objective 5:* Assist local organizations in the promotion of historic and cultural resources in their communities.
- Objective 6:* Assist local historical societies and museums in preserving structures and artifacts that reflect Columbia County’s past.

Goal 4: Establish and maintain long-term funding programs for the County Park System.

- Objective 1:* Examine the ability of the County to modify the Land Division Ordinance to allow park fees collected under the ordinance to be used to fund the County Park System.
- Objective 2:* Examine alternative funding sources for the County Park System.
- Objective 3:* Utilize, to the extent possible, state and federal resources and grant programs to offset local expenditures to develop and maintain the County Park System.
- Objective 4:* Encourage the creation of a volunteer group to help advocate for the County Park System and help with volunteer activities and fund raising for the parks.
- Objective 5:* Develop and implement a County Capital Improvement Plan that includes expenditures for park development.

Element # 6 - Economic Development

Economic Development Vision

- ◆ Economic prosperity through properly located commerce, industry, agriculture, and tourism economic activity areas while mitigating the impacts of incompatible land uses and the degradation of residential areas and the natural environment.

Goal 1: An improved and diversified economy.

- Objective 1:* Assist existing businesses and industry to improve their efficiency and ability to stay competitive.
- Objective 2:* Increase efforts to retain existing manufacturers and to attract new ones.
- Objective 3:* Encourage new business formation.
- Objective 4:* Expand and encourage participation in all Revolving Loan Fund programs.
- Objective 5:* Encourage the development of a broader range of commercial and service businesses in communities throughout the County.
- Objective 6:* Encourage the development of support industries for existing businesses and industries in the County.
- Objective 7:* Develop an opportunity network to assist in transferring of existing businesses to successors.
- Objective 8:* Encourage downtown revitalization and support the Main Street Program to help enhance community character and business opportunities.
- Objective 9:* Promote ongoing dialog between County staff and the Columbia County Economic Development Corporation to ensure that economic development projects are consistent with the goals and objectives of the County's Comprehensive Plan.
- Objective 10:* Work with public and private entities to provide high quality telecommunication facilities.
- Objective 11:* Develop basic design standards for all non-residential uses to assure a high value, lasting development pattern.
- Objective 12:* Encourage intergovernmental cooperation in the siting of new business opportunities and retaining existing businesses.

Goal 2: Improved employment opportunities.

- Objective 1:* Assist in educational opportunities to develop a high quality County workforce.
- Objective 2:* Attract new employers to increase employment opportunities and broaden the tax base.
- Objective 3:* Support and allow home-based businesses where compatible with surrounding properties.
- Objective 4:* Seek and implement new incentive programs that encourage industrial and commercial expansion and create opportunities for new employment.

Goal 3: Recognize agriculture and tourism as important economic resources and support the preservation and enhancement of these resources.

- Objective 1:* Assist in the promotion and attraction of agricultural related services and industries to maintain agriculture as a viable business.
- Objective 2:* Where consistent with local plans, allow small, low-impact non-farm businesses on farm properties where there will be no negative impacts on surrounding properties.
- Objective 3:* Foster tourism that promotes the natural resource base and the unique historical heritage of Columbia County.

- Objective 4:* Support Communities involved in the Main Street Program and the redevelopment of downtown districts as a means to attract tourism.
- Objective 5:* Capitalize on the County's recreational resources (lakes, rivers, trails, etc.) for siting of appropriate retail and service businesses that do not conflict with resource protection.

Element # 7 - Intergovernmental Cooperation

Intergovernmental Cooperation Vision

- ◆ Intergovernmental cooperation opportunities between Columbia County, local municipalities, the region, the state, tribal governments, and other adjacent governmental units utilized to the fullest extent possible.

Goal 1: Establish mutually beneficial intergovernmental relations with other units of government.

- Objective 1:* Encourage communities to create intergovernmental cooperative agreements for governmental services, activities, and programs wherever appropriate and assist these communities whenever possible.
- Objective 2:* Encourage incorporated municipalities and towns to enter into boundary agreements to address annexation and development issues and assist these communities whenever possible.
- Objective 3:* Promote cooperative projects with area school districts to educate and encourage participation in government among youth, specifically targeting participation in planning and land use issues.
- Objective 4:* Work to achieve cooperation and coordination between incorporated municipalities and adjoining towns on issues related to long-range planning and land use regulations.
- Objective 5:* Work to raise local government awareness of Wisconsin Statutes regarding intergovernmental cooperation and encourage their use.
- Objective 6:* Work with local governments, state agencies, other planning agencies, and school districts on land use and community development issues of mutual concern. (i.e. siting of public facilities)

Goal 2: Seek coordination and communication on planning activities between Columbia County, local municipalities, regional, state, and federal agencies.

- Objective 1:* Foster cooperation by providing opportunities for cities, villages, and towns to comment on specific development proposals, land use plans, and zoning changes.
- Objective 2:* Create and sponsor an ongoing forum in which the county, cities, villages, and towns can discuss land use and zoning issues on a regular basis.
- Objective 3:* Develop and support a process to resolve conflicts between plans for areas with overlapping government jurisdictions.
- Objective 4:* Work with towns, villages and cities to match land use plans and policies along municipal borders to promote consistency and minimize potential conflicts.
- Objective 5:* Utilize County planning staff to act as facilitators and educators to assist local municipalities with plan and ordinance administration.
- Objective 6:* Create a more consistent, integrated, and efficient code administration process for the County that provides all affected political jurisdictions an opportunity to influence the outcome.
- Objective 7:* Continue to promote future cooperative planning efforts and continue to offer planning services to Columbia County communities.
- Objective 8:* Encourage and support cooperative efforts between Columbia County and surrounding counties to address basin-wide water resource management

planning, regional transportation planning, and other regional planning issues that cross county boundaries.

Objective 9: Work with the towns and Department of Agriculture, Trade and Consumer Protection on updates and amendments to the Columbia County Farmland Preservation Plan.

Goal 3: Seek opportunities to improve the provision of shared public services and facilities such as police, fire, emergency rescue, parks, solid waste management, and transportation among units of government.

Objective 1: Whenever possible, encourage increased sharing of police, fire, and emergency rescue facilities and services to improve efficiency and coordination.

Objective 2: Encourage municipalities within the County to utilize the County composting and recycling center.

Objective 3: Encourage municipalities to continue to utilize the services of the County Highway Department for local road maintenance.

Objective 4: Prior to purchasing new facilities or equipment, examine the possibilities of trading, renting, sharing, or contracting such items with neighboring jurisdictions.

Objective 5: Work with private, municipal, county, and state agencies to coordinate the provision of park and recreation facilities and activities within the County.

Objective 6: Work with the Wisconsin Department of Transportation and other agencies to assure that transportation improvements are consistent with the goals and objectives of this Plan.

Objective 7: Encourage cooperative agreements with the Wisconsin Department of Natural Resources (WDNR) that are mutually beneficial to the County and the WDNR.

Objective 8: Encourage the development of Emergency Management Plans by local municipalities.

Element # 8 - Land Use

Land Use Vision

- ◆ Well-balanced and orderly development in both urban and rural areas of the County that minimizes potential conflicts between residential, commercial, industrial, and agricultural land uses and finds balance among economic development, the preservation of agriculture, the protection of natural and cultural resources, and the recognition of private property rights.

Goal 1: New development occurring in a well-planned, sustainable, aesthetically and architecturally pleasing manner compatible with the local character.

Objective 1: Designate large areas in the rural portions of Columbia County for continued agricultural use, allowing limited and controlled residential development according to a density policy to minimize adverse impacts on agriculture and maintain rural character.

Objective 2: Designate areas within Columbia County that are suitable for more dense residential development (e.g. subdivisions) and ensure quality development there which complements the surrounding area.

- Objective 3:* Encourage conservation subdivision design principles for new subdivisions where appropriate, per adopted County zoning ordinance standards.
- Objective 4:* Designate areas within Columbia County that are suitable for commercial and industrial uses and encourage the separation and screening of these uses from other incompatible land uses.
- Objective 5:* Encourage natural buffers between incompatible land uses where such uses adjoin one another.
- Objective 6:* Evaluate and recommend areas of the County where animal confinement areas can be operated without conflicting with other forms of development.
- Objective 7:* Assist local communities with the development of a local review process for planning and zoning related issues including the establishment of local plan commissions.

Goal 2: Provide tools for managing and coordinating development consistent with the goals and objectives of the Comprehensive Plan while ensuring a balance between private property rights and the best interests of the community as a whole.

- Objective 1:* Update and integrate remaining land use related sections of the Columbia County Code of Ordinances to reflect the goals and polices of the Comprehensive Plan.
- Objective 2:* Implement a development review process that objectively examines the quality of a proposed development and the long-term positive and negative impacts on the community and the County.
- Objective 4:* Promote clustered residential development as the preferred type of new rural residential growth in areas suitable for such development.
- Objective 5:* Implement a minimum density standard for limited residential development in areas planned for long-term agricultural use.
- Objective 6:* Encourage new residential lots and building sites to be located and designed in a manner that protects environmental corridors, wetlands, floodplains, and productive farmland.
- Objective 7:* New development should be consistent with town, village, and city plans, where applicable.

Goal 3: Balanced and appropriate land uses within all communities of Columbia County that enhance and sustain the economic stability of the County.

- Objective 1:* Direct more intense, urban forms of development into areas that can provide adequate municipal services to support the development.
- Objective 2:* Assist in the development of urban growth areas around all existing incorporated municipalities to allow for reasonable municipal growth.
- Objective 3:* Encourage and assist all local municipalities in the development of detailed comprehensive plans that promote the concepts of balanced community development, agricultural preservation, and clustered residential development.
- Objective 4:* Encourage each community in the County to have an appropriate variety of land use categories.
- Objective 5:* Encourage the redevelopment and adaptive reuse of underutilized agricultural, commercial, and industrial structures, where consistent with designated future land uses.

Objective 6: Explore the use of impact fees and other capital cost recovery mechanisms to assure that the costs of new development are not borne by existing taxpayers.

Element #9 - Implementation

Implementation Vision

- ◆ A compilation of clear and defined actions necessary to implement all Plan elements, summarize and track progress, and describe the procedures for amendments and revisions.

1.4 OVERALL EXISTING PROGRAMS AND POLICIES

The overall programs discussed in this section represent a compilation of the current efforts being taken by various levels of government. These efforts provide a means to assist in implementing the vision, goals and objectives of this Plan. Each program has a specific problem or issue it is attempting to address. It is the intent of these programs to provide assistance, guidance, and regulation in addressing the particular problem or issue. These programs provide a means to reach the goals of this Plan and achieve the related objectives. The list also contains governmental or quasi-governmental agencies that offer programs or assistance that can be utilized by Columbia County. A more detailed description of each of these programs is located within the individual Plan elements.

- Columbia County Housing Rehabilitation Program
- Habitat for Humanity
- United Migrant Opportunity Services (UMOS)
- Uniform Dwelling Code (UDC)
- Wisconsin Housing and Economic Development Authority (WHEDA)
- Central Wisconsin Community Action Council (CWCAC)
- PASER Program
- Rustic Roads – Wisconsin Department of Transportation
- State Road Aid Programs
- Knowles-Nelson Stewardship Program
- Clean Sweep Program
- Crime Stoppers
- Columbia County D.A.R.E. Program
- Columbia County Drug Education And Enforcement
- Hope House/D.A.R.T.
- Columbia County Cannabis Enforcement And Suppression Effort (CEASE)
- Farmland Preservation Program (see also separate Farmland Preservation Plan)
- Conservation Reserve Program (CRP)
- Conservation Reserve Enhancement Program (CREP)
- Glacial Habitat Restoration Area (GHRA) Project
- Managed Forest Law and Forest Crop Law
- Wetlands Reserve Program
- National and State Registers of Historic Places
- Wisconsin Historical Society - Division of Historic Preservation Subgrant Program
- Historic Preservation Tax Credits for Income-Producing Historic Buildings
- Historic Home Owner’s Tax Credits
- Archeological Sites Property Tax Exemption Program
- Columbia County Economic Development Corporation
- Revolving Loan Fund (RLF)
- Community Profiles
- Land and Building Inventory
- Technical College Programs and Universities
- Wisconsin Department of Tourism Programs
- Columbia County Tourism Committee
- Wisconsin Agricultural Development Zone Program
- Wisconsin Department of Commerce Programs
- Community Development Block Grant for Economic Development (CDBG-ED)
- Wisconsin’s Main Street Program
- USDA, Wisconsin Rural Development Programs
- WDNR – Brownfields Grant Program

- Tax Incremental Financing (TIF)
- UW-Extension Local Government Center
- Wisconsin Partnership
- Wisconsin Counties Association (WCA)
- Wisconsin Towns Association (WTA)
- League of WI Municipalities
- State of Wisconsin Statutes and Programs
 - Intergovernmental Agreements
 - Boundary Agreements Pursuant to Approved Cooperative Plan
 - Creation, Organization, Powers and Duties of a Regional Planning Commission
 - Municipal Revenue Sharing
 - Annexation
 - Incorporation
 - Extraterritorial Zoning
 - Extraterritorial Subdivision Review
- Columbia County Code of Ordinances
 - Zoning Ordinance
 - Land Division and Subdivision Ordinance
 - Private Sewage Systems Ordinance
 - Floodplain Zoning Ordinance
 - Shoreland Wetland Protection Ordinance
 - Nonmetallic Mining Reclamation Ordinance
 - Highway Access Control Ordinance
 - Animal Waste Management Ordinance

1.5 POPULATION AND BACKGROUND INFORMATION

1.5.1 Population

Understanding the current and past trends of the County's population is important in determining the amount of expected growth and development that is likely to take place in the County in the future. These trends are considered in the following paragraphs.

1.5.1.1 History and Setting

Columbia County was created in 1846, and is located in the south-central part of Wisconsin. It is bounded on the north by Adams, Marquette, and Green Lake Counties, on the east by Dodge County, on the south by Dane County, and on the west by the Wisconsin River and Sauk County. The County has an extreme length east and west of about 39 miles and a width north and south of 25 miles. It contains a gross area acreage of 509,671 or approximately 796 sq. miles. 23,219 acres are covered with water. Lake Wisconsin Reservoir is the largest lake in the County and the 17th largest lake in the state. Lake Wisconsin Reservoir occupies approximately 5,328 acres. In the year 2000, Columbia County had a population of 52,468. Columbia County contains four fourth class cities and ten villages. Portage is the largest city and the County Seat. In 2000, it had a population of 9,728. A general map of Columbia County including the regional setting is illustrated on Map 1-1 in Appendix I.

Columbia County has excellent highway connections. Combined Interstates 39, 90 and 94 travel in a north-south direction through the western part of the County. Paralleling the combined interstates and merging with I39 north of Portage is United States Highway 51, a major north-south route in the state. United States Highway 151 is a four-lane freeway that traverses the extreme southeast portion of the County and passes through the City of Columbus. United States Highway 16 traverses the County diagonally starting from Columbus in the southeast part of the County, going through Rio, Wycena, and Portage, and on to Wisconsin Dells in the northwest part of the County. A number of other state highways traverse the County, including highways, 22, 23, 33, 44, 60, 73, 78, 89, 113, 127, 146, and 188. The highway distance relationship of Portage to major urban centers in the mid-west is shown on Map 1-2 in Appendix I.

The County is also accessible by rail, bus, and air. Freight and passenger rail service are available in the County. Commercial bus service is also available. There are several small airports in the County. However, the nearest regularly scheduled commercial air service is at Madison.

Columbia County is an important agricultural County. It contains some of the best farmlands in the state, and is one of the state's leading vegetable producers. A large percentage of farm income in the County comes from the sale of livestock, cattle and swine, and livestock products, most notably milk. Manufacturing in the County is the largest source of employment for residents. It is fairly well diversified, with industries that include metalworking, textiles, apparel, leather goods, plastics, and wood products. Tourism also plays an important role in the County's economy.

1.5.1.2 Population Trends

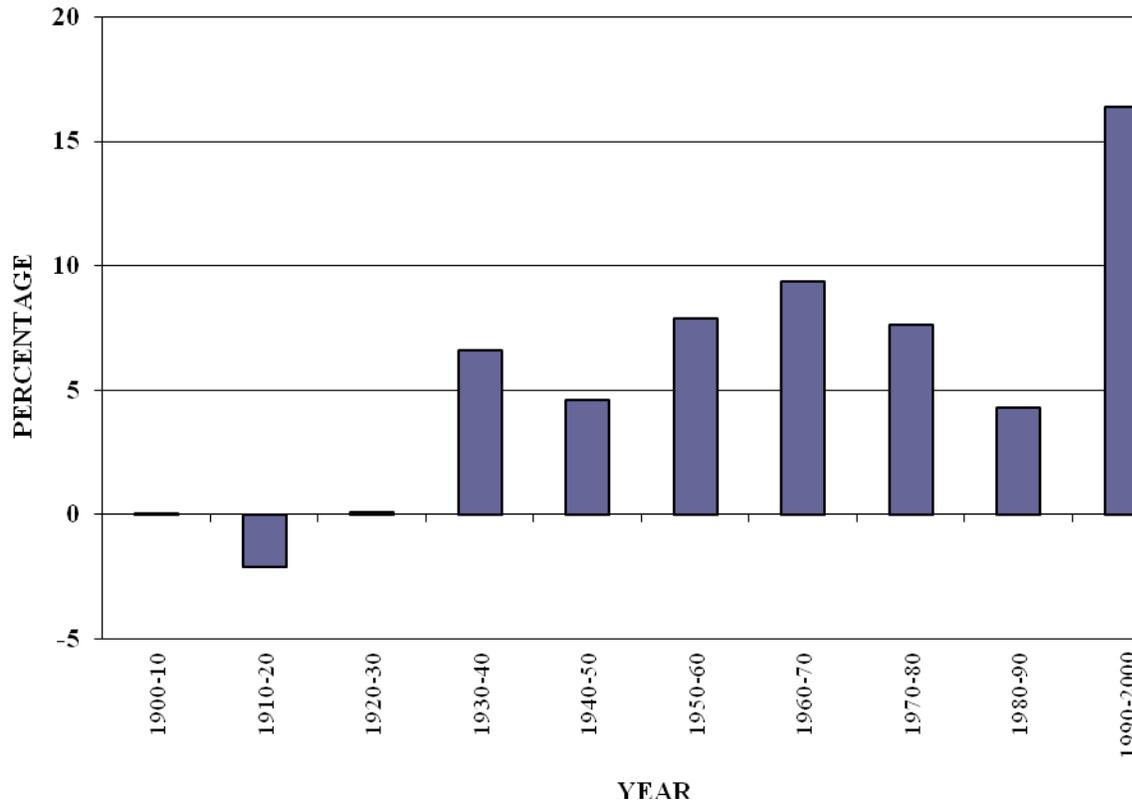
Over the course of the last century, Columbia County had three decades of low population growth or population decline followed, more recently, by several decades of population increases. During the first three decades of the 20th century, Columbia County had two decades with population growth of only 0.03 percent and 0.12 percent and one decade where the population declined by 2.12 percent. However, starting in the decade between 1930 and 1940 the County began a period of population

growth which continues through the present. The period of the highest percentage growth occurred between 1990 and 2000, reaching an increase of 16.37 percent. The County’s population grew steadily between 1930 and 2000 having five decades with a growth rate over six percent. Figure 1-1 represents the percentage of population change during the past 100 years.

In Columbia County, the only decade with an actual population decline occurred between 1910 and 1920. Between 1980 and 1990 the population increased, but at a lower rate than had been seen in previous decades. This reduced population growth was likely due to the national recession during that period. The improved economic conditions during the 1990s resulted in the County’s largest population increase between 1990 and 2000. Table 1-1 illustrates the percentage of population change during the past century for Columbia County and the municipalities within the County.

The percent of total population change for Columbia County over the last century was appreciably higher than the State, with the County’s population increasing more than nine percent higher than the State. The State’s population has grown steadily since 1900 and the County’s population has grown steadily since the 1930’s. County growth was highest between 1950 and 1970 and between 1990 and 2000 when the County experienced its largest increase of 16.37 percent. State growth was highest before 1930 and from 1950 to 1970. Table 1-2 compares long-term population trends between Columbia County and the State.

FIGURE 1-1
Columbia County, Long Term Population Trends



Source: U.S. Census

TABLE 1-1
Long Term Population Trends by Minor Civil Division
Columbia County, 1900-2000

Municipality	1900	1910	1920	1930	1940	1950	1960	1970	1980	1990	2000
Town of Arlington	794	816	793	808	822	613	653	701	752	748	848
Town of Caledonia	1,188	1,087	1,000	948	928	832	790	855	923	1,031	1,171
Town of Columbus	744	760	711	682	646	669	723	715	704	838	711
Town of Courtland	830	886	788	795	723	743	701	628	601	528	463
Town of Dekorra	908	842	735	637	787	911	1,108	1,763	1,914	1,829	2,350
Town of Fort Winnebago	665	626	601	569	535	551	626	673	860	825	855
Town of Fountain Prairie	1,409	990	910	819	832	806	744	816	771	743	810
Town of Hampden	887	800	843	836	733	696	706	704	650	566	563
Town of Leeds	1,214	1,055	1,061	1,030	961	928	930	869	845	809	813
Town of Lewiston	901	799	816	679	746	663	854	984	1,122	1,123	1,187
Town of Lodi	750	716	595	582	625	749	890	1,357	1,855	1,913	2,791
Town of Lowville	784	758	722	632	607	602	681	819	976	938	987
Town of Marcellon	882	853	770	696	663	655	659	759	809	880	1,024
Town of Newport	585	534	547	489	408	392	367	562	657	536	681
Town of Otsego	1,226	866	858	743	731	727	708	754	767	647	757
Town of Pacific	289	281	234	205	310	300	531	756	1,215	1,944	2,518
Town of Randolph	951	1,087	1,211	1,192	1,262	837	802	729	700	676	699
Town of Scott	811	796	727	693	688	603	577	585	602	639	791
Town of Springvale	751	735	673	614	619	563	484	504	521	466	550
Town of West Point	743	663	602	596	624	660	752	873	1,122	1,285	1,634
Town of Wyocena	1,158	706	603	566	630	623	844	1,098	1,225	1,228	1,543
Town Totals:	18,470	16,656	15,800	14,811	14,880	14,123	15,130	17,504	19,591	20,192	23,746
Village of Arlington	---	---	---	---	---	255	349	379	440	440	484
Village of Cambria	561	657	679	671	688	633	589	631	680	768	792
Village of Doylestown	---	259	270	238	253	261	249	265	294	316	328
Village of Fall River	---	360	400	375	425	479	584	633	850	842	1,097
Village of Friesland	---	---	---	---	---	311	308	301	267	271	298
Village of Pardeeville	788	987	878	873	1,001	1,112	1,331	1,507	1,594	1,630	1,982
Village of Poynette	633	656	724	672	870	969	1,090	1,118	1,447	1,662	2,266
Village of Randolph*	190	248	347	356	344	468	529	493	485	502	523
Village of Rio	479	704	620	641	696	741	788	792	785	768	938
Village of Wyocena	---	425	425	490	706	714	747	809	548	620	668
Village Totals:	2,090	3,020	2,994	3,032	3,617	5,943	6,564	6,928	7,390	7,819	9,376
City of Columbus*	2,349	2,523	2,460	2,514	2,760	3,250	3,467	3,789	4,049	4,083	4,443
City of Lodi	1,068	1,044	1,077	1,065	1,116	1,416	1,620	1,831	1,959	2,093	2,882
City of Portage	5,459	5,440	5,582	6,308	7,016	7,334	7,822	7,821	7,896	8,640	9,728
City of Wisconsin Dells*	1,134	1,170	1,206	1,489	1,762	1,957	2,105	2,277	2,337	2,261	2,293
City Totals:	10,010	10,177	10,325	11,376	12,654	13,957	15,014	15,718	16,241	17,077	19,346
Columbia County	31,121	31,129	30,468	30,503	32,517	34,023	36,708	40,150	43,222	45,088	52,468

--- Not Incorporated

* Columbia County Portion

Source: U.S. Census

TABLE 1-2
Comparison of Long Term Population Trends
Columbia County and Wisconsin, 1900-2000

Year	Columbia County		Wisconsin	
	Population	% Change	Population	% Change
1900	31,121	---	2,069,042	---
1910	31,129	0.03	2,333,860	12.81
1920	30,468	(2.12)	2,632,067	12.78
1930	30,503	0.12	2,939,006	11.66
1940	32,517	6.60	3,137,587	6.76
1950	34,023	4.63	3,434,575	9.47
1960	36,708	7.89	3,951,777	15.06
1970	40,150	9.38	4,417,821	11.79
1980	43,222	7.65	4,705,642	6.51
1990	45,088	4.32	4,891,769	3.96
2000	52,468	16.37	5,363,675	9.65
Total Change:	21,347	68.59%	3,294,633	59.23%

Source: U.S. Census

Table 1-3 illustrates the current population trends from 2000 to 2005 for Columbia County, the municipalities in the County, and the State of Wisconsin. Over the five years since the last Census, the County has grown at a somewhat faster rate than the State. Within the County, estimates indicate that Villages have grown the most with a seven percent increase followed by Towns and Cities with 4.8 and 3.5 percent increases respectively. The three municipalities with the largest estimated increases were the villages of Arlington and Fall River with 16.7 and 16.1 percent increase respectively and the Town of Lodi with an 11.9 percent increase. The two municipalities with the largest estimated population decreases were the Villages of Randolph and Cambria with 3.1 and 1.6 percent decreases respectively.

TABLE 1-3
Current Population Trends, Columbia County, 2000-2005

Municipality	2000 Census	2001 Estimate	2002 Estimate	2003 Estimate	2004 Estimate	2005 Estimate	% Change
Town of Arlington	848	852	858	868	883	873	2.9%
Town of Caledonia	1,171	1,179	1,196	1,204	1,223	1,235	5.5%
Town of Columbus	711	711	709	703	704	702	(1.3)%
Town of Courtland	463	465	468	472	477	475	2.6%
Town of Dekorra	2,350	2,359	2,372	2,375	2,406	2,437	3.7%
Town of Fort Winnebago	855	852	853	851	855	847	(0.9)%
Town of Fountain Prairie	810	814	817	821	825	841	3.8%
Town of Hampden	563	564	564	569	567	564	0.2%
Town of Leeds	813	817	816	815	826	832	2.3%
Town of Lewiston	1,187	1,198	1,202	1,202	1,221	1,247	5.1%
Town of Lodi	2,791	2,832	2,948	3,022	3,084	3,124	11.9%
Town of Lowville	987	999	1,003	1,014	1,026	1,020	3.3%
Town of Marcellon	1,024	1,028	1,034	1,044	1,054	1,053	2.8%
Town of Newport	681	681	685	691	685	683	0.3%
Town of Otsego	757	757	760	764	767	761	0.5%
Town of Pacific	2,518	2,547	2,586	2,624	2,651	2,691	6.9%
Town of Randolph	699	706	720	716	736	736	5.3%
Town of Scott	791	796	804	817	823	823	4.0%
Town of Springvale	550	554	559	555	555	559	1.6%
Town of West Point	1,634	1,656	1,672	1,684	1,750	1,750	7.1%
Town of Wyocena	1,543	1,563	1,564	1,572	1,602	1,626	5.4%
Town Totals:	23,746	23,930	24,190	24,383	24,720	24,879	4.8%
Village of Arlington	484	489	497	522	547	565	16.7%
Village of Cambria	792	790	786	783	785	779	(1.6)%
Village of Doylestown	328	331	333	335	337	333	1.5%
Village of Fall River	1,097	1,132	1,155	1,183	1,232	1,274	16.1%
Village of Friesland	298	298	296	297	303	299	0.3%
Village of Pardeeville	1,982	1,995	2,005	2,017	2,051	2,074	4.6%
Village of Poynette	2,266	2,304	2,349	2,403	2,461	2,496	10.2%
Village of Randolph*	523	520	519	517	513	507	(3.1)%
Village of Rio	938	964	965	971	981	987	5.2%
Village of Wyocena	668	671	673	698	702	715	7.0%
Village Totals:	9,376	9,494	9,578	9,726	9,912	10,029	7.0%
City of Columbus*	4,443	4,485	4,564	4,600	4,704	4,748	6.9%
City of Lodi	2,882	2,899	2,925	2,929	2,949	2,968	3.0%
City of Portage	9,728	9,804	9,895	9,905	9,966	9,981	2.6%
City of Wisconsin Dells*	2,293	2,300	2,320	2,319	2,345	2,335	1.8%
City Totals:	19,346	19,488	19,704	19,753	19,964	20,032	3.5%
Columbia County	52,468	52,912	53,472	53,862	54,596	54,940	4.7%
Wisconsin	5,363,675	5,400,449	5,453,896	5,490,718	5,532,955	5,580,757	4.0%

* Columbia County Portion

Source: U.S. Census & WI Department of Adm.

1.5.2 Population Characteristics

Populations comprise certain characteristics which may change over time. These include age, gender, race and national origin. These characteristics are considered in the following paragraphs.

1.5.2.1 Gender

Columbia County's population is fairly evenly distributed between male and female. In 1990, the County contained more females than males however by 2000 males had exceeded females. In 2000, the number of males and females were fairly equal in the ages of 5 to 19. Males were slightly more prevalent among children between the ages of 10 to 19. Among adults, males are more prevalent in the ages 20 thru 54. Age groups over 55 contained more females in 2000 than males. In the ages of family formation from age 20 to 34, there were 4,902 males and 4,237 females. Table 1-4 illustrates the number of males and females in the Columbia County by age group.

TABLE 1-4
Gender Distribution By Age, Columbia County, 1990-2000

Age	Males			Females		
	1990	2000	Change	1990	2000	Change
Under 5	1,527	1,662	8.84	1,593	1,567	(1.63)
5 – 9	1,708	1,864	9.13	1,609	1,806	12.24
10 – 14	1,786	1,997	11.81	1,710	1,845	7.89
15 – 19	1,603	1,941	21.09	1,457	1,787	22.65
20 – 24	1,298	1,368	5.39	1,160	1,102	(5.00)
25 – 29	1,653	1,635	(1.09)	1,530	1,379	(9.87)
30 – 34	1,956	1,899	(2.91)	1,815	1,756	(3.25)
35 – 44	3,568	4,684	31.28	3,265	4,336	32.80
45 – 54	2,311	3,929	70.01	2,273	3,541	55.79
55 – 64	2,037	2,373	16.49	2,174	2,440	12.24
65 – 74	1,759	1,764	0.28	2,073	2,032	(1.98)
75 – and Over	1,172	1,404	19.80	2,051	2,357	14.92
Totals:	22,378	26,520	18.51	22,710	25,948	14.26

Source: U.S. Census

1.5.2.2 Marital Status

A larger percentage of people in Columbia County, 58 percent, are married compared with the State of Wisconsin, 53.6 percent. Conversely, the percentage of single persons in the County that were never married is significantly lower than the State, with the County 21.5 percent and the State 27.2 percent. The percentages of separated and widowed persons in Columbia County exceed those in the same categories for the State while the percentage of those divorced was slightly lower than the State. Table 1-5 compares the marital status of County and State residents over the age of 15.

TABLE 1-5
Marital Status of Persons Over Age 15
Columbia County and Wisconsin, 2000

Marital Status	Columbia County	% of Total	Wisconsin	% of Total
Single	8,975	21.5%	1,153,197	27.2%
Married	24,214	58.0%	2,272,658	53.6%
Separated	1,919	4.6%	160,862	3.8%
Widowed	2,935	7.0%	269,611	6.4%
Divorced	3,684	8.8%	383,233	9.0%
Totals:	41,727	100%	4,239,561	100%

Source: U.S. Census

1.5.2.3 Racial Composition

Nearly all of Columbia County's residents are white. Minority or mixed race persons in the County in 2000 amounted to 1,992 persons, or 2.8 percent of the total population. These include 432 African Americans, 165 American Indians, 185 Asian or Pacific Islander, 827 Hispanic, and 232 other races. A total of 354 other persons indicated that they were of more than one race. Table 1-6 illustrates the change in racial distribution for Columbia County from 1990 to 2000.

TABLE 1-6
Racial Distribution, Columbia County, 1990-2000

Race	Number		Change	
	1990	2000	Number	Percent
White	44,234	50,476	6,242	14.11%
Black or African American	233	432	199	85.41%
American Indian	134	165	31	23.13%
Asian and Pacific Islander	126	185	59	46.83%
Hispanic	358	827	469	131.01%
Other	3	29	26	866.67%
Two or more races	N/A	354	N/A	N/A

Source: U.S. Census

1.5.2.4 National Origin

In 2000, 37 percent of Columbia County's population was of German ancestry. No other nationalities, with the exceptions of Norwegian, Irish, and English represent even five percent of Columbia County's population. Table 1-7 illustrates 40 different national origins represented among the County's population.

TABLE 1-7
National Origin, Columbia County, 2000

Nationality	Columbia County	Percent of Total
Armenian	17	0.03%
Austrian	66	0.13%
Belgian	82	0.16%
British	52	0.10%
Canadian	14	0.03%
Croatian	42	0.08%
Czech	412	0.79%
Czechoslovakian	85	0.16%
Danish	341	0.65%
Dutch	1,302	2.48%
English	2,707	5.16%
European	274	0.52%
Finnish	103	0.20%
French (except Basque)	640	1.22%
French Canadian	246	0.47%
German	19,750	37.64%
Greek	49	0.09%
Hungarian	87	0.17%
Irish	3,335	6.36%
Israeli	14	0.03%
Italian	643	1.23%
Lithuanian	83	0.16%
Northern European	42	0.08%
Norwegian	4,352	8.29%
Pennsylvania German	32	0.06%
Polish	1,626	3.10%
Russian	47	0.09%
Scandinavian	118	0.22%
Scotch-Irish	372	0.71%
Scottish	426	0.81%
Slavic	11	0.02%
Slovak	15	0.03%
Sub-Saharan African:	20	0.04%
Swedish	559	1.07%
Swiss	425	0.81%
Ukrainian	51	0.10%
United States or American	2,130	4.06%
Welsh	371	0.71%
Yugoslavian	16	0.03%
Other groups	1,588	3.03%
Unclassified or not reported	9,923	18.91%
Total:	52,468	100%

Source: U.S. Census

1.5.2.5 Density

Columbia County contains 796 square miles or 509,687 acres. In 2000, the County had a population of 23,746 persons in the unincorporated portions of the County. The density in the unincorporated areas of the County was 0.05 persons per acre or 31.12 persons per square mile. The Town with the highest density is Pacific with 0.18 persons per acre or 116.36 persons per square mile, the Town with the lowest density is Courtland with 0.02 persons per acre or 13.05 persons per square mile. The densest Village is Randolph and the least dense is Doylestown. The City with the highest density is Lodi, the City with the lowest density is Portage. The overall density for Columbia County is 65.88 persons per square mile or 0.10 persons per acre. Table 1-8 illustrates the density of Columbia County and the municipalities in Columbia County.

TABLE 1-8
Density by Municipality, Columbia County, 2000

Municipality	2000 Census	Acres	Persons per Acre	Sq. Miles	Persons per Square Mile
Town of Arlington	848	22,492	0.04	35.14	24.13
Town of Caledonia	1,171	40,590	0.03	63.42	18.46
Town of Columbus	711	20,253	0.04	31.65	22.46
Town of Courtland	463	22,700	0.02	35.47	13.05
Town of Dekorra	2,350	28,798	0.08	45.00	52.22
Town of Fort Winnebago	855	21,453	0.04	33.52	25.51
Town of Fountain Prairie	810	22,301	0.04	34.85	23.24
Town of Hampden	563	22,859	0.02	35.72	15.76
Town of Leeds	813	22,987	0.04	35.92	22.63
Town of Lewiston	1,187	35,547	0.03	55.54	21.37
Town of Lodi	2,791	18,415	0.15	28.77	97.01
Town of Lowville	987	22,882	0.04	35.75	27.61
Town of Marcellon	1,024	22,912	0.04	35.80	28.60
Town of Newport	681	14,210	0.05	22.20	30.68
Town of Otsego	757	19,826	0.04	30.98	24.44
Town of Pacific	2,518	13,851	0.18	21.64	116.36
Town of Randolph	699	22,517	0.03	35.18	19.87
Town of Scott	791	22,916	0.03	35.81	22.09
Town of Springvale	550	26,310	0.02	41.11	13.38
Town of West Point	1,634	20,829	0.08	32.55	50.20
Town of Wyocena	1,543	23,732	0.07	37.08	41.61
Town Totals:	23,746	488,380	0.05	763.10	31.12
Village of Arlington	484	457	1.06	0.71	681.69
Village of Cambria	792	637	1.24	1.00	792.00
Village of Doylestown	328	2,561	0.13	4.00	82.00
Village of Fall River	1,097	1,021	1.07	1.60	685.63
Village of Friesland	298	647	0.46	1.01	295.05
Village of Pardeeville	1,982	1,444	1.37	2.26	876.99
Village of Poynette	2,266	1,565	1.45	2.45	924.90
Village of Randolph*	523	150	3.47	0.24	2,179.17
Village of Rio	938	839	1.12	1.31	716.03
Village of Wyocena	668	998	0.67	1.56	428.21
Village Totals:	9,376	10,319	0.91	16.14	580.92
City of Columbus*	4,443	2,618	1.70	4.09	1,086.31
City of Lodi	2,882	898	3.21	1.40	2,058.57
City of Portage	9,728	6,055	1.61	9.46	1,028.33
City of Wisconsin Dells*	2,293	1,401	1.64	2.19	1,047.03
City Totals:	19,346	10,972	1.76	17.14	1,128.70
Columbia County	52,468	509,671	0.10	796.38	65.88

* Columbia County Portion

Source: U.S. Census & Columbia County Planning and Zoning Dept.

1.5.2.6 *Natural Increase and Migration*

There are two sources of population change, natural increase or decrease, and migration. Natural increase or decrease is the number of births compared with the number of deaths among residents of the County. The increasing number of adults of childbearing age and the increasing number of children in Columbia County coupled with a leveling off of the elderly suggest that natural increase will be a factor in population growth for the County into the immediate future. Trends in age distribution are discussed in more detail in the next section.

Migration is the movement of people into or out of a community. Table 1-9 compares the migration of people in Columbia County and Wisconsin. Among persons five years old or older, about 41 percent of Columbia County's population in 2000 had moved within the preceding five years compared to about 44 percent of the State's population that had moved during the same period.

TABLE 1-9
Population Migration of Persons Five Years or Older
Columbia County and Wisconsin, 2000

Place of Residence	Columbia County		Wisconsin	
	Number	Percent	Number	Percent
Same House as 5 Years Before	29,105	59.11%	2,836,232	56.46%
Different House:				
Same County	9,038	18.36%	1,233,211	24.55%
Other Wisconsin County	8,472	17.21%	549,993	10.95%
Other State	2,381	4.84%	341,310	6.79%
Other Country	243	0.49%	62,521	1.24%
Totals:	49,239	100.00%	5,023,267	100.00%

Source: U.S. Census

The percentage of people moving to Columbia County from other parts of Wisconsin was about 17 percent compared to about 18 percent of County residents who moved within the County. Residents moving to the County from other states or other countries amount to slightly over five percent of the County population compared to about eight percent for the State.

1.5.2.7 Age Distribution & Median Age

The population of Columbia County has shown an overall increase in the number of children under age 18, while at the same time the 65 and over age group has also shown an overall increase. Table 1-10 shows changes in the age composition from 1990 to 2000. All age groups under 64 increased over the last decade with the exceptions of the 25-34 age group. The number of persons age 45 to 54 showed the highest increase. The increasing number of persons age 18 to 24 may indicate that more young people are staying in the County or moving to the County for job opportunities rather than leaving to find jobs elsewhere. The number of persons in the 25 to 34 age group has decreased slightly over the 10 year period. However persons aged 35 through 54 have increased significantly. Persons age 65 to 74 decreased slightly, a 1.28 percent decrease, while those over 75 increased over 17 percent. As a result of these trends, the median age in Columbia County increased from 35.2 years in 1990 to 38.0 years in 2000.

TABLE 1-10
Age Distribution, Columbia County, 1990-2000

Age	Population		Change	
	1990	2000	Number	Percent
Under 5	3,121	3,218	97	3.11%
5 - 9	3,457	3,589	132	3.82%
10 - 14	3,361	3,965	604	17.97%
15 - 17	1,938	2,449	511	26.37%
18 - 24	3,582	3,725	143	3.99%
25 - 34	6,948	6,671	(277)	(3.99%)
35 - 44	6,774	9,000	2,226	32.86%
45 - 54	4,643	7,472	2,829	60.93%
55 - 64	4,209	4,812	603	14.33%
65 - 74	3,832	3,783	(49)	(1.28%)
75 and Over	3,223	3,784	561	17.41%
Totals:	45,088	52,468	7,380	16.37%
Median Age:	35.2	38	2.8	7.96%

Source: U.S. Census

Columbia County has a slightly lower overall percentage of children under age 18 than Wisconsin, but the County does modestly exceed the County percentage in the 10 to 17 age groups. However, Columbia County's population in the 18 to 24 age group is over 2.5 percent lower than the State. Columbia County's age group from 25 through 34 also lags slightly behind the State. In the 35 and older age groups Columbia County's percentage of population exceeds that of the State, particularly in the over 65 age groups. Columbia County's age distribution is compared with Wisconsin in Table 1-11.

TABLE 1-11
Age Distribution, Columbia County and Wisconsin, 2000

Age	Columbia County		Wisconsin	
	Number	Percent	Number	Percent
Under 5	3,218	6.13%	342,340	6.38%
5 - 9	3,589	6.84%	379,484	7.08%
10 - 14	3,965	7.56%	403,074	7.51%
15 - 17	2,449	4.67%	243,858	4.55%
18 - 24	3,725	7.10%	520,629	9.71%
25 - 34	6,671	12.71%	706,168	13.17%
35 - 44	9,000	17.15%	875,522	16.32%
45 - 54	7,472	14.24%	732,306	13.65%
55 - 64	4,812	9.17%	457,741	8.53%
65 - 74	3,783	7.21%	355,307	6.62%
75 and Over	3,784	7.21%	347,246	6.47%
Total Under 18:	13,221	25.20%	1,368,756	25.52%
Total 18 - 64:	31,680	60.40%	3,292,366	61.38%
Total Over 65:	7,567	14.42%	702,553	13.10%
Totals:	52,468	100.00%	5,363,675	100.00%
Median Age:	38		36	

Source: U.S. Census

1.5.2.8 Educational Levels

School enrollment in Columbia County and Wisconsin are compared in Table 1-12 below. Among persons three years old and older, the percentage of enrolled preschool students in the County was 6.10 percent compared to 5.80 percent in the State. Students in kindergarten, elementary school and high school constituted almost 81 percent of the enrolled students in the County compared to just under 71 percent for the State. A significantly smaller percentage of students were enrolled in college in Columbia County compared to the State, having 13.24 percent and 23.36 percent respectively.

TABLE 1-12
School Enrollment by Persons Three Years Old and Over
Columbia County and Wisconsin, 2000

School	Columbia County		Wisconsin	
	Number	Percent	Number	Percent
Preschool	733	6.10%	71,624	5.80%
Kindergarten	561	4.67%	63,387	5.13%
Elementary	5,912	49.20%	531,375	42.99%
High School	3,220	26.80%	279,632	22.62%
College	1,591	13.24%	289,943	23.46%
Total Enrolled:	12,017	100.00%	1,235,961	100.00%

Source: U.S. Census

Table 1-13 shows years of school completed by Columbia County and Wisconsin residents. In Columbia County, the percent of the population age 25 or older having a high school education in 2000 was about five percent higher than the State. The number of residents with less than a high school education was also slightly higher for the State. The percentage of county residents with a high school diploma and some education beyond high school was higher in Columbia County than the State. However, the percentage of residents with a college degree or other advanced degree was lower in the County than the State. The most noticeable variation was among residents with a bachelor's degree. In this category, the percentage of County residents with a bachelor's degree was almost four percent less than residents of the State.

TABLE 1-13
Years of School Completed by Persons 25 Years or Older
Columbia County and Wisconsin, 2000

Years of School Completed	Columbia County		Wisconsin	
	Number	Percent	Number	Percent
Less than 9 th Grade	1,654	4.66%	186,125	5.35%
9 th – 12 th Grade, no diploma	3,250	9.15%	332,292	9.56%
High School Graduate	14,108	39.71%	1,201,813	34.58%
Some College, no degree	7,717	21.72%	715,664	20.59%
Associate Degree	2,859	8.05%	260,711	7.50%
Bachelor's Degree	4,074	11.47%	530,268	15.26%
Graduate or Professional Degree	1,719	4.84%	222,568	6.40%
Doctorate Degree	148	0.42%	26,437	0.76%
Totals:	35,529	100.00%	3,475,878	100.00%

Source: U.S. Census

1.5.2.9 Income Levels

The Wisconsin Department of Revenue shows Columbia County's per capita income overall is just slightly below that of the State. Table 1-14 shows that the per capita income in Columbia County was below the average for the State during each of the 11 years between 1990 and 2001. However, during that same period, Columbia County's per capita income increased \$7,784 or 67.64 percent compared to Wisconsin's increase of \$7,405 or 58.37 percent during the same time period. Over the 11 year period the County's per capita income has grown more rapidly than the State exceeding the State by 5.12 percent. Table 1-14 compares the per capita adjusted gross income of Columbia County with the State of Wisconsin.

TABLE 1-14
Per Capita Adjusted Gross Income
Columbia County and Wisconsin, 1990-2001

Year	Columbia County		Wisconsin
	Income	% of State	
1990	\$11,508	90.71%	\$12,686
1991	\$11,918	93.47%	\$12,750
1992	\$12,376	93.14%	\$13,287
1993	\$13,093	94.60%	\$13,840
1994	\$14,138	97.28%	\$14,534
1995	\$14,868	97.02%	\$15,324
1996	\$15,193	95.80%	\$15,859
1997	\$16,347	95.93%	\$17,040
1998	\$17,394	95.18%	\$18,275
1999	\$19,195	97.65%	\$19,657
2000	\$20,072	97.90%	\$20,503
2001	\$19,292	96.02%	\$20,091
Change:			
Number	\$7,784	105.12%	\$7,405

Source: Wisconsin Department of Revenue

The per capita income in Columbia County is shown to have increased in real numbers every year since 1990. This increase in income is the result of either smaller numbers of children in the County in relation to the number of working adults or from actual increases in income earned by the working portion of the population. Population information discussed earlier in this element indicated that the number of children in the county was increasing. Therefore, it is more likely that the increases in per capita adjusted gross income are the result of actual increases in the income of working adults in the County. Rising income levels can increase housing values, encourage business expansion and new businesses, and encourage the more affluent to move to Columbia County.

Median household income in Columbia County exceeded the State in 1999. Over 52 percent of the households in the county had incomes of \$30,000 to \$74,999, compared to just over 47 percent for the State. However, Columbia County lagged slightly behind the State in households with incomes over \$75,000. Table 1-15 compares household income in Columbia County with the State.

TABLE 1-15
Household Income
Columbia County and Wisconsin, 1999

Household Income	Columbia County		Wisconsin	
	Number	Percent	Number	Percent
Less than \$10,000	1,189	5.82%	148,964	7.14%
\$10,000 to \$29,999	4,847	23.74%	522,765	25.06%
\$30,000 to \$49,999	5,347	26.19%	517,280	24.79%
\$50,000 to \$74,999	5,327	26.09%	474,299	22.73%
\$75,000 to \$124,999	2,976	14.58%	321,002	15.39%
\$125,000 to \$199,999	475	2.33%	69,689	3.34%
\$200,000 or more	253	1.24%	32,305	1.55%
Total Households:	20,414	100.00%	2,086,304	100.00%
1999 Median Household Income:	\$45,064		\$43,791	

Source: U.S. Census

1.5.3 Population Forecasts

Population projections are important in the planning process so that appropriate amounts of land can be identified for the needs of future populations. Natural increase has not provided major changes in Columbia County's population in recent years. However, it is anticipated that the County's location in close proximity to rapidly growing Dane County and the City of Madison will increase migration to the area.

One source that provides projections of the future population for Columbia County is the Demographic Services Section of the State Department of Administration. This Agency publishes official population estimates annually and periodically projects the population for communities throughout the state.

1.5.3.1 Department of Administration Projection

Department of Administration projections of population growth estimate a 21 percent increase in population within Columbia County over the 30 years between 2000 and 2030. This growth will add 11,028 new residents to the County. Population projections for Columbia County provided by the Department of Administration are illustrated in Table 1-16 below.

TABLE 1-16
DOA Population Projections, Columbia County
2000-2030

Municipality	2000 Census	2005	2010	2015	2020	2025	2030**	Number Change 2000-2030	Percent Change 2000-2030
Town of Arlington	848	869	889	907	923	944	963	115	13.6%
Town of Caledonia	1,171	1,220	1,269	1,313	1,354	1,401	1,447	276	23.6%
Town of Columbus	711	691	672	652	632	616	597	(114)	(16.0)%
Town of Courtland	463	450	437	424	411	401	389	(74)	(16.0)%
Town of Dekorra	2,350	2,448	2,544	2,632	2,714	2,808	2,900	550	23.4%
Town of Fort Winnebago	855	843	833	821	808	800	789	(66)	(7.7)%
Town of Fountain Prairie	810	818	826	832	837	847	854	44	5.4%
Town of Hampden	563	549	535	520	506	495	481	(82)	(14.6)%
Town of Leeds	813	802	792	781	769	761	751	(62)	(7.6)%
Town of Lewiston	1,187	1,200	1,213	1,224	1,232	1,247	1,259	72	6.1%
Town of Lodi	2,791	3,028	3,259	3,477	3,682	3,903	4,125	1334	47.8%
Town of Lodi	987	1,001	1,021	1,039	1,054	1,076	1,094	107	10.8%
Town of Marcellon	1,024	1,056	1,088	1,117	1,143	1,175	1,205	181	17.7%
Town of Newport	681	698	716	731	744	762	778	97	14.2%
Town of Otsego	757	764	770	775	779	787	793	36	4.8%
Town of Pacific	2,518	2,725	2,926	3,117	3,295	3,488	3,682	1164	46.2%
Town of Randolph	699	717	735	751	765	783	800	101	14.4%
Town of Scott	791	829	867	902	934	971	1,007	216	27.3%
Town of Springvale	550	566	582	596	608	624	639	89	16.2%
Town of West Point	1,634	1,740	1,844	1,941	2,032	2,132	2,232	598	36.6%
Town of Wycena	1,543	1,613	1,682	1,746	1,804	1,872	1,938	395	25.6%
Town Totals:	23,746	24,627	25,500	26,298	27,026	27,893	28,723	4,977	21.0%
Village of Arlington	484	500	516	531	544	560	575	91	18.8%
Village of Cambria	792	782	773	763	752	746	737	(55)	(6.9)%
Village of Doylestown	328	333	338	342	346	351	356	28	8.5%
Village of Fall River	1,097	1,190	1,280	1,366	1,446	1,532	1,619	522	47.6%
Village of Friesland	298	297	297	296	294	294	293	(5)	(1.7)%
Village of Pardeeville	1,982	2,057	2,130	2,197	2,259	2,332	2,402	420	21.2%
Village of Poynette	2,266	2,454	2,638	2,811	2,974	3,149	3,326	1060	46.8%
Village of Randolph*	523	516	510	503	495	490	483	(40)	(7.6)%
Village of Rio	938	988	1,030	1,069	1,105	1,147	1,189	251	26.8%
Village of Wycena	668	678	688	696	703	713	722	54	8.1%
Village Totals:	9,376	9,795	10,200	10,574	10,918	11,314	11,702	2,326	24.8%
City of Columbus*	4,443	4,594	4,743	4,879	5,003	5,151	5,293	850	19.1%
City of Lodi	2,882	3,067	3,247	3,417	3,575	3,749	3,922	1040	36.1%
City of Portage	9,728	10,062	10,390	10,689	10,963	11,291	11,604	1876	19.3%
City of Wisconsin Dells*	2,293	2,289	2,286	2,278	2,268	2,271	2,266	(27)	(1.2)%
City Totals:	19,346	20,012	20,666	21,263	21,809	22,462	23,085	3,739	19.3%
Columbia County	52,468	54,434	56,366	58,135	59,753	61,669	63,510	11,042	21.1%
Wisconsin	5,363,675	5,563,896	5,751,470	5,931,386	6,110,878	6,274,867	6,415,923	1,052,248	19.6%

Source: U.S. Census and WIDOA

* Columbia County Portion

** 2030 figures calculated by Columbia County Planning and Zoning based upon WIDOA trends.

1.5.3.2 Alternative Projection Based Upon Current Population Trends

An alternate means of projecting population future population growth for the County is to project future population based upon the rate of growth that has taken place since the last Census. Such a projection provides an alternate view of future population growth. Columbia County has added on average about 494 additional people each year over the five years since the 2000 Census. Table 1-17 below demonstrates how the County's population will grow if the level of increase experienced over the last three years continues through 2030.

TABLE 1-17
Alternate Population Projection Based Upon Current Population Trends
Columbia County 2000-2030

Municipality	2000 Census	2005	2010	2015	2020	2025	2030	Number Change 2000-2030	Percent Change 2000-2030
Town of Arlington	848	873	898	923	948	973	998	150	17.7%
Town of Caledonia	1,171	1,235	1,299	1,363	1,427	1,491	1,555	384	32.8%
Town of Columbus	711	702	693	684	675	666	657	(54)	(7.6)%
Town of Courtland	463	475	487	499	511	523	535	72	15.6%
Town of Dekorra	2,350	2,437	2,524	2,611	2,698	2,785	2,872	522	22.2%
Town of Fort Winnebago	855	847	839	831	823	815	807	(48)	(5.6)%
Town of Fountain Prairie	810	841	872	903	934	965	996	186	23.0%
Town of Hampden	563	564	565	566	567	568	569	6	1.1%
Town of Leeds	813	832	851	870	889	908	927	114	14.0%
Town of Lewiston	1,187	1,247	1,307	1,367	1,427	1,487	1,547	360	30.3%
Town of Lodi	2,791	3,124	3,457	3,790	4,123	4,456	4,789	1,998	71.6%
Town of Lowville	987	1,020	1,053	1,086	1,119	1,152	1,185	198	20.1%
Town of Marcellon	1,024	1,053	1,082	1,111	1,140	1,169	1,198	174	17.0%
Town of Newport	681	683	685	687	689	691	693	12	1.8%
Town of Otsego	757	761	765	769	773	777	781	24	3.2%
Town of Pacific	2,518	2,691	2,864	3,037	3,210	3,383	3,556	1,038	41.2%
Town of Randolph	699	736	773	810	847	884	921	222	31.8%
Town of Scott	791	823	855	887	919	951	983	192	24.3%
Town of Springvale	550	559	568	577	586	595	604	54	9.8%
Town of West Point	1,634	1,750	1,866	1,982	2,098	2,214	2,330	696	42.6%
Town of Wycena	1,543	1,626	1,709	1,792	1,875	1,958	2,041	498	32.3%
Town Totals:	23,746	24,879	26,012	27,145	28,278	29,411	30,544	6,798	28.6%
Village of Arlington	484	565	646	727	808	889	970	486	100.4%
Village of Cambria	792	779	766	753	740	727	714	(78)	(9.8)%
Village of Doylestown	328	333	338	343	348	353	358	30	9.1%
Village of Fall River	1,097	1,274	1,451	1,628	1,805	1,982	2,159	1,062	96.8%
Village of Friesland	298	299	300	301	302	303	304	6	2.0%
Village of Pardeeville	1,982	2,074	2,166	2,258	2,350	2,442	2,534	552	27.9%
Village of Poynette	2,266	2,496	2,726	2,956	3,186	3,416	3,646	1,380	60.9%
Village of Randolph*	523	507	491	475	459	443	427	(96)	(18.4)%
Village of Rio	938	987	1,036	1,085	1,134	1,183	1,232	294	31.3%
Village of Wycena	668	715	762	809	856	903	950	282	42.2%
Village Totals:	9376	10,029	10,682	11,335	11,988	12,641	13,294	3,918	41.8%
City of Columbus*	4,443	4,748	5,053	5,358	5,663	5,968	6,273	1,830	41.2%
City of Lodi	2,882	2,968	3,054	3,140	3,226	3,312	3,398	516	17.9%
City of Portage	9,728	9,981	10,234	10,487	10,740	10,993	11,246	1,518	15.6%
City of Wisconsin Dells*	2,293	2,335	2,377	2,419	2,461	2,503	2,545	252	11.0%
City Totals:	19,346	20,032	20,718	21,404	22,090	22,776	23,462	4,116	21.3%
Columbia County	52,468	54,940	57,412	59,884	62,356	64,828	67,300	14,832	28.3%
Wisconsin	5,363,675	5,580,757	5,797,839	6,014,921	6,232,003	6,449,085	6,666,167	1,302,492	24.3%

* Columbia County Portion

Source: U.S. Census, WI DOA, and Columbia County Planning and Zoning

1.5.3.3 Alternative Projection Based Upon Historic Population Trends

An alternate means of projecting population future population growth for the County is to project future population based upon the historic rate of population change that has taken place over several decades. This alternate population projection was created by using the average population change of the 1960, 1970, 1980, 1990, and 2000 Census' and projecting this increase out to the year 2030. Such a projection provides an alternate view of future population growth. Based on information from the US Census, Columbia County has added on average 394 additional people each year since the 1960 Census. Table 1-18 below demonstrates how the County's population will grow if the level of increase experienced over the last 40 years continues through 2030.

TABLE 1-18
Alternate Population Projection Based Upon Historic Population Trends
Columbia County 2000-2030

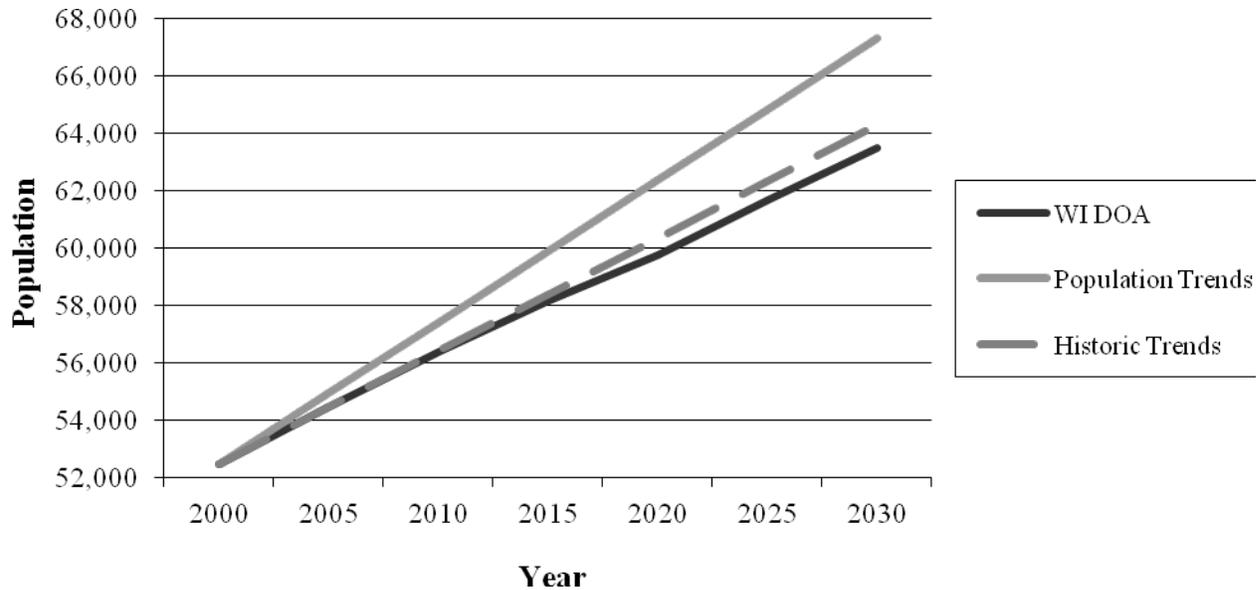
Municipality	2000 Census	2005	2010	2015	2020	2025	2030	Number Change 2000-2030	Percent Change 2000-2030
Town of Arlington	848	872	897	921	946	970	994	146	17.2%
Town of Caledonia	1,171	1,219	1,266	1,314	1,362	1,409	1,457	286	24.4%
Town of Columbus	711	710	708	707	705	704	702	(9)	(1.3)%
Town of Courtland	463	433	404	374	344	314	285	(179)	(38.6)%
Town of Dekorra	2,350	2,505	2,661	2,816	2,971	3,126	3,282	932	39.6%
Town of Fort Winnebago	855	884	912	941	970	998	1,027	172	20.1%
Town of Fountain Prairie	810	818	827	835	843	851	860	50	6.1%
Town of Hampden	563	545	527	509	492	474	456	(107)	(19.0)%
Town of Leeds	813	798	784	769	755	740	725	(88)	(10.8)%
Town of Lewiston	1,187	1,229	1,270	1,312	1,354	1,395	1,437	250	21.0%
Town of Lodi	2,791	3,029	3,266	3,504	3,742	3,979	4,217	1,426	51.1%
Town of Lowville	987	1,025	1,064	1,102	1,140	1,178	1,217	230	23.3%
Town of Marcellon	1,024	1,070	1,115	1,161	1,207	1,252	1,298	274	26.7%
Town of Newport	681	720	760	799	838	877	917	236	34.6%
Town of Otsego	757	763	769	775	782	788	794	37	4.9%
Town of Pacific	2,518	2,766	3,015	3,263	3,512	3,760	4,008	1,490	59.2%
Town of Randolph	699	686	673	660	648	635	622	(77)	(11.1)%
Town of Scott	791	818	845	871	898	925	952	161	20.3%
Town of Springvale	550	558	567	575	583	591	600	50	9.0%
Town of West Point	1,634	1,744	1,855	1,965	2,075	2,185	2,296	662	40.5%
Town of Wyocena	1,543	1,630	1,718	1,805	1,893	1,980	2,067	524	34.0%
Town Totals:	23,746	24,823	25,900	26,977	28,054	29,131	30,208	6,462	27.2%
Village of Arlington	484	501	518	535	552	568	585	101	20.9%
Village of Cambria	792	817	843	868	894	919	944	152	19.2%
Village of Doylestown	328	338	348	358	368	377	387	59	18.1%
Village of Fall River	1,097	1,161	1,225	1,289	1,354	1,418	1,482	385	35.1%
Village of Friesland	298	297	296	294	293	292	291	(8)	(2.5)%
Village of Pardeeville	1,982	2,063	2,145	2,226	2,308	2,389	2,470	488	24.6%
Village of Poynette	2,266	2,413	2,560	2,707	2,854	3,001	3,148	882	38.9%
Village of Randolph*	523	522	522	521	520	519	519	(5)	(0.9)%
Village of Rio	938	957	976	994	1,013	1,032	1,051	113	12.0%
Village of Wyocena	668	658	648	638	629	619	609	(59)	(8.9)%
Village Totals:	9,376	9,728	10,079	10,431	10,782	11,134	11,485	2,109	22.5%
City of Columbus*	4,443	4,565	4,687	4,809	4,931	5,053	5,175	732	16.5%
City of Lodi	2,882	3,040	3,198	3,355	3,513	3,671	3,829	947	32.8%
City of Portage	9,728	9,966	10,205	10,443	10,681	10,919	11,158	1,430	14.7%
City of Wisconsin Dells*	2,293	2,317	2,340	2,364	2,387	2,411	2,434	141	6.1%
City Totals:	19,346	19,888	20,429	20,971	21,512	22,054	22,595	3,249	16.8%
Columbia County	52,468	54,438	56,408	58,378	60,348	62,318	64,288	11,820	22.5%
Wisconsin	5,363,675	5,540,162	5,716,650	5,893,137	6,069,624	6,246,111	6,422,599	1,058,924	19.7%

* Columbia County Portion

Source: U.S. Census and Columbia County Planning and Zoning

Both alternate population projections based upon recent population trends and historic trends show a more rapid population increase by 2030 than the DOA projections for the same period. Projections based on recent population estimates or historic trends look at only single factors of population change and assume that these trends will continue over the 30-year period. However these numbers may be over inflated because they do not anticipate aspects of the population cycle. Figure 1-2 illustrates the DOA and alternate population projections for the County.

FIGURE 1-2
Population Projections, Columbia County, 2000-2030



Source: Wisconsin Dept. of Administration & Columbia County Planning and Zoning

1.5.4 Households

The number of housing units and the size of households impact the future demand for housing in Columbia County. An adequate supply of housing units is important to population growth and influences the types of people who will choose to live in the County.

1.5.4.1 Household Size

Increases in the number of housing units in Columbia County have resulted in a decrease in the average household size in the County. In 1990, the average number of persons per household in the County was 2.67. In 2000, the average number of persons per household decreased to 2.49 per unit, a decrease of 6.74 percent per unit. Likewise, the statewide average number of persons per household decreased from 2.61 in 1990 to 2.50 in 2000, a decrease of 4.2 percent. Table 1-19 below shows that the most common occupancy of households in Columbia County is by a two-person household. Over 36 percent of all households are so occupied. One-person households are a close second with just over 25 percent of all households so occupied. However, one-person households are the predominant type renter occupied household, while two person household make up the largest number of owner occupied households. Three and four person households are also common in both categories but are

significantly more common in owner occupied households. A total of 193 households in the County contain seven or more people.

TABLE 1-19
Columbia County, Household Size By Tenure, 2000

Size of Household	Number of Households					
	Owner Occupied	% of Owner Occupied	Renter Occupied	% of Renter Occupied	Total Households	% of Total
1 Person	2,892	18.90%	2,316	45.05%	5,208	25.48%
2 Person	6,017	39.33%	1,408	27.39%	7,425	36.33%
3 Person	2,470	16.15%	635	12.35%	3,105	15.19%
4 Person	2,427	15.86%	460	8.95%	2,887	14.13%
5 Person	1,011	6.61%	216	4.20%	1,227	6.00%
6 Person	317	2.07%	77	1.50%	394	1.93%
7 or More	164	1.07%	29	0.56%	193	0.94%
Totals	15,298	100.00%	5,141	100.00%	20,440	100.00%

Source: U.S. Census

1.5.4.2 Housing Unit Trends

The housing supply in Columbia County has grown moderately over the 10 years between 1990 and 2000. Total housing units in the County increased from 19,258 units in 1990 to 22,658 units in 2000, an increase of 3,427 units. The increase in housing over the 10 year period amounts to a growth rate of 17.80 percent. This rate of growth in housing units is higher than the State's growth rate of 12.91 percent for the same period. The number of occupied housing units also increased from 16,868 in 1990 to 20,439 in 2000, an increase of 21.17 percent. Table 1-20 compares the housing unit trends in Columbia County and Wisconsin. Figure 1-3 graphically compares housing unit trends in Columbia County and Wisconsin.

TABLE 1-20
Housing Unit Trends, Columbia County and Wisconsin
1990 - 2000

		1990	2000	# Increase	% Increase
Total Housing Units	Columbia County	19,258	22,685	3,427	17.80%
	Wisconsin	2,055,774	2,321,144	265,370	12.91%
Occupied Housing Units	Columbia County	16,868	20,439	3,571	21.17%
	Wisconsin	1,822,118	2,084,544	262,426	14.40%

Source: U.S. Census

1.5.4.3 Population Based Household Forecast

One method for projecting the need for future additional housing units in the County is based upon projected population growth. Department of Administration projections indicate that approximately 11,028 additional persons will reside in the County between 2000 and 2030. The amount of housing needed for this population is dependent upon the desired density level. In order to maintain the 2.49 persons per household that existed in 2000, about 4,429 new units will be needed by 2030. However, if an increase or reduction in the number of persons per housing unit is desired by the County, thus reducing or increasing the density, the amount of new housing needed will have to be increased or decreased accordingly.

Using the population projection figures based upon population trends since the 2000 Census, the number of needed housing units will be somewhat larger. This projection calls for an additional 14,832 residents in the County between 2000 and 2030. Using the figures from this projection and maintaining the 2000 level of persons per housing unit, the number of new units needed would be 5,957. Again, this number is subject to increase or decrease depending on the desired density level.

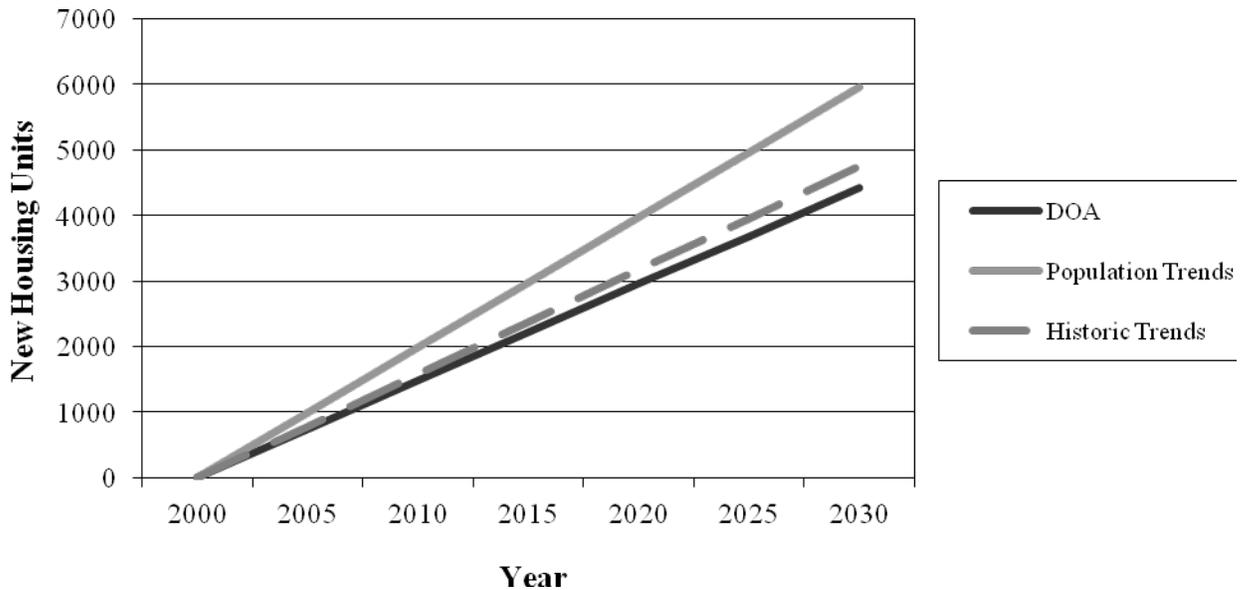
The population projection based upon historic population trends estimates a larger population increase than the DOA projection but a smaller increase than the projection based upon population trends. The historic population trends calls for 11,832 additional residents between 2000 and 2030. Housing this additional population at the 2000 level of persons per housing unit will require 4,752 new housing units between 2000 and 2030. This figure would again be subject to increase or decrease depending on density. All three of the projections are subject to change from external forces such as the economy or public perceptions of desirable places to live. Table 1-21 below compares the three population projections and the estimated number of housing units needed by 2030. Figure 1-3 illustrates the three housing unit projections.

TABLE 1-21
Estimated Additional Housing Units Needed Based Upon Projected Population Growth
Columbia County, 2000-2030

	WI DOA	Current Population Trends	Historic Population Trends
Projected Additional Population 2000 - 2030	11,042	14,832	11,820
Persons Per Housing Unit 2000	2.49	2.49	2.49
Estimated Additional Housing Units Needed by 2030			
Towns (unincorporated areas)	1,999	2,730	2,595
Villages	934	1,574	847
Cities	1,502	1,653	1,305
Columbia County	4,435	5,957	4,747

Source: Columbia County Planning and Zoning

FIGURE 1-3
Projected Housing Units Based Upon Projected Population Growth
Columbia County, 2000-2030

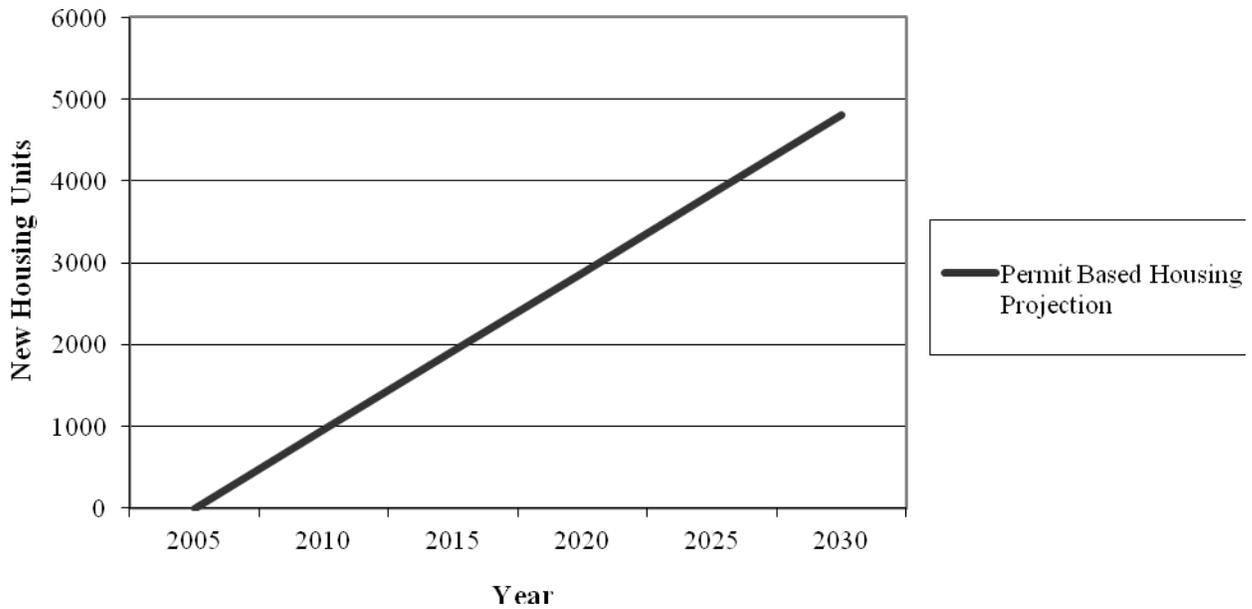


Source: Columbia County Planning and Zoning

1.5.4.4 Permit Based Household Forecast

An alternate means for projecting the need for future additional housing units in the County is based upon trends in zoning permits. Between 1990 and 2005 an average of 192 zoning permits for new homes were issued each year in the unincorporated areas of Columbia County (not including the Towns of Scott and Randolph which are not zoned). Projecting this 16 year average out to the year 2030 indicates that approximately 4,800 new homes will be required in the unincorporated areas between 2005 and 2030. Figure 1-4 illustrates the projected increase in the number of housing units - needed in the unincorporated areas of the County by the year 2030. More detailed information on zoning permit and land use trends can be found in the Land Use Element of this Plan.

FIGURE 1-4
Projected Housing Units Based Upon Zoning Permit Trends
Unincorporated Areas, Columbia County, 2005-2030



Source: Columbia County Planning and Zoning

1.5.5 Employment

The number of people in the labor force, the types of employers, and the kinds of occupations in Columbia County influence the amount and type of future growth that will take place in the County. A thorough understanding of employment trends is important in planning for the future of Columbia County.

1.5.5.1 Labor Force

In Columbia County in 2000, 69.4 percent of the population age 16 and over was in the labor force and was similar to the 69.1 percent for Wisconsin as a whole. Among persons age 16 and older, 65.2 percent of the County’s women and 73.7 percent of the County’s men are in the labor force compared to of 64.1and 74.3 percent respectively for the State. Table 1-22 provides labor force comparisons for Columbia County and Wisconsin in 2000.

TABLE 1-22
Columbia County and Wisconsin, Labor Force Comparisons, 2000

Characteristics	Columbia County		Wisconsin	
	Number	Percent	Number	Percent
Total Population	52,468	---	5,363,675	---
Persons Age 16 or Over	40,848	77.85%	4,157,030	77.50%
<i>Males</i>	20,544	50.29%	2,030,019	48.83%
<i>Females</i>	20,304	49.71%	2,127,011	51.17%
In Labor Force	28,369	---	2,872,104	---
<i>Males</i>	15,132	53.34%	1,508,279	52.51%
<i>Females</i>	13,237	46.66%	1,363,825	47.49%
Civilian Labor Force	28,313	---	2,869,236	---
<i>Employed</i>	27,324	96.51%	2,734,925	95.32%
<i>Unemployed</i>	989	3.49%	134,311	4.68%

Source: U.S. Census

1.5.5.2 *Employment Trends*

When comparing the 13 industry groups which employed persons in Columbia County, five showed a higher percentage for the County than the State. Those with a higher percentage for the County include agriculture and mining; construction; wholesale trade; transportation, warehousing, and utilities; and public administration. Manufacturing was the leading source of employment in 2000, employing 21.35 percent of the County's labor force. The second largest source of employment in 2000 was educational and health at 17.31 percent. Table 1-23 shows Columbia County employment by industry group.

TABLE 1-23
Columbia County and Wisconsin, Employment of Industry Group, 2000

Industry Group	Columbia County		Wisconsin	
	Number Employed	Percent of Total	Number Employed	Percent of Total
Agriculture & Mining	1,282	4.69%	75,418	2.76%
Construction	2,268	8.30%	161,625	5.91%
Manufacturing	5,834	21.35%	606,845	22.19%
Wholesale Trade	985	3.60%	87,979	3.22%
Retail Trade	3,083	11.28%	317,881	11.62%
Transportation, Warehousing, & Utilities	1,350	4.94%	123,657	4.52%
Information	553	2.02%	60,142	2.20%
Insurance, Real Estate, Finance, Rental & Leasing	1,469	5.38%	168,060	6.14%
Professional, Management, Administrative, & Scientific	1,510	5.53%	179,503	6.56%
Educational, & Health	4,730	17.31%	548,111	20.04%
Arts, Entertainment, Recreation	1,866	6.83%	198,528	7.26%
Other Services	911	3.33%	111,028	4.06%
Public Administration	1,483	5.43%	96,148	3.52%
Totals:	27,324	100.00%	2,734,925	100.00%

Source: U.S. Census

Within each industry group, Columbia County workers practice a variety of occupations. Table 1-24 presents employment by occupation in 2000 for Columbia County. The County exceeded the State in three occupation categories. Those categories include farming, fishing, and forestry; construction, extraction, and mining; and production, and transportation. The percentage of workers in the three other categories were higher for the State.

TABLE 1-24
Columbia County, Employment by Occupation, 2000

Occupation	Columbia County		Wisconsin	
	Number Employed	Percent of Total	Number Employed	Percent of Total
Executives, Professionals, & Managers	7,698	28.17%	857,205	31.34%
Service Occupations	3,647	13.35%	383,619	14.03%
Sales & Office Occupations	6,802	24.89%	690,360	25.24%
Farming, Fishing, & Forestry	314	1.15%	25,725	0.94%
Construction, Extraction, & Maintenance	3,177	11.63%	237,086	8.67%
Production, & Transportation	5,686	20.81%	540,930	19.78%
Totals:	27,324	100.00%	2,734,925	100.00%

Source: U.S. Census

Executive, Professional, and Manager Occupations were the leading occupation category in the County in 2000, employing 7,698 persons or 28.17 percent. Sales & Office Occupations accounted for 6,802 workers or 24.89 percent. There were 5,686 persons involved in Production, & Transportation occupations constituting 20.81 percent of the employed persons. Other important occupations of Columbia County's work force were Service Occupations, 3,647 persons or 13.35 percent, as well as Construction, Extraction, and Maintenance jobs, 3,177 persons or 11.63 percent.

1.5.5.3 Employment Forecast

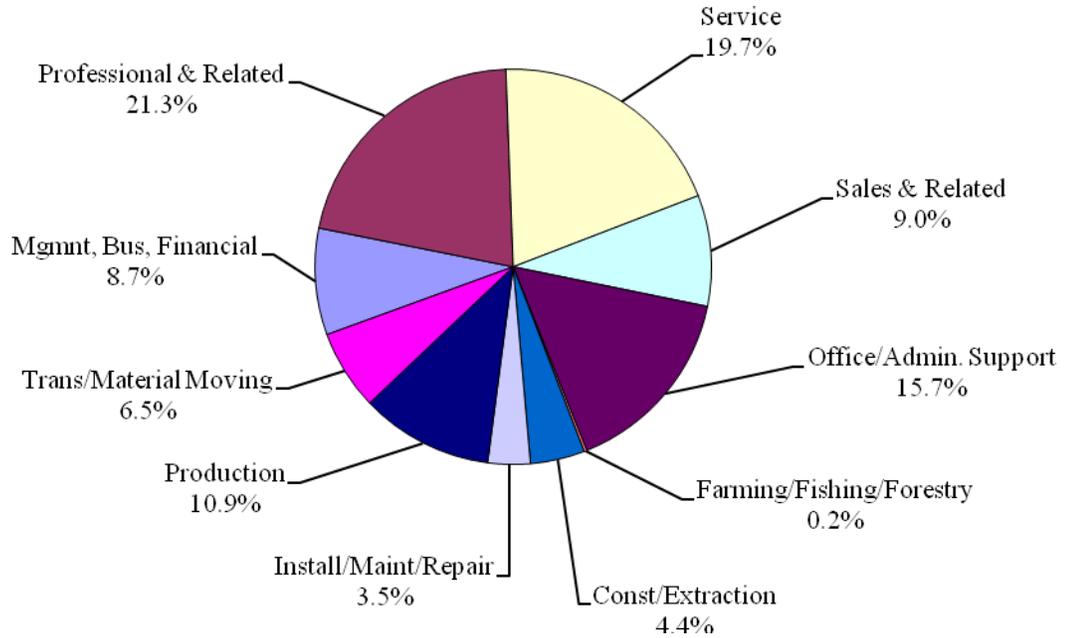
Future trends in employment in Columbia County are closely tied to the employment opportunities in Columbia County as well as those in other nearby Counties. The Wisconsin Department of Workforce Development divides the state into workforce development areas. Columbia County is included in the South Central Region that is comprised of six counties; Columbia, Dane, Dodge, Jefferson, Marquette, and Sauk. Table 1-25 below shows the projected employment trends for the south central region from 2000 to 2010. Professional and service jobs are expected to see the largest increases while production jobs are expected to see the smallest increase. Figure 1-5 graphically illustrates the projected employment increases by occupation group.

TABLE 1-25
Employment Forecast, South Central Wisconsin, 2000-2010

Occupational Group	Estimated employment in 2000	Projected employment in 2010	Change	Percent Change	New Jobs	Replacements	Total
Total, All Occupations	405,490	451,950	46,460	11.46%	4,650	9,750	14,400
Management, Business, Financial	35,230	39,310	4,080	11.58%	410	650	1,060
Professional & Related	80,590	96,110	15,520	19.26%	1,570	1,620	3,190
Service	76,240	89,250	13,010	17.06%	1,300	2,420	3,720
Sales & Related	37,200	40,890	3,690	9.92%	370	1,260	1,630
Office/Admin. Support	67,340	71,110	3,770	5.60%	380	1,410	1,790
Farming/Fishing/Forestry	940	1,040	100	10.64%	10	30	40
Const/Extraction	18,230	20,090	1,860	10.20%	190	340	530
Install/Maintenance/Repair	14,400	15,670	1,270	8.82%	130	300	430
Production	48,410	49,060	650	1.34%	70	1,120	1,190
Trans/Material Moving	26,930	29,430	2,500	9.28%	250	620	870

Source: WI Department of Workforce Development, Local Workforce Planning Section, June 2003

FIGURE 1-5
Projected Jobs in South Central Wisconsin in 2010 – By Occupational Group



Source: WI Department of Workforce Development, Local Workforce Planning Section, June 2003

2.0 HOUSING

The housing element considers the number of units available for residents of Columbia County and some conditions of that housing supply which may affect its suitability for the future. An adequate supply of the type of housing needed by the County's population is critical to population growth and can influence the type of people who choose to live in the County.

2.1 HOUSING VISION

- ◆ Residences set in attractive, safe, and appropriate environments for all County residents.

2.2 HOUSING GOALS AND OBJECTIVES

Goal 1: Provide for planned and orderly housing development.

- Objective 1:* Encourage rehabilitation and proper maintenance of older homes.
- Objective 2:* Encourage infill of vacant lots in existing subdivisions.
- Objective 3:* Encourage new development to be sited near or adjacent to existing development, when appropriate.
- Objective 4:* Require connectivity between adjacent housing developments for both vehicular and pedestrian traffic.
- Objective 5:* Encourage residential development in areas served by public sanitary sewer, when appropriate.
- Objective 6:* Encourage new housing areas to be predominantly single-family homes or duplexes in unsewered areas.
- Objective 7:* Limit the amount of multi-family housing in unsewered areas.
- Objective 8:* Discourage the development of additional mobile home parks in unsewered areas.
- Objective 9:* Require that all new housing meet applicable codes and required standards of construction.
- Objective 10:* Consider smaller lot sizes and increased density in areas of the County with sanitary sewer service, where appropriate.
- Objective 11:* Consider larger lot sizes and lower densities in unsewered areas of the County, where appropriate.
- Objective 12:* Encourage clustered residential development.
- Objective 13:* Discourage residential development on prime agricultural lands and near active farms.
- Objective 14:* Enforce County Zoning and Subdivision Ordinances in a manner consistent with the County Comprehensive Plan.

Goal 2: A cooperative approach involving the towns, county, state and private entities to meet current and future housing needs.

- Objective 1:* Regularly meet with officials from all County municipalities to discuss and review housing needs and plans.
- Objective 2:* Seek input of appropriate governmental entities and property owners in areas affected by housing development plans.
- Objective 3:* Meet with State officials as needed.

Goal 3: A full range of housing opportunities available for Columbia County’s current and future residents.

- Objective 1:* Promote an adequate supply of appropriate housing for all who work in Columbia County.
- Objective 2:* Promote all types of residential development including multi-family, affordable housing, elderly housing, and group living quarters in proportion to the demand for such housing, in appropriate areas, and subject to development standards.
- Objective 3:* Examine the need for emergency housing in the County.
- Objective 4:* Plan for the future housing needs of an aging population.

Goal 4: Appropriate regulations to implement the Comprehensive Plan.

- Objective 1:* Review all Columbia County Land Use Ordinances and recommend changes to implement the Comprehensive Plan.
- Objective 2:* Provide adequate enforcement of all County regulations regarding housing.
- Objective 3:* Encourage the development of County-wide standards for storm water management and erosion control.
- Objective 4:* Monitor new technology related to private sanitary sewer systems and implement the technology as appropriate.

2.3 HOUSING PROGRAMS

The programs listed in this section consist of a sampling of the housing related efforts that are operating in Columbia County. Some of these programs are administered by Columbia County or other governmental agencies, others are administered by private non-profit groups. The list should not be considered a comprehensive list of all housing programs in the County nor should endorsement of a program be implied from fact that a program is listed in the Plan. All of the listed programs help in some way to accomplish the goals and objectives of this housing element and the Columbia County Comprehensive Plan as a whole.

2.3.1 Columbia County Zoning Ordinance

The Columbia County Zoning Code is part of the County’s Code of Ordinances. The Zoning Code, completely updated in 2012, establishes 13 primary use districts, an agricultural overlay district, 3 planned development overlay districts, a shoreland-wetland overlay district, and a floodplain overlay district. Of the 13 primary zoning districts, 7 allow some form of residential use as either a permitted or conditional use. These 7 districts allow for a variety of housing types including single family, duplexes, multifamily, and mobile home parks. The Zoning Code allows for new rural residential lots as small as 43,560 square feet, down to 30,000 square feet for conservation neighborhoods.

2.3.2 Columbia County Housing Rehabilitation Program

Columbia County administers a Housing Rehabilitation Program for the repair and improvement of housing units in the County. The program is funded through a Community Development Block Grant (CDBG) and provides no interest, deferred payment loans for household repairs and improvements to homeowners who meet certain income requirements. Landlords who agree to rent to low or moderate income tenants can also receive no interest loans for rental properties to be paid back over a period of 5 to 10 years. The program also provides assistance with down payments and closing costs for qualified home buyers. Columbia County should continue to support this program and attempt to make all eligible

property owners aware of the benefits the program offers in an effort to achieve many of the housing related goals stated in this Plan.

2.3.3 Habitat for Humanity

Habitat for Humanity is a nonprofit organization with a goal of eliminating poverty housing and homelessness. The program uses volunteer labor and donations of money and supplies to build or rehabilitate simple, decent houses. Habitat homeowners are required to invest hundreds of hours of their own labor into building their Habitat house and the houses of others. The homeowners are sold their Habitat home at no profit and are financed with affordable no-interest loans. Payments made on the mortgages are used to build and rehabilitate other Habitat homes. The Sauk-Columbia County Habitat for Humanity Affiliate coordinates all aspects of the program where it operates in Columbia County. This program can help to achieve many of the housing related goals outlined in this Plan and should be supported by Columbia County when possible.

2.3.4 United Migrant Opportunity Services (UMOS)

United Migrant Opportunity Services (UMOS) is a private, non-profit corporation established in 1965 to advocate for and provide services to Hispanic migrant and seasonal farm workers in Wisconsin. The housing department within UMOS addresses the housing needs of migrant workers that come to Wisconsin for work each growing season. UMOS provides a variety of housing services for migrant and seasonal workers. Locally, UMOS operates migrant housing facilities near Montello and Berlin and in Dodge County near Beaver Dam. Migrant and seasonal workers are important to the local economy in parts of Columbia County and efforts should be made to support organizations like UMOS that provide decent housing to this important part of the workforce.

2.3.5 Uniform Dwelling Code (UDC)

The Uniform Dwelling Code (UDC) is the statewide building code for one and two family dwellings built since June 1, 1980. The code sets minimum standards for fire safety; structural strength; energy conservation; erosion control; heating, plumbing and electrical systems; and general health and safety. A recent change in State law requires all municipalities in the State to enforce the UDC. The UDC is an important tool for use in developing quality housing in Columbia County.

2.3.6 Wisconsin Housing and Economic Development Authority (WHEDA)

Wisconsin Housing and Economic Development Authority (WHEDA) was created by the State of Wisconsin to make construction, rehabilitation, and permanent mortgage loans to eligible sponsors of housing projects for low and moderate income households. WHEDA provides a variety of services low interest mortgages, down payment assistance, home improvement and rehabilitation loans, as well as loans for affordable rental housing, small businesses, and agriculture operations. WHEDA also has partnership programs with the USDA – Rural Development that provide additional loan funding for qualified applicants that live in communities with populations less than 20,000. These programs provide important resources to County residents

2.3.7 Central Wisconsin Community Action Council (CWCAC)

Central Wisconsin Community Action Council (CWCAC) is a private nonprofit organization that administers a variety of State and Federal housing Programs to assist low-income families in becoming self-sufficient and help communities grow and prosper. Housing related programs administer by CWCAC deal with a number of issues such as energy assistance, home weatherization, home purchase assistance, home rehabilitation, and housing development for low-income renters. CWCAC also provides emergency shelter and food assistance as well as emergency homeless shelter and transitional housing for homeless families with children. Programs provided by organizations like CWCAC provide important housing resources for County residents and help to achieve some of the goals and objectives of this Plan.

2.4 HOUSING CHARACTERISTICS

2.4.1 Age of Housing Supply

Table 2-1 illustrates the age of Columbia County's housing units in 2000. The age of the County's housing stock provides an indication of its overall condition. The largest percentage of housing units in the County, 31.89 percent, were built before 1940. Homes built between 1970 and 1979 also represent a significant percentage of the housing supply at 15.02 percent.

TABLE 2-1
Columbia County, Age of Housing Supply, 2000

Year Structure Built	Number	% of Total
1999 – 3/2000	489	2.16%
1995 – 1998	2,134	9.41%
1990 – 1994	1,769	7.80%
1980 – 1989	2,154	9.50%
1970 – 1979	3,408	15.02%
1960 – 1969	2,238	9.87%
1950 – 1959	1,983	8.74%
1940 –1949	1,275	5.62%
1939 or Earlier	7,235	31.89%
Total:	22,685	100.00%

Source: U.S. Census

A large number of older housing units may indicate the need for rehabilitation or replacement of a significant portion of the existing housing stock during the planning period covered by this Plan. In planning for new or replacement housing, the availability of land, utilities, transportation facilities, parks, and other infrastructure needs to be considered.

2.4.2 Units in Structure

Single-family detached homes represented 17,127 of the County's housing units in 2000. Such homes made up 75.50 percent of the housing units as shown in Table 2-2. Duplexes and mobile homes represent the next most common types of housing in Columbia County. There were 1,132 duplexes and 985 mobile homes representing 4.99 percent and 4.34 percent respectively of the County's housing supply in 2000. Multi-family housing with more than two housing units amounted 2,864 structures in 2000 or 12.63 percent of the housing supply.

TABLE 2-2
Number of Housing Units In Structure, Columbia County, 2000

Number of Housing Units in Structure	Total	Percent of Total
1 (Single-Family Detached)	17,127	75.50%
1 (Single-Family Attached)	568	2.50%
2 (Duplex)	1,132	4.99%
3 or 4	841	3.71%
5 to 9	739	3.26%
10 to 19	629	2.77%
20 or more	655	2.89%
Mobile Home	985	4.34%
Other	9	0.04%
Totals:	22,685	100.00%

Source: U.S. Census

2.4.3 Value of Owner-Occupied Housing

A sample of owner-occupied housing in Columbia County provides an estimate of the range in values of such homes as shown in Table 2-3. The number of homes valued at \$50,000 to \$99,999 constituted 30.05 percent of the County's housing in 2000 compared to 33.83 percent of the State's housing. Homes valued at \$100,000 to \$149,999 constituted the largest number of homes in the County with 33.24 percent of the County's housing in 2000 compared to 28.79 percent of the State's housing. The County had only 6.29 percent of its housing valued below \$50,000 compared to 9.96 percent of the State's housing.

The number of owner-occupied homes valued at \$50,000 or more constituted about 93.7 percent of the County's housing in 2000 compared to 90 percent of the State's housing. Homes valued at \$150,000 to \$199,000 constituted 16.37 percent of the County's housing in 2000 compared to 14.78 percent for the State. The County also had 944 homes valued between \$200,000 and \$249,000 and 1,205 homes valued at more than \$250,000 in 2000.

The median housing value for Columbia County, \$115,000, was higher than the median value for the State, \$112,200. The availability of affordable homes for lower-income households is a growing problem in the State of Wisconsin and in Columbia County. As the cost of homes increase, more households may find it difficult to afford adequate housing. Escalating housing costs can have effects on economic development, local tax base, and population migration in the County.

TABLE 2-3
Columbia County and Wisconsin, Value of Owner-Occupied Housing, 2000

Housing Value	Columbia County		Wisconsin	
	Number of Homes	Percent of Total	Number of Homes	Percent of Total
Less than \$50,000	963	6.29%	142,047	9.96%
\$50,000 - \$99,999	4,597	30.05%	482,614	33.83%
\$100,000 - \$149,999	5,086	33.24%	410,673	28.79%
\$150,000 - \$199,999	2,505	16.37%	210,917	14.78%
\$200,000 - \$249,999	944	6.17%	79,807	5.59%
\$250,000 or More	1,205	7.88%	100,602	7.05%
Totals:	15,300	100.00%	1,426,660	100.00%
Median Value:	\$115,000		\$112,200	

Source: U.S. Census

2.4.4 Rent For Non-Farm Housing

In 2000, most housing units in Columbia County, 44.5 percent, rented in the \$300 to \$499 per month range. This was also the range most rental housing units in the State rented for, with 39.2 percent of the rental units in the State rented in this range. Only 41 rental units in the County, less than one percent, rented for more than \$1,000 per month. A total of 466 rental units were available for less than \$200 per month in 2000 and 227 units required no cash rent. Median rent in Columbia County, \$437, was lower than the median rent for the State, \$473, however the County's rent increased more rapidly than the State's during the decade. Table 2-4 shows the range of rent for non-farm housing in Columbia County and the State of Wisconsin.

TABLE 2-4
Columbia County and Wisconsin, Rent For Non-Farm Housing Units, 2000

Monthly Rent	Columbia County				Wisconsin			
	Number of Housing Units		Change		Number of Housing Units		Change	
	1990	2000	Number	Percent	1990	2000	Number	Percent
Less than \$200	463	466	3	0.65%	51,599	43,307	(8,292)	(16.07%)
\$200 - \$299	786	469	(317)	(40.33%)	83,862	52,030	(31,832)	(37.96%)
\$300 - \$499	2,105	2,126	21	1.00%	289,964	251,475	(38,489)	(13.27%)
\$500 - \$749	411	1,259	848	206.33%	120,285	210,537	90,252	75.03%
\$750 - \$999	28	194	166	592.86%	14,968	44,948	29,980	200.29%
\$1,000 or more	0	41	41	100.00%	3,844	15,409	11,565	300.86%
No Cash Rent	227	227	0	0.00%	17,849	23,966	6,117	34.27%
Median Rent	\$356	\$437	\$81	22.75%	\$399	\$473	\$74	18.55%

Source: U.S. Census

2.4.5 Occupancy Characteristics

Table 2-5 shows that there were a total 16,868 occupied housing units in Columbia County in 1990. That number increased by 3,571 units or 21.17 percent, to 20,439 units in 2000. This rate of growth in occupied housing units was higher than the state growth rate of 14.4 percent for the same time period. A total of 2,998 of the new housing units were owner-occupied, bringing the number of owner-occupied housing units in the County to 15,300 in 2000, or 74.9 percent of the total occupied housing units. In comparison, owner-occupied housing units accounted for 72.9 percent of the occupied housing units in 1990.

TABLE 2-5
Number of Housing Units by Occupancy Status
Columbia County, 1990-2000

Housing Unit Status	Housing Units		Change	
	1990	2000	Number	Percent
Owner-Occupied	12,302	15,300	2,998	24.37%
Renter-Occupied	4,566	5,139	573	12.55%
Total Occupied Units	16,868	20,439	3,571	21.17%
Vacant:	2,390	2,246	(144)	(6.03)%
For sale	125	220	95	76.00%
For rent	342	377	35	10.23%
For seasonal, recreational, or occasional use	1,525	1,298	(227)	(14.89)%
Other reason	398	351	(47)	(11.81)%
Totals Housing Units:	19,258	22,685	3,427	17.80%

Source: U.S. Census

Renter-occupied housing did not increase as rapidly as owner-occupied housing between 1990 and 2000. The number of rental units in the County increased by 12.55 percent in 2000 compared to a 24.37 percent for owner-occupied housing units. There were 4,566 renter-occupied housing units in 1990, or 27.01 percent of the total occupied housing units. A total of 573 renter-occupied housing units were added during the 1990's, resulting in 5,193 rental units in 2000, or 25.14 percent of all occupied housing units.

Vacant housing units accounted for 2,390 units or 12.4 percent of all housing units in 1990. In 2000, vacant housing units in the County accounted for 2,246 units or 9.9 percent of all housing units, a decrease of six percent over the 10-year period. Some categories of vacant housing units increased during the 10-year period while others decreased. Those units vacant due to being for sale increased by 76 percent while vacant rental units increased by only 10.23 percent. This trend may indicate an increasing demand for rental units over the 10-year period. On the other hand, vacant seasonal, recreational, or occasional use units decreased in number by almost 15 percent possibly indicating a trend of seasonal and recreational homes being converted to year round homes. In addition, the number of homes vacant for other reasons also showed only a decrease of 11.81 percent during the 1990's possibly indicating an overall increase in demand for housing in the County.

2.4.6 Household Size

Table 2-6 illustrates the change in household size between 1990 and 2000 for Columbia County and the municipalities in the County. Columbia County's household size decreased from 2.60 persons per household in 1990 to 2.49 persons per household in 2000. This decrease in household size is consistent with state and national trends. In Columbia County, only the Towns of Otsego and Scott as well as the Villages of Fall River, Friesland, and Rio experienced increases in the household size between 1990 and 2000.

TABLE 2-6
Household Size by Municipality, Columbia County, 1990-2000

Municipality	1990 Household Size	2000 Household Size
Town of Arlington	2.96	2.81
Town of Caledonia	2.89	2.60
Town of Columbus	3.10	2.91
Town of Courtland	2.93	2.65
Town of Dekorra	2.65	2.48
Town of Fort Winnebago	3.01	2.63
Town of Fountain Prairie	2.84	2.71
Town of Hampden	3.03	2.63
Town of Leeds	2.78	2.63
Town of Lewiston	2.79	2.51
Town of Lodi	2.75	2.59
Town of Lowville	2.89	2.68
Town of Marcellon	3.00	2.83
Town of Newport	2.65	2.45
Town of Otsego	2.70	2.78
Town of Pacific	2.64	2.50
Town of Randolph	3.12	3.07
Town of Scott	3.06	3.26
Town of Springvale	2.89	2.79
Town of West Point	2.55	2.48
Town of Wyocena	2.72	2.51
Village of Arlington	2.67	2.59
Village of Cambria	2.64	2.58
Village of Doylestown	2.72	2.71
Village of Fall River	2.54	2.62
Village of Friesland	2.68	2.73
Village of Pardeeville	2.57	2.38
Village of Poynette	2.58	2.46
Village of Randolph*	2.77	2.60
Village of Rio	2.39	2.45
Village of Wyocena	2.49	2.37
City of Columbus*	2.46	2.37
City of Lodi	2.50	2.44
City of Portage	2.37	2.30
City of Wisconsin Dells*	2.30	2.28
Columbia County	2.60	2.49
Wisconsin	2.61	2.50

* Columbia County Portion

Source: U.S. Census

2.4.7 Housing Unit Trends

Table 2-7 illustrates the trend in the number of housing units for Columbia County and the municipalities in the County, as well as the State of Wisconsin. Columbia County had 22,685 housing units in 2000, a 17.8 percent increase over 1990. Towns experienced the largest increase in the number of housing units, adding 1,650 housing units in the decade between 1990 and 2000, an 18.4 percent increase. Among towns, the Town of Lodi had the largest increase adding 416 housing units during the decade, a 46.8 percent increase. All towns had increases in housing units except the Town of Columbus, which lost three housing units between 1990 and 2000.

Cities experienced the next largest increase in the number of housing units, adding 1,048 housing units between 1990 and 2000, a 14.6 percent increase. Among cities, the City of Portage had the largest increase in the number of housing units, adding 379 housing units during the decade, a 10.6 percent increase. However, the City of Lodi had the largest percentage increase, adding 365 housing units for a 43.8 percent increase. All cities in the County added over 100 housing units during the decade.

Villages added 863 housing units and had the largest total percentage increase of 27.4 percent. Two villages, the Village of Arlington and the Village of Doylestown, experienced small declines in the total number of housing units between 1990 and 2000. All other villages experienced growth in the number of housing units. The growth in village housing units ranged from the Village of Friesland adding two units for a 1.8 percent increase to the Village of Poynette adding 289 units for a 43.1 percent increase.

TABLE 2-7
Housing Unit Trends by Municipality, Columbia County, 1990-2000

Municipality	1990 Total Housing Units	2000 Total Housing Units	Number Change 1990-2000	Percent Change 1990-2000
Town of Arlington	262	314	52	19.8%
Town of Caledonia	626	723	97	15.5%
Town of Columbus	240	237	(3)	(1.3)%
Town of Courtland	182	191	9	4.9%
Town of Dekorra	1,074	1,246	172	16.0%
Town of Fort Winnebago	278	352	74	26.6%
Town of Fountain Prairie	299	321	22	7.4%
Town of Hampden	198	221	23	11.6%
Town of Leeds	294	319	25	8.5%
Town of Lewiston	512	567	55	10.7%
Town of Lodi	888	1,304	416	46.8%
Town of Lowville	338	390	52	15.4%
Town of Marcellon	322	375	53	16.5%
Town of Newport	308	335	27	8.8%
Town of Otsego	272	290	18	6.6%
Town of Pacific	847	1,099	252	29.8%
Town of Randolph	233	241	8	3.4%
Town of Scott	232	255	23	9.9%
Town of Springvale	190	211	21	11.1%
Town of West Point	803	897	94	11.7%
Town of Wyocena	557	717	160	28.7%
Town Totals	8,955	10,605	1,650	18.4%
Village of Arlington	181	180	(1)	(0.6)%
Village of Cambria	309	336	27	8.7%
Village of Doylestown	120	117	(3)	(2.5)%
Village of Fall River	341	449	108	31.7%
Village of Friesland	114	116	2	1.8%
Village of Pardeeville	686	877	191	27.8%
Village of Poynette	671	960	289	43.1%
Village of Randolph*	191	207	16	8.4%
Village of Rio	336	401	65	19.3%
Village of Wyocena	199	234	35	17.6%
Village Totals	3,148	4,011	863	27.4%
City of Columbus*	1,729	1,922	193	11.2%
City of Lodi	833	1,198	365	43.8%
City of Portage	3,587	3,966	379	10.6%
City of Wisconsin Dells*	1,006	1,117	111	11.0%
City Totals	7,155	8,203	1,048	14.6%
Columbia County	19,258	22,685	3,427	17.8%
Wisconsin	2,055,774	2,321,144	265,370	12.9%

* Columbia County Portion

Source: U.S. Census

3.0 TRANSPORTATION

The transportation system which serves Columbia County provides for the transport of goods and people into, out from, and within the County. The transportation system contains multiple modes involving air, land, and water transport. Several elements of the system are not located in the County itself, however the County's proximity to these elements is an important consideration in evaluating and planning for the County's transportation system.

3.1 TRANSPORTATION VISION

- ◆ A safe, efficient, and well-planned transportation system that incorporates and encourages multiple modes of travel.

3.2 TRANSPORTATION GOALS AND OBJECTIVES

Goal 1: A safe and well maintained system of roads and highways

- Objective 1:* Improve existing safety-deficient roadways in the most economical and efficient manner to reduce accident potential.
- Objective 2:* Maintain and upgrade existing roadways before developing new major highways.
- Objective 3:* New parcels requiring access onto State Highways or major County Trunk Highways should be discouraged.
- Objective 4:* Encourage the Wisconsin Department of Transportation to improve existing highways to include passing and turning lanes where appropriate and necessary.
- Objective 5:* Develop a means to objectively determine the environmental and economic impacts of proposed transportation improvements and use this evaluation system to evaluate road projects in the County.
- Objective 6:* Work with the City of Portage and the Wisconsin Department of Transportation to examine the feasibility of providing a State Highway 33 bypass of the City of Portage to facilitate the movement of through traffic.
- Objective 7:* Develop a capital improvement plan for Columbia County that includes County highway improvement projects and prioritizes them according to need.
- Objective 8:* Work with the Wisconsin Department of Transportation to assure that their transportation improvements in Columbia County are consistent with the goals and objectives of the Columbia County Comprehensive Plan.
- Objective 9:* Develop naming convention standards for all roads in Columbia County to prevent the duplication of road names and achieve a logical hierarchy.

Goal 2: An appropriate set of standards for all roads and highways.

- Objective 1:* Develop an access management plan for arterial and collector highways.
- Objective 2:* Work with the Wisconsin Department of Transportation to ensure adequate access control management on state highways in the county.
- Objective 3:* Limit access points on Major Corridors to a five hundred (500) foot minimum spacing.
- Objective 4:* Limit access points on Minor Corridors to a three hundred (300) foot minimum access spacing.

- Objective 5:* Require private driveways accessing interior parcels to have a minimum corridor width of sixty-six (66) feet and to remain clear of development of any type to the rear lot line of the parcel.
- Objective 6:* Discourage the development of new private roads.
- Objective 7:* Require new development to have safe access to a paved public road.
- Objective 8:* Encourage cul-de-sacs to be less than one thousand (1,000) feet in length.
- Objective 9:* Encourage the adoption of adequate town road standards in all the towns and to require developers to build any new town roads to those standards.
- Objective 10:* Require that road improvement projects have a high aesthetic quality and a positive visual relation to the surrounding landscape and that the projects minimize the disruption of natural, historical, and cultural resources.
- Objective 11:* Require traffic impact analysis studies for large developments along important highway corridors.
- Objective 12:* Discourage residential development near Primary Corridors.

Goal 3: Roads and highways are properly classified and under the appropriate jurisdiction.

- Objective 1:* Work with the Wisconsin Department of Transportation to change the official Functional Classification of Highways Map in accordance with the Proposed Functional Classification Map in this Plan.
- Objective 2:* Transfer highway jurisdiction, as opportunities arise, in accordance with the Proposed Functional Classification of Highways Map in this Plan: roads classified as local to the Towns; roads classified as collectors to the County Highway Department; roads classified as arterials to the State Department of Transportation.

Goal 4: Adequate development and full utilization of all modes of transportation in the County.

- Objective 1:* Pursue a bicycle and pedestrian plan for the County that designates and signs bicycle routes throughout the County utilizing low traffic volume roads, recommends the construction of paved shoulders with bike lanes on specific segments of roadway, and proposes the construction of a system of multi-use trails separated from roadways.
- Objective 2:* Evaluate roads in the County that have potential to be designated as Rustic Roads and work with the Wisconsin Department of Transportation to designate qualifying roads.
- Objective 3:* Support the development and continued improvement of a high quality airport in the City of Portage to meet air transportation needs of those living and working in Columbia County.
- Objective 4:* Seek opportunities to assist and expand the railroad systems operating in Columbia County, including opportunities and initiatives to improve freight service, expanded AMTRAK service, and develop high-speed rail service.
- Objective 5:* Preserve abandoned rail corridors as multi-use trails so that they are available for future transportation uses, if needed.
- Objective 6:* Discourage development proposals requiring new rail crossings and eliminate existing crossings whenever possible to improve safety.
- Objective 7:* Require an appropriate buffer for residential development in areas adjacent to active rail lines.

- Objective 8:* Review the needs of specialized transit programs throughout the County, such as transportation services for the County's elderly and handicapped, and prepare a plan for the continued improvement of these services.
- Objective 9:* As roads are reconstructed and new roads are built, consider the needs of agricultural equipment, horse drawn vehicles, and heavy trucks in the design of the road to ensure that the road is properly constructed to accommodate all likely users.
- Objective 10:* Encourage the development and utilization of alternative forms of transportation and fuels, when appropriate.

3.3 TRANSPORTATION PROGRAMS

3.3.1 Columbia County Land Division and Subdivision Ordinance

The Columbia County Land Division and Subdivision Ordinance regulates the division of land within the County. It also provides standards for the construction of new roads, such as right-of-way widths, pavement widths, and grade requirements. Under the County's Land Division and Subdivision Ordinance roads within Columbia County are classified into two categories, urban and rural. Within each category roads are divided by type; principle arterial, minor arterial, major collector, minor collector, and local roads. Each type of roadway has its own set of minimum standards.

3.3.2 Columbia County Highway Access Control Ordinance

The Columbia County Highway Access Control Ordinance regulates access onto County highways. The purpose for the access regulations are to protect the County's investment in existing and proposed highways by protecting the highway's traffic carrying capacity. In regulating access to County highways, the ordinance prevents improperly located access points that can lead to the road prematurely becoming obsolete and thereby requiring costly improvements. The ordinance provides for safe and efficient access to Columbia County highways. County highways are categorized by type according to definitions in the ordinance. Each category of County highway has its own set of access standards.

3.3.3 PASER/WISLR Program

The PASER/WISLR Program is a system for local governments to evaluate and schedule road maintenance on the local road system. The program requires officials to evaluate the condition of local roads based on observing characteristics of the road such as the texture of the road surface or the spacing of cracks. The officials then assign a rating on a scale of 1 to 10. These ratings, along with information on traffic volumes, are used to schedule the maintenance and reconstruction of County roads. The Columbia County Highway Department maintains a computer database of the rating on roads in the County and regularly reevaluates its road maintenance schedule using the PASER/WISLR Program.

3.3.4 Rustic Roads – Wisconsin Department of Transportation

The Rustic Roads System in Wisconsin was created by the 1973 State Legislature in an effort to help citizens and local units of government preserve what remains of Wisconsin's scenic, lightly traveled country roads for the leisurely enjoyment of bikers, hikers and motorists. Unique brown and yellow signs mark the routes of all officially-designated Rustic Roads. An officially designated Rustic Road remains under local control. The county, city, village, or town has the same authority over the Rustic Road as it possesses over other highways under its jurisdiction. In addition, a Rustic Road is eligible for state aids just as any other public highway.

The following characteristics are needed for a road to qualify for the Rustic Road program:

- The road should have outstanding natural features along its borders such as rugged terrain, native vegetation, native wildlife, or include open areas with agricultural vistas which singly or in combination uniquely set this road apart from other roads.
- The road should be a lightly traveled local access road, one which serves the adjacent property owners and those wishing to travel by auto, bicycle, or hiking for purposes of recreational enjoyment of its rustic features.
- The road should be one not scheduled nor anticipated for major improvements which would change its rustic characteristics.
- The road should have, preferably, a minimum length of 2 miles and, where feasible, should provide a completed closure or loop, or connect to major highways at both ends of the route.

A Rustic Road may be dirt, gravel or paved road. It may be one-way or two-way. It may also have bicycle or hiking paths adjacent to or incorporated in the roadway area. The maximum speed limit on a Rustic Road has been established by law at 45 mph, however, a speed limit as low as 25 mph may be established by the local governing authority.

There are currently two designated Rustic Roads in Columbia County. Rustic Road 49 follows Fairfield Street in the City of Portage and Levee Road in the Town of Caledonia. The full length of the Rustic Road 49 is 9.8 miles, from CTH T in Sauk County to STH 33 in Columbia County. The road travels through the Aldo Leopold reserve and the Pine Island Wildlife area along the Wisconsin River.

Rustic Road 69 follows Old Agency House Road in the City of Portage. The full length of Rustic Road 69 is 0.75 miles, from Albert Street to the road's termini. The road travels along the Portage Canal and ends at the historic Indian Agency House Museum.

Opportunities exist elsewhere in the County for additional roads to be designated as Rustic Roads. Roads to be considered for Rustic Road designation include Fox River Road and Lock Road in the Town of Fort Winnebago, Owen Park Road in the Town of Caledonia, East Morse Road in the Town of Dekorra, Cheese Factory Road in the Town of Lewiston, County Line Road in the Town of Lodi, County Highway WD in the Town of Newport, County Highway O in the Towns of Lewiston and Newport, and Van Ness Road in the Town of West Point. Local levels of government should evaluate roads under their jurisdiction for inclusion into the Rustic Road program.

3.3.5 Other State Road Aid Programs

The State of Wisconsin Department of Transportation has a variety of transportation programs available to help fund local transportation projects. Each program is intended to address a particular aspect of the transportation system. The County and local governments should take advantage of these funding sources, when appropriate, as they attempt to implement the Comprehensive Plan.

3.4 STATE AND REGIONAL TRANSPORTATION PLANS

The Wisconsin Department of Transportation maintains several statewide transportation related plans that contain policies, recommendations, and strategies regarding the transportation system in Columbia County. These plans should be taken into consideration when transportation related decisions and plans are made in Columbia County. The Wisconsin Department of Transportation's planning documents include the following:

- Wisconsin State Highway Plan 2020
- Wisconsin Bicycle Transportation Plan 2020
- Wisconsin State Rail Plan 2020
- Wisconsin Statewide Pedestrian Policy Plan 2020
- Wisconsin State Airport System Plan 2020
- Five Year Airport Improvement Plan
- Translink 21: A Multi-Modal Transportation Plan for Wisconsin's 21st Century
- Wisconsin Department of Transportation Access Management System Plan
- Statewide Transportation Improvement Plan
- Six-Year Improvement Program

The Wisconsin State Highway Plan 2020 addresses major needs and priorities for the State Highway System. Major improvements from the Plan that affect Columbia County include the possible addition of lanes on I90/94 between I39 and Wisconsin Dells. The Plan also identifies the potential for traffic congestion on portions of STH 16, 22, and 33 as well as USH 51 in Columbia County. These congested areas may require future improvements to address the congestion issues.

In addition to the State Highway Plan, the Wisconsin Department of Transportation maintains a six-year improvement program for smaller projects throughout the State. Scheduled projects for Columbia County are listed in Table 3-1. Policies, recommendations, and strategies from the other plan documents listed above will be addressed as necessary in the appropriate sections of this element.

Columbia County is not a member of a regional planning commission or Metropolitan Planning Organization (MPO), therefore no regional transportation plans exist that pertain to Columbia County.

TABLE 3-1
Wisconsin Department of Transportation
2004-2009 Six Year Program for Columbia County

Hwy	Project Title	Miles	Cost Estimate (Range)	Year	Project Description
13	Broadway Street, C. Wisconsin Dells	1.64	\$750,000-\$999,000	2005	Replace existing deteriorated pavement, curb and gutter and storm sewer.
13	Broadway Street, C. Wisconsin Dells	1.04	\$1,000,000-\$1,999,999	2005	Replace existing deteriorated pavement, curb and gutter and storm sewer.
16	James Street, C of Columbus	0.10	\$500,000-\$749,999	2006	Replace the deficient bridge.
33	Portage – STH 22	7.62	\$500,000 - \$749,999	2004	Mill and overlay the existing roadway.
33	Wisconsin St – CPRXR	0.75	\$1,000,000-\$1,999,999	07-09	Reconstruct the existing urban street.
I39	Dane County Line – CTH CS	7.41	\$2,000,000-\$2,999,999	2005	Patch as needed and overlay.
I39	Hogan Road Bridges (B-11-68/69)	0.00	\$500,000-\$749,999	2004	Replace the deteriorated bridge decks.
I39	USH 51 – N. Co. Line (CTH X, B-67)	0.00	Less than \$100,000	2004	Increase vertical clearance to standards by raising this bridge and adjusting the approaches.
I39	USH 51- NCL (Grotzke Road, B-70)	0.00	Less than \$100,000	2004	Increase vertical clearance to standards by raising this bridge and adjusting the approaches.
I39	USH 51- North County Line	4.66	\$10,000,000-\$10,999,999	2004	Replace the existing deteriorating pavement.
I39	STH 33 (B-11-0054)	0.01	\$100,000-\$249,999	07-09	Paint the existing steel girders.
I39	Dane County Line – CTH CS (NB)	7.41	\$2,000,000-\$2,999,999	2005	Patch as needed and overlay.
I39	Rowan Creek Structures	0.02	\$500,000-\$749,999	07-09	Replace the decks.
51	West Wisconsin Street C Portage	0.37	\$100,000-\$249,999	2005	Link three signals in progression on West Wisconsin Street.
60	WSOR Overpass City of Lodi	0.40	\$750,000-\$999,999	07-09	Reconstruct the existing urban street.
73	Ludington St, C of Columbus (B-6)	0.00	\$250,000-\$449,999	07-09	Replace the existing bridge.
78	Kinney Road Intersection	0.17	\$250,000-\$449,999	2004	Reconfigure the STH 78 & Kinney Road intersection.
I90	Cascade Mt. Rd. (B-11-33)	0.00	\$100,000-\$249,999	07-09	Paint bridge steel.
I90	STH 60 Bridges	0.00	\$750,000-\$999,999	07-09	Overlay the decks.
I90	STH 33-STH78	2.59	\$8,000,000-\$8,999,999	07-09	Expand the interstate from four to six lanes.
127	STH 16 – Portage Road (B-866)	0.00	\$250,000-\$449,999	2006	Replace deficient existing bridge.
146	CTH A – Cambria	3.59	\$2,000,000-\$2,999,999	07-09	Flatten, straighten and widen STH 146.
146	CTH Z – CTH A	4.58	\$750,000-\$999,999	07-09	Resurface the existing highway.
146	Williams, Florence and Madison, Cambria	0.94	\$100,000- \$249,999	07-09	Resurface the existing urban pavement.
151	South 73 – North 73	4.42	\$4,000,000-\$4,999,999	07-09	Replace the existing concrete pavement.

Source: Wisconsin Department of Transportation

3.5 FUNCTIONAL CLASSIFICATION OF ROADWAYS

Vehicular travel on the public highway system is the transportation mode for the vast majority of trips by Columbia County residents. Road and highway transportation systems primarily serve two basic functions. One function being is to provide access to adjacent properties and the other function is to provide for the movement of vehicular traffic through an area. The primary function of a particular road is determined by its functional classification. Roads and highways are grouped into three main functional classes: local, collector, and arterial. Descriptions of the functional classifications of roadways are listed in the sections below. Map 3-1 in Appendix 1 illustrates the functional classification of highways for Columbia County.

The functional classification of a roadway can be further described as urban or rural. Urban roadways are located in municipalities with populations of 5,000 or more. In Columbia County, this would apply to roads in the City of Portage. All other roads in the County are considered rural. The definition and description of roads classified as urban or rural are generally the same, however urban roads may have to meet different design and construction standards than rural roads.

The functional classification of a particular roadway is important to consider during the evaluation of proposed land use changes on adjacent lands. The effect a proposed land use might have on the function of a road could lead to serious traffic congestion or safety issues and to costly improvements to correct the problems. The management of access points on higher volume roads helps to minimize the impacts of development on the ability of the road to function as it is intended. Evaluating the impacts of land use changes on the transportation system is an important consideration when making land use decisions.

3.5.1 Local Roads

Local roads primarily provide access to adjacent properties and only secondarily provide for the movement of vehicular traffic. Since access is their primary function, through traffic should be discouraged. Traffic volume is expected to be light and should not interfere with the access function of these streets. Most town roads are considered local roads, however portions of some County and State highways fall in this category as well.

3.5.2 Collector Roads

Collector roads carry vehicular traffic into and out of residential, commercial, and industrial areas. These roadways gather traffic from the local roads and funnel it to arterial roads. Access to adjacent properties is a secondary function of collector roads. Collector roads are further divided into major or minor collectors depending on the amount of traffic they carry. Examples of major collector roadways in the County includes all or parts of County Trunk Highways A, C, D, F, G, N, I, P, AA, CS, CX, JV, and SS as well as all or parts of State Highways 23, 44, 60, 89, 113, 127, and 146. Examples of minor collector roadways in the County include all or parts of County Trunk Highways A, B, E, J, K, O, U, V, Z, CM, DG, and EF as well as all or parts of State Highway 188, Levee Road, Durward Glenn Road, and Tipperary Road.

3.5.3 Arterial Roads

Arterial highways serve primarily to move through traffic. Traffic volumes are generally heavy and traffic speeds are generally high. Arterial highways are further divided into principal and minor arterials depending on the traffic volume and the amount of access provided. In Columbia County, Interstate Highways 39, 90, 94 are examples of principal arterial highways. US Highway 151 in the southeast corner of the County is also an example of a principal arterial highway. Minor Arterials in Columbia

County include State Highways 16, 22, 33, 73 and 78 as well as US Highway 51 and parts of State Highway 60.

3.6 TRAFFIC VOLUMES

Traffic volume is also an important consideration for land use planning. The volume of traffic on a particular roadway and the associated noise, air quality, safety level, and other such concerns are considerations that need to be addressed in deciding how land should be used. Map 3-2 in Appendix 1 shows the average daily traffic volume of major traffic corridors within Columbia County.

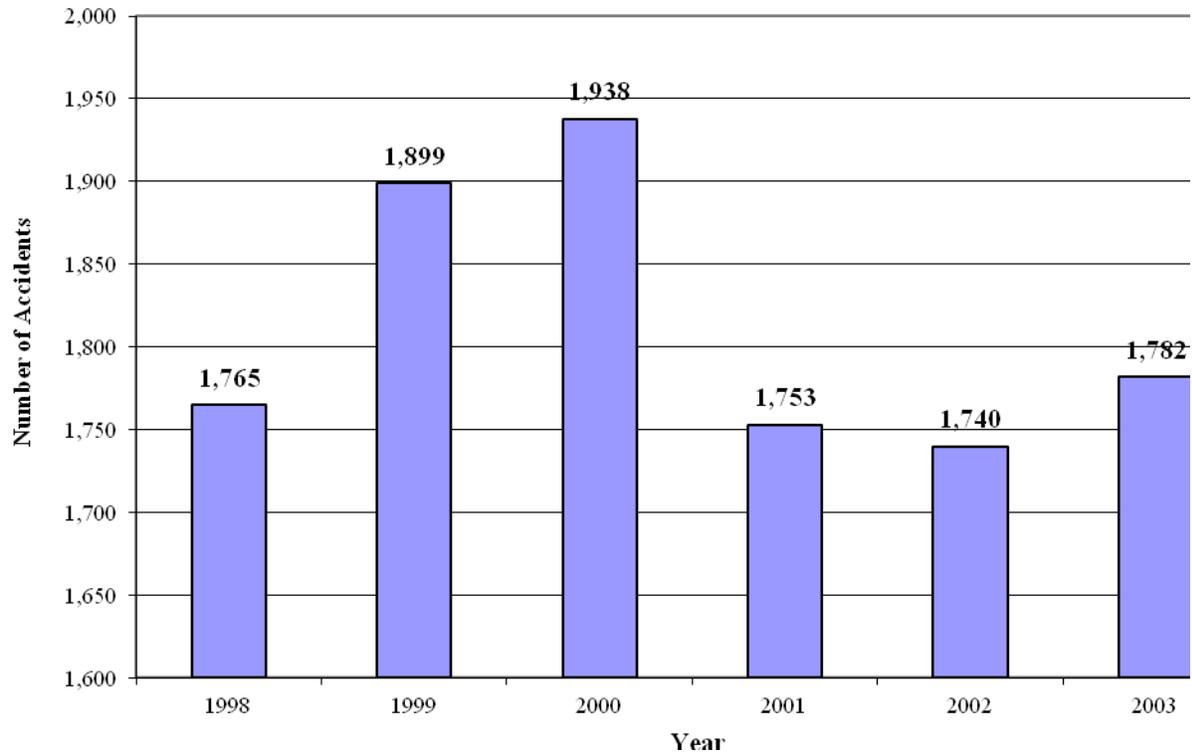
Traffic volumes vary considerably on the different roadways within the County. Combined Interstate highways 39, 90, and 94 carry the highest volume of vehicle traffic recorded in the County, with an average daily traffic count of 67,500 vehicles just south of the STH 60 interchange. USH 151 carries 17,800 vehicles per day south of Columbus. The volume of traffic on a particular roadway can be significantly influenced by its intersection with other roadways. For example, the average daily traffic volume on USH 51 decreases by 4,900 vehicles north of its intersection with State Highways 22 and 60 in the Town of Leeds.

3.7 TRAFFIC SAFETY

The number of traffic accidents on Columbia County roadways provides insight into the overall safety level of the County's transportation system. Between 1998 and 2003 the average annual number of accidents that occurred on Columbia County roadways, not including accidents on private property or parking lots, was 1,813. In comparison, during the same period the number of accidents in Dodge County averaged 1,789, Dane County averaged 10,264, Sauk County averaged 2,072, Adams County averaged 725, Marquette County averaged 527, and Green Lake County averaged 654.

Information on traffic accidents is submitted to the Wisconsin Department of Transportation through accident reports from law enforcement agencies. The information on traffic accidents is used by the Wisconsin Department of Transportation and County Highway Departments to make decisions on local road improvement projects. Figure 3-1 displays the annual number of traffic accidents in Columbia County between 1998 and 2003.

FIGURE 3-1
Traffic Accidents, Columbia County, 1998-2003



Source: Wisconsin Department of Transportation, DMV Traffic Accident Database.

Traffic safety and efficiency on Columbia County highways can be improved by limiting or discouraging the creation of new parcels that require access to State and County Trunk Highways or to Town roads where sight distance is limited. This practice restricts the access points to these roadways thereby reducing accident potential and the need to reduce speed limits to improve safety. New parcels should be encouraged only where access can be safely provided by an existing Town road or where a new Town road will be constructed to accommodate the parcels. In addition, the impacts of land use changes can also have significant impacts on the safety of a road. Limiting or discouraging land uses that generate high traffic volumes from having direct access to collector and arterial roads can help to preserve the function of the road and increase safety.

Safety concerns on heavily traveled highways in the County can also be addressed by examining the role the particular highway plays in the transportation network. Insuring that roads are properly classified based upon how they are functioning in the transportation network helps in planning for maintenance and reconstruction of the road, as well as managing access to the road. As a result, Table 3-2 outlines proposed changes to the functional classification of certain roads in the County based upon the manner in which they are currently functioning. Reclassifying the functional classification of these roads will allow the traffic carrying capacity of these roads to be preserved through additional scrutiny being placed on the location of new access points to these roads and on the setbacks required for land uses along these roads.

TABLE 3-2
Proposed Functional Classification Changes, Columbia County, 2004

Road	Municipality	Proposed Change
Haynes Road	Town of Wycocena	Reclassify Haynes Road between STH 22 and STH 44 as a Minor Collector
Levee Road	Town of Caledonia	Reclassify as a Local Road
CTH DM	Town of Leeds and Hampden	Reclassify as a Local Road from USH 51 to CTH K
CTH E	Towns of Marcellon, Scott, & Randolph	Reclassify as a Minor Collector
CTH J	Town of Dekorra	Reclassify as a Major Collector from CTH CS South to CTH V
CTH K	Towns of Columbus, Hampden, Leeds, Arlington, and Lodi	Reclassify as a Minor Collector
CTH O	Town of Lewiston	Reclassify as a Local Road
CTH X	Towns of Fort Winnebago and Lewiston	Reclassify as a Minor Collector
STH 23	Town of Newport	Reclassify as a Minor Arterial
STH 44	Towns of Wycocena, Marcellon, & Scott	Reclassify as a Minor Arterial
STH 60	Towns of Columbus, Hampden, Leeds, and Arlington,	Reclassify as a Minor Arterial from I39/90/94 to USH 51 and from STH 22 to STH 16
STH 89	Town of Columbus	Reclassify as a Minor Arterial
STH 113	Towns of Lodi & West Point	Reclassify as a Minor Arterial

Source: Columbia County Planning and Zoning

Table 3-3 contains recommendations for the possible jurisdictional transfers of certain roads in Columbia County. These recommendations reflect the jurisdictional changes that are necessary to match the jurisdiction of the roads to their function. For example, if a county highway is functioning as a local road then the county highway should be transferred to the appropriate town to be managed as a town road. Likewise, if a town road is functioning as a collector highway then the road should be transferred to the county highway department to be managed as a county highway. In addition, certain state highways that are functioning as collector highways should also be transferred to the county highway department to be managed as county highways. Ideally, all roads classified as local roads would be under town jurisdiction, all roads classified as collector roads would be under county jurisdiction, and all roads classified as arterial roads would be under state jurisdiction. Transferring roads to the proper jurisdiction allows that jurisdiction to focus limited resources more effectively and improve road safety. The possible jurisdictional transfers proposed in this Plan should take place over time as opportunities present themselves and the transfers should be based upon a mutual agreement between the affected governmental entities. Map 3-3 in Appendix I illustrates the proposed functional classification of highways based upon the recommended functional classification changes and jurisdictional transfers.

TABLE 3-3
Possible Jurisdictional Transfers, Columbia County, 2004

Road	Municipality	Proposed Change
Barta Road	Town of West Point	J.T. to a County Highway
Durward Glen Road	Town of Caledonia	J.T. to a County Highway
Haynes Road	Town of Wyocena	J.T. to a County Highway from STH 22 to STH 44
Johnson Road	Town of Fountain Prairie	J.T. to a County Highway or to the Village of Fall River from STH 16 to the Fall River Village Limits
Lindsay Road	Town of Lodi	J.T. to a County Highway
Lowville Road	Town of Lowville	J.T. to a County Highway or to the Village of Rio from STH 16 to the Rio Village Limits
River Road	Town of Newport	J.T. to a County Highway or to the City of Wisconsin Dells
To River Road	Town of Newport	J.T. to a County Highway or to the City of Wisconsin Dells
Vine Street Road	Town of Newport	J.T. to a County Highway or to the City of Wisconsin Dells
Wabeek Road	Town of Newport	J.T. to a County Highway or to the City of Wisconsin Dells from STH 13 to the Wisconsin Dells City Limits
CTH A	Towns of Courtland and Fountain Prairie	J.T. to a Town Road Between CTH G and CTH Z
CTH CD	Towns of Courtland and Fountain Prairie	J.T. to a Town Road
CTH CS	Town of Lowville	J.T. to a Town Road from CTH C to STH 22
CTH DG	Towns of Courtland and Fountain Prairie	J.T. to a Town Road from CTH G to CTH Z (rename the remaining portion of CTH DG to CTH Z)
CTH F	Town of Randolph	J.T. to a Town Road
CTH DM	Towns of Leeds and Hampden	J.T. to a Town Road from USH 51 to CTH K
CTH G	Town of Courtland	J.T. to a Town Road from County Line to CTH A
CTH G	Town of Springvale	J.T. to a Town Road from CTH B to CTH SS
CTH H	Towns of Scott & Springvale	J.T. to a Town Road
CTH HH	Town of Scott	J.T. to a Town Road
CTH J	Town of Dekorra	J.T. to a Town Road from CTH CS North to CTH V
CTH O	Towns of Lewiston & Newport	J.T. to a Town Road
CTH Q	Town of Arlington	J.T. to a Town Road from STH 60 to CTH K
CTH W	Town of Caledonia	J.T. to a Town Road
CTH WD	Town of Newport	J.T. to a Town Road
CTH XX	Town of Lewiston	J.T. to a Town Road
CTH Y	Town of Lodi	J.T. to a Town Road
STH 127	Town of Lewiston	J.T. to a County Highway from STH 16 in the City of Portage to CTH XX
STH 127	Towns of Lewiston and Newport	J.T. to a Town Road from CTH XX west to STH 16
STH 146	Towns of Randolph, Courtland, & Fountain Prairie	J.T. to a County Highway (rename to CTH M)
STH 188	Town of West Point	J.T. to a County Highway

Source: Columbia County Planning and Zoning

Another way in which road safety can be improved is through the construction of new road segments. New road segments can help to correct deficiencies in the County's transportation system and allow the system to function more safely and efficiently. Table 3-4 lists the proposed new road segments in Columbia County. The approximate locations of these facilities are illustrated on Map 3-3 in Appendix I.

TABLE 3-4
Proposed Road Improvements and New Road Segments, Columbia County, 2004

Road	Municipality	Proposed Change
CTH CS	Village of Poynette & Town of Arlington	Reroute CTH CS to the south and extend the road to USH 51
STH 33	Towns of Pacific and Caledonia & City of Portage	Reroute highway east and south of City with a new bridge over the WI River.
McMahon Road	City of Portage & Town of Lewiston	New road connection between I39/USH 51 interchange (Portage) and STH 127
Johnson Road	Town of Columbus & City of Columbus	Extend Johnson Road west and north from River Road to STH 73

Source: Columbia County Planning and Zoning

In an effort to prioritize road corridors in the County for regulatory and planning purposes, Map 3-4 in Appendix I was created using the information provided in this element. This map is intended to designate those roads in the County that will form the core of the County transportation system over the course of the planning period. The purpose of the map is to provide a basis for improved regulation of designated corridors and to protect road corridors that will be of importance in the future. The map designates all roads in the County based on the type of service they provide to the transportation system. Using this map, County ordinances should be modified to preserve the County transportation system's ability to handle anticipated traffic increases over time. These efforts will help ensure a future transportation system that is both safe and functional.

Safety at rail crossings in Columbia County is another important aspect of traffic safety. Due to safety concerns, the Wisconsin Commissioner of Railroads has ordered the improvement of several rail crossings in the County over the next several years. The main purpose for the improvements is to deal with inadequate sight distances at the rail crossings and to prevent future accidents. The planned projects include the installation of flashing lights and gates at five intersections, the construction of two overpass bridges, and the closure of one intersection. Table 3-5 outlines the ordered improvements to the rail crossings in the County between 2004 and 2007.

TABLE 3-5
Ordered Rail Crossing Improvements, Columbia County, 2004 - 2007

Road	Municipality	Improvement	Anticipated Year of Improvement
Mohr Road	Town of Fountain Prairie	Installation of Flashing Lights and Gates	2004
CTH CD	Town of Fountain Prairie	Installation of Flashing Lights and Gates	2004
Konkel Road	Town of Lewiston	Remove Bridge over Tracks and Closure of Crossing	2004
Maass Road	Town of Lewiston	Closure of At-Grade Crossing	2004
Weyh Road	Town of Lewiston	Installation of Flashing Lights and Gates	2004
Wolfram Road	Town of Lewiston	Installation of Flashing Lights and Gates	2004
Williams Road	Town of Otsego	Installation of Flashing Lights and Gates	2004
Salisbury Road	Town of Wycocena	Installation of Flashing Lights and Gates	2005
Swarthout Road	Town of Fountain Prairie	Closure of At-Grade Crossing	2005
Sauer Road	Town of Fountain Prairie	Construct Bridge Over Railroad Tracks	2005
Ontario Street	City of Portage	Installation of Flashing Lights and Gates	2006
Industrial Road	Town of Lewiston	Closure of At-Grade Crossing	2007
Boeck Road	Town of Lewiston	Installation of Flashing Lights and Gates	2007
Seier Road	Town of Fountain Prairie	Construct Bridge Over Railroad Tracks	2007

Source: Wisconsin Commissioner of Railroads

3.8 DESCRIPTION OF EXISTING COUNTY HIGHWAYS

Table 3-6 provides detailed information about the County highway network in Columbia County. The length of each roadway segment, the width of right-of-way, pavement and shoulder widths, average daily traffic, and function are included in the summary.

**TABLE 3-6
Description of the County Highway System, Columbia County, 2004**

Road Segment	Starting at:	Ending at:	Length (miles)	ROW Width (feet)	Pavement Width (feet)	Shoulder Width (feet)	Estimated Avg. Daily Traffic Count	Functional Class.
CTH A	STH 73	CTH A	0.02	66	21	3	220	Minor Collector
	CTH A	Point on CTH A (a)	0.48	66	21	3	220	
	Point on CTH A (a)	Jones Rd	0.38	66	24	3	220	
	Jones Rd	Schilling Rd	1.06	66	24	3	220	
	Schilling Rd	Hollnagel Rd	0.54	66	24	3	220	
	Hollnagel Rd	Jung Rd	0.49	66	24	3	490	
	Jung Rd	STH 146	2.59	66	24	3	490	
	STH 146	Howell Rd	0.79	66	22	3	170	
	Howell Rd	CTH G	1	66	22	3	170	
	CTH G	Kirley Rd	0.75	66	22	2	160	
	Kirley Rd	Marshall Dr	0.31	66	22	2	160	
	Marshall Dr	Palmer Rd	0.45	66	22	2	160	
	Palmer Rd	Point on CTH A (b)	0.59	66	22	3	150	
	Point on CTH A (b)	Welch St	0.28	66	21	3	150	
	Welch St	CTH Z	0.22	66	21	3	150	
	CTH Z	Mohr Rd	0.37	66	21	3	170	Minor Collector
	Nagle Rd	CTH Z	0.25	66	21	4	150	
	Nagle Rd	CTH Z	0.25	66	21	4	370	
	Village of Doylestown	STH 16	0.84	66	24	3	420	Major Collector
	STH 16	Moore Rd	1.7	66	24	3	310	
	Moore Rd	Town Line	0.47	66	20	2	370	
	Town Line	Duborg Rd	0.54	66	20	3	360	
	Duborg Rd	CTH N	0.5	66	20	3	360	
	CTH N	STH 60	1.01	66	22	3	230	Minor Collector
	STH 60	CTH K	0.74	66	22	2	130	
	CTH K	Eggert Rd	0.7	66	22	3	150	
	Eggert Rd	Sanderson Rd	0.3	66	22	3	150	
	Sanderson Rd	Arnold Rd	0.65	66	22	3	150	
	Arnold Rd	Arnold Rd	0.26	66	22	3	150	
	Arnold Rd	Bristol Rd	1.4	66	22	3	190	
Total:			19.93					
CTH AA	Town Line	Adney Rd	1.83	66	24	2	520	Major Collector
	Adney Rd	STH 127	0.35	66	24	2	520	
	Total:			2.18				
CTH B	Roberts Rd	Point on CTH B (a)	0.31	60	22	3	320	Minor Collector
	Point on CTH B (a)	Morgan Rd	0.06	66	22	3	380	
	Morgan Rd	Point on CTH B (b)	0.13	60	22	3	420	
	Point on CTH B (b)	Jones Dr	0.24	60	22	3	420	
	Jones Dr	Kohnke Dr	0.37	66	22	3	320	

Road Segment	Starting at:	Ending at:	Length (miles)	ROW Width (feet)	Pavement Width (feet)	Shoulder Width (feet)	Estimated Avg. Daily Traffic Count	Functional Class.
CTH B (cont.)	Kohnke Dr	Kuehn Rd	0.59	66	22	3	350	Minor Collector
	Kuehn Rd	Old B Rd	0.52	66	22	3	350	
	Old B Rd	Bender Rd	1.32	66	22	3	180	
	Bender Rd	CTH G	1.27	66	22	3	180	
	CTH G	Doyle Rd	0.76	66	22	3	360	
	Doyle Rd	Kirley Rd	0.25	66	22	3	360	
	Kirley Rd	Palmer Rd	0.51	66	22	3	360	
	Palmer Rd	CTH Z	0.51	66	22	3	310	
	CTH Z	Domes Rd	1	66	22	2	225	
	Domes Rd	Point on CTH B (c)	0.01	66	22	2	225	
	Point on CTH B (c)	Ludwig Rd	0.24	66	20	2	225	
	Ludwig Rd	Larson Dr N	0.25	66	20	2	225	
	Larson Dr N	Larson Dr S	0.01	66	20	2	225	
	Larson Dr S	Jacobson Dr	0.5	66	20	2	225	
	Jacobson Dr	Williams Rd	0.99	66	22	3	420	
	Williams Rd	Ludwig Dr	0.19	66	22	3	420	
	Ludwig Dr	Dahlen Dr	0.12	66	22	3	420	
	Dahlen Dr	Jameson Dr	0.29	66	22	3	420	
	Jameson Dr	CTH SS	0.4	66	22	3	420	
	CTH SS	Village of Rio	0.03	66	22	3	420	
	CTH C	Transport Dr	0.04	66	24	5	680	Major Collector
	Transport Dr	Hagen Rd	1.03	66	24	5	680	
	Hagen Rd	Christopher Rd	1.02	66	24	5	680	
	Christopher Rd	Traut Rd	1	66	24	5	680	
	Traut Rd	STH 22	1.28	66	24	5	680	
	STH 22	Dunning Rd	1.48	66	22	2	245	Minor Collector
	Dunning Rd	Town Line	0.23	66	22	2	245	
	Town Line	USH 51	1.93	66	22	3	260	
USH 51	Inch Heights Rd (2)	0.2	66	22	2	260		
Inch Heights Rd (2)	Keebaugh Rd	0.77	66	22	2	260		
Keebaugh Rd	Point on CTH B (d)	0.19	66	22	3	175		
Point on CTH B (d)	Oshaukuta Rd.	0.42	66	20	2	175		
Oshaukuta Rd	Morse Rd E	0.43	66	20	2	175		
Morse Rd E	CTH J	1.04	66	20	2	175		
CTH J	CTH V	0.49	66	20	2	35		
Total:			22.42					
CTH C	STH 16	CTH B	0.02	80	24	5	700	Major Collector
	CTH B	Drake Rd	1.02	66	22	3	700	
	Drake Rd	Hanson Rd	1.02	66	22	3	700	
	Hanson Rd	King Rd	1.02	66	22	3	720	
	King Rd	CTH CS	1.02	66	22	3	720	

Road Segment	Starting at:	Ending at:	Length (miles)	ROW Width (feet)	Pavement Width (feet)	Shoulder Width (feet)	Estimated Avg. Daily Traffic Count	Functional Class.
CTH C (cont.)	CTH CS	Point on CTH C (a)	0.51	66	22	4	700	Major Collector
	Point on CTH CS (a)	Town Line	0.51	66	24	4	510	
	Town Line	Hall Rd	0.5	66	22	4	560	
	Hall Rd	Hall Rd	0.2	60	24	4	560	
	Hall Rd	Point on CTH C (b)	0.31	60	24	4	560	
	Point of CTH C (b)	Hanson Dr	0.26	66	24	4	260	
	Hanson Dr	STH 60	0.75	66	24	4	260	
	STH 60	Melby Dr	0.38	66	22	2	610	
	Melby Dr	Burke Dr	0.12	66	22	2	610	
	Burke Dr	Point on CTH C (c)	0.26	66	22	2	610	
	Point on CTH C (c)	Bradley Rd	0.25	66	22	3	410	
	Bradley Rd	Point on CTH C (d)	0.51	66	22	3	410	
	Point on CTH C (d)	CTH K	0.5	66	22	2	620	
	CTH K	Anderson Dr	0.8	66	22	3	620	
	Anderson Dr	CTH DM	0.42	66	22	3	620	
	CTH DM	Wangsness Rd	0.51	66	24	3	670	
Wangsness Rd	Town Line	0.5	66	24	3	670		
Total:			11.39					
CTH CD	CTH CD	John Dr	0.3	66	24	4	210	Local Road
	John Dr	Court Rd	0.35	66	24	4	210	
	Court Rd	Sadoski Dr	0.87	66	24	4	210	
	Sadoski Dr	CTH DG	0.4	66	24	4	210	
	CTH DG	Hoefs Rd	0.7	66	20	2	220	
	Hoefs Rd	Paradise Rd	1.24	66	20	2	220	
	Paradise Rd	Pete Reak Rd	0.88	66	20	2	220	
	Pete Reak Rd	Shady Lane Rd	0.45	66	22	2	150	
	Shady Lane Rd	Point on CTH CD (a)	0.36	66	20	3	275	
	Point on CTH CD (a)	Rupnow Rd	0.07	66	22	2	150	
	Rupnow Rd	Heppe Rd	0.58	66	20	3	275	
	Heppe Rd	CTH Z	0.76	66	20	3	275	
	CTH Z	Scheiber Dr	0.46	66	20	3	275	
	Scheiber Dr	Fields Rd	0.54	66	20	3	275	
	Fields Rd	Fields Rd	0.01	66	20	3	275	
	Fields Rd	Point on CTH CD (b)	1.25	66	20	3	275	
	Point on CTH CD (b)	Sauer Rd	0.28	66	22	4	225	
Sauer Rd	STH 16	0.66	66	22	4	225		
Total:			9.73					
CTH CM	CTH CX	Rusch Rd	0.23	66	22	2	380	Minor Collector
	Rusch Rd	Carroll Rd	0.24	66	22	2	380	
	Carroll Rd	TN RD 3	0.07	66	22	2	380	
	TN RD 3	Dixon Rd	1.26	66	22	2	380	

Road Segment	Starting at:	Ending at:	Length (miles)	ROW Width (feet)	Pavement Width (feet)	Shoulder Width (feet)	Estimated Avg. Daily Traffic Count	Functional Class.
CTH CM (cont.)	Dixon Rd	CTH T	0.56	66	22	2	380	Minor Collector
	CTH T	Fox River Rd	0.17	66	22	4	130	
	Fox River Rd	CTH F	0.7	66	20	4	130	
	CTH F	Link Rd	1.26	66	22	2	75	
	Link Rd	Wilcox Rd	0.51	66	20	4	75	
	Wilcox Rd	Town Line	0.49	66	20	4	75	
	Town Line	Monthey Rd	0.83	66	22	3	500	
	Monthey Rd	Stone School Rd	0.4	66	22	3	500	
	Stone School Rd	Dalton Rd	0.12	66	22	3	500	
	Dalton Rd	Turner Rd	0.27	66	22	3	500	
	Turner Rd	Fifteenth Rd	1.03	66	21	3	500	
	Fifteenth Rd	Point on CTH CM (a)	0.18	66	21	3	750	
	Point on CTH CM (a)	Town Line	0.59	66	21	3	850	
Total:			8.91					
CTH CS	CTH C	Huber Rd	0.31	66	22	5	70	Local Road
	Huber Rd	Hagen Rd	0.31	66	22	5	70	
	Hagen Rd	Gilbert Rd	0.41	66	22	5	70	
	Gilbert Rd	Kroncke Rd	0.6	66	22	5	70	
	Kroncke Rd	Ray Rd	0.75	66	22	5	70	
	Ray Rd	Mountford Rd	0.26	66	22	5	70	
	Mountford Rd	STH 22	1.23	66	22	5	70	
	STH 22	Dunning Rd	0.29	66	24	2	670	
	Dunning Rd	Birchwood Dr	1.29	66	24	2	670	
	Birchwood Dr	Town Line	0.22	66	24	5	670	
	Town Line	Stebbins Rd	0.5	100	24	5	1250	
	Stebbins Rd	Bohling Rd	0.9	100	24	5	1250	
	Bohling Rd	Point on CTH CS (a)	0.13	100	24	5	1250	
	Point on CTH CS (a)	Bethel Dr	0.12	66	24	6	1250	
	USH 51	Wilson St	0.03	66	36	2	1250	
	Wilson St	Cleveland St	0.03	66	36	2	1250	
	Hillpoint Ct	Point on CTH CS (b)	0.05	66	23	6	1430	
	Point on CTH CS (b)	Butternut Rd	0.05	66	23	6	1460	
	Butternut Rd	Point on CTH CS (c)	0.07	66	23	6	1410	
	Point on CTH CS (c)	Point on CTH CS (d)	0.08	66	23	6	1460	
	Point on CTH CS (d)	Point on CTH CS (e)	0.08	66	23	6	1430	
	Point on CTH CS (e)	Wilson Rd	0.23	66	24	6	1600	
	Wilson Rd	CTH J	2.1	66	24	6	1600	
	CTH J	IH 39 Ramps	0.11	100	24	8	730	
	IH 39 Ramps	Point on CTH CS (f)	0.12	100	24	8	730	
	Point on CTH CS (f)	IH 39 Ramps	0.14	100	24	7	1950	
IH 39 Ramps	Point on CTH CS (g)	0.18	100	24	7	1950		

Road Segment	Starting at:	Ending at:	Length (miles)	ROW Width (feet)	Pavement Width (feet)	Shoulder Width (feet)	Estimated Avg. Daily Traffic Count	Functional Class.
CTH CS (cont.)	Point on CTH CS (g)	CTH J	0.69	66	23	6	1950	Major Collector
	CTH J	Heintz Rd	0.03	66	24	4	680	
	Heintz Rd	Olson Rd	0.51	66	24	4	680	
	Olson Rd	Hooker Rd	0.51	66	24	4	680	
	Hooker Rd	Smith Rd	0.25	66	24	4	680	
	Smith Rd	Old C's Rd	0.02	100	24	5	680	
	Old C's Rd	CTH V	0.51	100	24	5	680	
Total:			7.44					
CTH CX	Town Line	Point on CTH CX (a)	0.3	100	24	6	2990	Major Collector
	Point on CTH CX (a)	CTH CM	1.28	100	20	6	2990	
	CTH CM	Hogan Rd	1.25	100	20	10	1160	
	Hogan Rd	Carroll Rd	0.75	100	24	9	1200	
	Carroll Rd	CTH X	0.51	100	24	9	1200	
	CTH X	Gunderson Dr	0.65	66	24	8	225	
	City of Portage (Frontage Rd)	City of Portage (Frontage Rd)	0.35	70	24	5	200	Local Road (Urban)
Total:			5.09					
CTH D	Town Line	Hemling Rd	0.56	66	22	3	610	Major Collector
	Hemling Rd	CTH DG	0.61	66	22	3	610	
	CTH DG	Sleepy Hollow Rd	0.51	66	22	2	1010	
	Sleepy Hollow Rd	Leinke Rd	0.38	66	22	2	1010	
	Leinke Rd	Village of Fall River	0.01	66	22	2	1010	
Total:			2.07					
CTH DG	CTH G	CTH CD	1.3	66	21	3	75	Local Road
	CTH CD	Hyland Rd	0.8	66	22	3	75	
	Hyland Rd.	Point on CTH DG (a)	0.79	66	22	3	75	
	Point on CTH DG (a)	Pete Reak Rd	0.26	66	20	3	75	
	Pete Reak Rd	Kennedy Dr	1.05	66	22	3	75	
	Kennedy Dr	Finch Rd	0.54	66	22	3	75	
	Finch Rd	CTH Z	0.91	66	22	3	75	
	CTH Z	Sauer Rd	0.78	66	20	3	200	Minor Collector
	Sauer Rd	Hinzman Dr	0.51	66	21	3	200	
	Hinzman Dr.	Ridgewood Ct	0.62	66	21	3	200	
	Ridgewood Ct	Oak Shore Dr	0.09	66	21	3	200	
	Oak Shore Dr	CTH D	0.13	66	21	3	200	
Total:			7.78					
CTH DM	Town Line	Herschleb Dr	0.24	66	24	2	370	Minor Collector
	Herschleb Dr	USH 51	0.49	66	24	2	370	
	USH 51	Harvey Rd	0.99	66	22	2	390	
	Harvey Rd	Kroncke Rd	1.01	66	22	2	390	
	Kroncke Rd	Pederson Rd	0.29	66	22	2	390	

Road Segment	Starting at:	Ending at:	Length (miles)	ROW Width (feet)	Pavement Width (feet)	Shoulder Width (feet)	Estimated Avg. Daily Traffic Count	Functional Class.
CTH DM (cont.)	Pederson Rd	Bussian Rd	0.1	66	22	2	390	Minor Collector
	Bussian Rd	Parsonage Dr	0.24	66	22	2	390	
	Parsonage Dr	Stark Rd	0.27	66	22	2	390	
	Stark Rd	CTH C	0.61	66	22	2	390	
	CTH C	Gilbertson Rd	0.52	66	22	4	390	
	Gilbertson Rd	Davidson Rd	0.53	66	24	4	360	
	Davidson Rd	CTH K	1.03	66	24	4	360	
Total:			6.32					
CTH E	CTH EE	Town Line	0.88	66	24	4	150	Local Road
	Town Line	Fenske Rd	0.43	66	24	3	160	
	Fenske Rd	Fenske Rd	0.08	66	24	3	160	
	Fenske Rd	STH 44	0.69	66	24	3	160	
	STH 44	Newell Rd	0.51	66	22	2	190	
	Newell Rd	Libke Rd	1.55	66	22	2	190	
	Libke Rd	CTH H	1.03	66	22	2	190	
	CTH H	Inglehart Rd	1.51	66	20	4	180	
	Inglehart Rd	Point on CTH E (a)	0.16	66	20	4	150	
	Point on CTH E (a)	Inglehart Rd	0.18	66	20	4	150	
	Inglehart Rd	Scharf Rd	0.46	66	20	4	140	
	Scharf Rd	CTH M	1.08	66	20	4	140	
	CTH M	Koopmans Dr	0.72	66	20	3	130	
	Koopmans Dr	Sterk Rd	0.54	66	20	3	130	
	Sterk Rd	CTH EF	0.25	66	20	3	150	
	CTH EF	Burmania Dr	0.6	66	20	4	150	Minor Collector
	Burmania Dr	E Friesland Rd	0.4	66	20	4	150	
	E Friesland Rd	Posthuma Rd	0.47	66	20	4	290	
	Posthuma Rd	H Devries Dr	0.07	66	20	4	290	
	H Devries Dr	Blanecae Rd	0.98	66	20	4	290	
Total:			12.59					
CTH EE	STH 33	Red Bird Ln	0.42	66	22	6	870	Minor Collector
	Red Bird Ln	Cardinal Dr	0.16	66	22	6	870	
	Cardinal Dr	Military Rd	0.32	66	22	6	870	
	Military Rd	Dumke Rd	0.98	66	24	3	300	
	Dumke Rd	Quarry Rd	0.52	66	24	3	300	
	Quarry Rd	Wilcox Rd	0.41	66	24	3	300	
	Wilcox Rd	Polinske Rd	0.85	66	24	3	300	
	Polinske Rd	Point on CTH EE (a)	1.19	66	24	3	350	
	Point on CTH EE (a)	Monthey Rd	0.45	66	24	3	360	
	Monthey Rd	Newton Rd	0.73	66	24	4	360	
	Newton Rd	Starr Rd	0.26	66	24	4	360	
	Starr Rd	Staufenbeil Rd	1.03	66	24	4	360	

Road Segment	Starting at:	Ending at:	Length (miles)	ROW Width (feet)	Pavement Width (feet)	Shoulder Width (feet)	Estimated Avg. Daily Traffic Count	Functional Class.
CTH EE (cont.)	Staufenbeil Rd	School Rd	0.5	66	24	4	360	Minor Collector
	School Rd	Comstock Rd	0.73	66	24	4	360	
	Comstock Rd	STH 22	0.37	66	24	4	360	
	STH 22	Old STH 22	0.13	66	24	4	260	
	Old STH 22	Mc Elroy Rd	0.5	66	24	4	260	
	McElroy Rd	CTH E	1.14	66	24	4	260	
	CTH E	Kiefer Rd	0.53	66	26	4	225	
	Kiefer Rd	Town Line	1	66	26	4	225	
	Town Line	Fenske Rd	0.84	66	22	4	540	
	Fenske Rd	Barry Rd	0.5	66	22	4	540	
Total:			13.56					
CTH EF	CTH E	Flat Meadow Dr	0.64	66	22	3	510	Minor Collector
	Flat Meadow Dr	Village of Friesland	0.37	66	22	3	510	
	Village of Friesland	STH 33	1.02	66	26	3	750	
Total:			2.03					
CTH F (Randolph)	Town Line	Kok Rd	0.5	66	20	2	150	Local Road
CTH F	Fox River Rd	CTH CM	0.5	66	22	5	150	Major Collector
	CTH CM	Point on CTH F (a)	0.47	66	22	5	150	
	Point on CTH F (a)	Point on CTH F (b)	0.93	66	20	5	380	
	Point on CTH F (b)	Dumke Rd	0.2	66	22	5	870	
	Dumke Rd	Fox River Rd	0.57	66	22	5	870	
	Fox River Rd	Clark Rd	1.07	66	22	5	870	
	Clark Rd	Bornick Rd	0.49	66	24	2	870	
	Bornick Rd	STH 33	2.29	66	24	2	870	
Total:			7.02					
CTH G	Town Line	Coulter Rd	0.72	66	23	3	230	Local Road
	Coulter Rd	Meyers Rd.	0.66	66	23	3	230	
	Meyers Rd	CTH DG	0.5	66	23	3	230	
	CTH DG	Jung Rd	0.72	66	23	3	230	
	Jung Rd	Pierce Rd	1.08	66	23	3	230	
	Pierce Rd	STH 146	1.42	66	23	3	230	
	STH 146	CTH A	1.26	66	23	4	180	
	CTH A	Town Line	0.12	66	20	4	180	
	Town Line	CTH B	1	66	21	4	75	Minor Collector
	CTH B	Point on CTH G (a)	0.19	66	20	4	75	
	Point on CTH G (a)	Kovalaske Dr	0.75	66	20	3	75	Local Road
	Kovalaske Dr.	Senft Rd	0.27	66	20	4	75	
	Senft Rd	Berger Rd	0.47	66	20	4	75	
	Berger Rd	Ludwig Rd	0.77	66	20	4	75	
	Ludwig Rd	Old B Rd	1.39	66	22	3	75	
	Old B Rd	Raddatz Rd	0.73	66	20	4	225	

Road Segment	Starting at:	Ending at:	Length (miles)	ROW Width (feet)	Pavement Width (feet)	Shoulder Width (feet)	Estimated Avg. Daily Traffic Count	Functional Class.
CTH G (cont.)	Raddatz Rd	CTH SS	0.78	66	20	4	225	Local Road
	CTH SS	CTH SS	0.27	66	22	4	75	Major Collector
	CTH SS	Schliesmann Rd	1.02	66	22	4	75	
	Schliesmann Rd	Point on CTH G (b)	0.86	66	22	3	300	
	Point on CTH G (b)	Point on CTH G (c)	0.26	80	22	5	300	
	Point on CTH G (c)	Twitchell Rd	0.47	66	22	3	300	
	Twitchell Rd	W Hill Rd	0.25	66	22	3	300	
	W Hill Rd	Point on CTH G (d)	1	66	22	3	300	
	Point on CTH G (d)	Village of Wyocena	0.05	66	22	8	200	
	Village of Wyocena	Abraham Rd	1.81	66	24	4	700	
	Abraham Rd	Warnke Dr	0.31	66	24	4	700	
	Warnke Dr	Town Line	0.34	66	22	4	700	
	Town Line	Fair Winds Dr	0.23	66	24	3	770	
	Fair Winds Dr	Warren Dr	0.62	66	24	3	770	
	Warren Dr	W Bush Rd	0.43	66	24	3	770	
	W Bush Rd	CTH P	0.63	66	24	3	770	
Total:			21.38					
CTH GG	CTH G	Termini	0.24	66	20	4	15	Local Road
CTH H	CTH HH	H Kowald Dr	0.85	66	24	2	170	Local Road
	H Kowald Dr	Kowald Rd	0.17	66	24	4	170	
	Kowald Rd	Point on CTH H (a)	0.26	66	24	4	170	
	Point on CTH H (a)	Point on CTH H (b)	0.41	66	22	3	170	
	Point on CTH H (b)	CTH E	0.33	66	22	3	150	
	CTH E	Ross Rd	0.99	66	22	3	150	
	Ross Rd	Dykstra Dr	0.75	66	22	4	150	
	Dykstra Dr	Freisland Rd	0.26	66	22	4	150	
	Freisland Rd	Crown Rd	0.51	66	22	4	150	
	Crown Rd	STH 33	0.5	66	22	4	150	
	STH 33	Vaughn Rd	1.01	66	20	3	75	
Vaughn Rd	CTH P	0.75	66	21	3	75		
Total:			6.79					
CTH HH	STH 44	CTH FF	0.25	66	20	3	35	Local Road
	CTH FF	CTH II	0.5	66	20	3	35	
	CTH II	CTH H	0.76	66	20	4	75	
	CTH H	Town Line	0.5	66	20	4	75	
Total:			2.01					
CTH I	Ellickson St	Curtis St	0.06	66	34	3	700	Major Collector
	Curtis St	Point on CTH I (a)	0.06	66	34	3	700	
	Point on CTH I (a)	Kampen Rd	0.76	66	22	2	860	
	Kampen Rd	CTH K	1.00	66	22	2	840	
	CTH K	Meek Rd	1.01	66	24	2	640	
Total:			2.89					

Road Segment	Starting at:	Ending at:	Length (miles)	ROW Width (feet)	Pavement Width (feet)	Shoulder Width (feet)	Estimated Avg. Daily Traffic Count	Functional Class.
CTH J	STH 188	Harmon Rd W	1.25	66	20	1	300	Minor Collector
	Harmon Rd. W	O'Connor Rd	0.25	66	20	1	300	
	O'Connor Rd	E Harmon Rd	0.49	66	20	1	300	
	E Harmon Rd	Chrisler Rd	0.77	66	20	1	300	
	Chrisler Rd.	Corner Rd	0.44	66	20	1	300	
	Corner Rd	CTH VJ	0.1	66	20	1	300	
	CTH VJ	Chrislaw Rd	1.02	66	20	1	300	
	Chrislaw Rd	Van Ness Rd	0.28	66	20	1	300	
	Van Ness Rd.	Town Line	0.51	66	20	1	300	
	Town Line	Point on CTH J (a)	0.89	66	20	4	500	
	Point on CTH J (a)	Bilkey Rd	0.17	66	21	4	500	
	Bilkey Rd	Point on CTH J (b)	0.44	66	21	4	500	
	Point on CTH J (b)	Point on CTH J (c)	0.27	66	21	2	500	
	Point on CTH J (c)	Development Dr	0.01	66	26	2	370	
	Development Dr	STH 113	0.22	66	26	2	370	
	Spring Creek Rd	Fair St	0.4	66	22	2	730	
	Fair St	Lindsay Rd	0.84	66	22	2	730	
	Lindsay Rd	CTH V	1.27	66	24	5	970	Major Collector
	CTH V	Point on CTH J (d)	0.92	66	24	12	2440	
	Point on CTH J (d)	CTH V	0.17	66	24	8	173	
	CTH V	Point on CTH J (e)	0.12	66	24	8	173	Minor Collector
	Point on CTH J (e)	Koltes Rd	0.66	66	22	2	173	
	Koltes Rd	Town Line	0.84	66	22	2	173	
	Town Line	CTH CS	0.59	66	26	3	620	
	CTH CS	Point on CTH J (f)	0.12	100	24	2	150	Local Road
	Point on CTH J (f)	Kent Rd	0.94	66	21	2	75	
	Kent Rd	Kent Rd	0.26	66	21	2	75	
	Kent Rd	Schofield Rd	0.51	66	21	2	75	
	Schofield Rd	Black Rd	0.25	66	21	2	75	
	Black Rd	Earnie Rd	0.57	66	21	2	75	
Earnie Rd	Bilkie-McMillan Rd	0.24	66	21	2	75		
Bilkie-Memillian Rd	Morse Rd E	0.67	66	21	2	75		
Morse Rd E	Voss Rd	0.53	66	21	2	75		
Voss Rd	CTH B	0.98	66	21	2	75		
CTH B	CTH V	0.21	66	22	3	75		
CTH V	USH 51	2.16	66	22	3	420	Minor Collector	
Total:			20.36					
CTH K	City of Lodi	Dalton Rd	0.48	66	21	3	490	Minor Collector
	Dalton Rd	Mack Rd	0.04	66	21	3	490	
	Mack Rd	Hillestad Rd	1.31	66	21	3	490	

Road Segment	Starting at:	Ending at:	Length (miles)	ROW Width (feet)	Pavement Width (feet)	Shoulder Width (feet)	Estimated Avg. Daily Traffic Count	Functional Class.	
CTH K (cont.)	Hillestad Rd	Town Line	0.26	66	21	3	490	Local Road	
	Town Line	Cobbs Rd	0.73	66	20	3	310		
	Cobbs Rd	Smokey Hollow Rd	0.27	66	21	3	310		
	Smokey Hollow Rd	Point on CTH K (a)	0.96	66	20	3	225		
	Point on CTH K (a)	Pine Hollow Rd	0.32	100	23	3	225		
	Pine Hollow Rd	Point on CTH K (b)	0.06	100	23	3	225		
	Point on CTH K (b)	CTH Q	0.70	66	20	2	225		
	CTH Q	Hill Rd	0.51	66	21	2	180		
	Hill Rd	Patton Rd	0.09	66	21	2	180		
	Patton Rd	Wibu Rd	1.00	66	21	2	180		
	Wibu Rd	CTH I	1.01	66	21	3	150		
	CTH I	Point on CTH K (c)	1.0	66	21	3	110		
	Point on CTH K (c)	Point on CTH K (d)	0.06	66	21	2	35		
	Point on CTH K (d)	Goose Pond Rd	0.06	66	21	2	150		
	Goose Pond Rd	Hopkins Rd	0.9	66	22	2	150		
	Hopkins Rd	USH 51	1.01	66	22	2	150		
	USH 51	Harvey Rd	1	66	21	3	220		
	Harvey Rd	Kroncke Rd	1.01	66	21	3	220		
	Kroncke Rd	Bussian Rd	0.45	66	24	3	150		
	Bussian Rd	Bredeson Dr	0.59	66	24	3	150		
	Bredeson Dr	CTH C	0.96	66	24	3	150		
	CTH C	Town Line	0.07	66	20	3	75		
	Town Line	Mickelson Dr	1.19	66	21	3	75		
	Mickelson Dr.	CTH DM	0.02	66	21	3	75		
	CTH DM	Old F Rd	0.26	66	22	2	380		
	Old F Rd	CTH N	0.6	66	22	2	380		Minor Collector
	CTH N	Bradley Rd	0.71	66	22	2	280		Major Collector
	Bradley Rd	CTH A	1.53	66	21	4	150		Local Road
	CTH A	CTH A	1.15	66	22	3	130	Minor Collector	
	CTH A	Loeffler Rd	0.25	66	22	3	210	Local Road	
	Loeffler Rd	Huebner Rd	0.86	66	22	3	210		
	Huebner Rd	Vernie Rd	0.52	66	22	2	275		
	Vernie Rd	Wendt Rd	0.45	66	22	2	275		
Wendt Rd	Weiner Rd	0.51	66	22	2	275			
Weiner Rd	Ott Dr	0.33	66	22	2	275			
Ott Dr	Boelte Rd	0.17	66	22	2	275			
Boelte Rd	Kitzerow Dr	0.38	66	22	3	350			
Kitzerow Dr	Heyden Dr	0.27	66	22	3	350			
Heyden Dr	Osterhoff Dr	0.09	66	22	3	350			
Osterhoff Dr	Schaeffer Rd	0.27	66	22	3	350			
Schaeffer Rd	City of Columbus	1.1	66	24	3	300			
Total:			25.51						

Road Segment	Starting at:	Ending at:	Length (miles)	ROW Width (feet)	Pavement Width (feet)	Shoulder Width (feet)	Estimated Avg. Daily Traffic Count	Functional Class.
CTH M	N County Line Rd	Schmidt Rd	0.51	66	20	3	100	Major Collector
	Schmidt Rd	Schmidt Rd	0.5	66	20	3	100	
	Schmidt Rd	Horton Dr	0.05	66	20	3	100	
	Horton Dr	CTH E	0.46	66	20	3	100	
	CTH E	Scharf Rd	0.75	66	20	3	320	
	Scharf Rd	Friesland Rd	1.01	66	20	3	320	
	Friesland Rd	Long View Dr	0.77	66	20	3	320	
	Long View Dr	STH 146	0.57	66	22	3	320	
Total:			4.62					
CTH N	Town Line	Bristol Rd	0.12	66	26	3	440	Major Collector
	Bristol Rd	Hanson Dr	0.64	66	26	3	440	
	Hanson Dr	Kranz Rd	0.32	66	26	3	440	
	Kranz Rd	Kranz Dr	0.26	66	26	3	440	
	Kranz Dr	Point on CTH N (a)	1.04	66	26	3	440	
	Point on CTH N (a)	Eggert Rd	0.21	80	26	3	360	
	Eggert Rd	CTH K	0.04	80	26	3	360	
	Bradley Rd	Voss Dr	0.15	66	22	2	260	
	Voss Dr	Eggert Dr	0.53	66	22	2	260	
	Eggert Dr	STH 60	0.87	66	22	2	260	
	STH 60	Hall Rd	1.46	66	21	2	150	
	Hall Rd	CTH A	0.45	66	21	2	150	
Total:			6.09					
CTH O	STH 23	Weber Dr	0.06	66	22	3	180	Local Road
	Weber Dr	Broadway Ave	0.5	66	22	3	180	
	Broadway Ave	STH 127	1	66	22	3	180	
	STH 127	Vera Dr	0.38	66	22	4	140	
	Vera Dr	Lewis Rd	0.13	66	22	4	140	
	Lewis Rd	STH 16	0.05	66	22	4	140	
	STH 16	Freel Dr	0.17	66	22	2	75	
	Freel Dr	Fox Run Rd	0.98	66	22	2	75	
	Fox Run Rd	Ingelbretson Rd	0.07	66	22	2	75	
	Ingelbretson Rd	Point on CTH O (a)	0.46	66	22	2	75	
	Point on CTH O (a)	Gabris Dr	0.05	66	20	1	35	
	Gabris Dr	Ingelbretson Rd	0.75	66	20	1	35	
	Ingelbretson Rd	Zinke Rd	0.79	66	20	2	35	
	Zinke Rd	Jones Rd	0.91	66	20	2	35	
	Jones Rd	Town Line Rd	0.38	66	20	2	35	
	Town Line Rd	Point on CTH O (b)	0.38	66	20	3	35	
Point on CTH O (b)	Konkel Rd	0.34	66	24	2	35		
Konkel Rd	Wolfram Rd	0.85	66	24	2	35		

Road Segment	Starting at:	Ending at:	Length (miles)	ROW Width (feet)	Pavement Width (feet)	Shoulder Width (feet)	Estimated Avg. Daily Traffic Count	Functional Class.	
CTH O (cont.)	Wolfram Rd	Point on CTH O (c)	0.13	66	24	2	35	Local Road	
	Point on CTH O (c)	Weyh Rd	1.5	66	20	5	35		
	Weyh Rd	Maass Rd	1.83	66	22	3	100		
	Maass Rd	Church Rd	0.27	66	22	3	100		
	Church Rd	Point on CTH O	1.36	66	23	4	400		
	Total:			15.94					
		Point on CTH O	Industrial Rd	0.98	66	23	2	330	Minor Collector
		Industrial Rd	Boeck Rd	1.02	66	23	2	330	
		Boeck Rd	Pine Ridge Cir	0.22	66	23	2	330	
		Pine Ridge Cir	Point on CTH O (d)	0.12	66	23	4	350	
Point on CTH O (d)	Parkview Ct	0.26	66	23	2	330			
CTH P	STH 16	Crawford Rd	0.13	66	26	5	1450	Major Collector	
	Crawford Rd	Rosina Ct	0.24	66	26	5	1450		
	Rosina Ct	Wolf Dr	0.15	66	26	5	1450		
	Wolf Dr	Meadowview Dr	0.03	120	26	5	2480		
	Meadowview Dr	Whitetail Dr	0.33	120	26	5	2480		
	Whitetail Dr	Whitetail Dr	0.31	120	26	5	2480		
	Whitetail Dr	Point on CTH P (a)	0.11	120	26	5	2480		
	Point on CTH P (a)	CTH G	0.3	66	26	5	2480		
	CTH G	Raymond Rd	0.32	80	26	6	1770		
	Raymond Rd	Wardle Rd	0.87	80	26	6	1770		
	Wardle Rd	Blank Rd	0.25	66	26	4	1540		
	Blank Rd	Wakayne Dr	0.45	66	26	4	700		
	Wakayne Dr	Groth Rd	0.51	66	26	4	700		
	Groth Rd	Brenemann Rd	1.18	66	26	4	700		
	Brenemann Rd	Village of Pardeeville	0.38	66	26	4	700		
	Village of Pardeeville	Holverson Rd	0.51	66	22	2	930		
	Holverson Rd	Pardeeville Rd	0.41	66	22	2	930		
	Pardeeville Rd	Pardeeville Rd Spur	0.02	66	22	2	930		
	Pardeeville Rd Spur	Atkinson Rd	0.13	66	22	2	930		
	Pardeeville Rd	Atkinson Rd	1	66	22	4	930		
	Atkinson Rd	CTH SS	0.95	66	22	4	350		
	CTH SS	Beahm Rd	0.47	66	22	5	360		
	Beahm Rd	H Healy Dr	0.03	66	22	5	360		
	H Healy Dr	Healy Rd	1.41	66	22	5	360		
	Healy Rd	Sawyer Rd	0.26	66	22	5	360		
	Sawyer Rd	Owens Rd	0.27	66	22	3	600		
	Owens Rd	CTH H	1.95	66	22	3	600		
CTH H	Welsh Prairie Rd	0.01	66	22	3	600			
Welsh Prairie Rd	Point on CTH P (b)	0.18	66	22	3	600			

Road Segment	Starting at:	Ending at:	Length (miles)	ROW Width (feet)	Pavement Width (feet)	Shoulder Width (feet)	Estimated Avg. Daily Traffic Count	Functional Class.
CTH P (cont.)	Point on CTH P (b)	Inglehart Rd	0.66	66	22	3	700	Major Collector
	Inglehart Rd	Inglehart Rd	0.01	66	22	3	700	
	Inglehart Rd	Union St (Cambria)	0.4	66	22	7	440	
	Evans Dr (Cambria)	Kikkirt Ct	0.02	80	24	2	690	
	Kikkirt Ct	Point on CTH P (c)	0.18	80	24	2	690	
	Point on CTH P (c)	Fordeg Rd	1.63	80	24	3	1140	
	Fordeg Rd	Krueger Rd	0.25	80	24	3	1140	
	Krueger Rd	Point on CTH P (d)	0.18	80	24	3	1140	
	Point on CTH P (d)	Jones Rd	1.62	80	24	4	1410	
	Jones Rd	Point on CTH P (e)	0.44	66	24	4	610	
	Point on CTH P (e)	Village of Randolph	0.11	66	22	2	700	
Total:			18.66					
CTH Q	CTH CS	Point on CTH Q (a)	0.19	66	24	5	160	Minor Collector
	Point on CTH Q (a)	Pine Hollow Rd	0.60	66	24	5	360	
	Pine Hollow Rd	Richard Rd	1.10	66	24	5	360	
	Richard Rd	STH 60	1.21	66	24	5	360	
	STH 60	Kampen Rd	1.00	66	22	3	160	Local Road
	Kampen Rd	CTH K	0.51	66	22	3	160	
Total:			4.61					
CTH SS	Village of Rio	Town Line	0.25	66	22	3	390	Major Collector
	Town Line	Old CTH B	0.5	66	20	4	280	
	Old CTH B	Taylor Rd	0.49	66	20	4	280	
	Taylor Rd	Jennings Rd	0.25	66	20	4	280	
	Jennings Rd	CTH G	1.74	66	20	4	360	
	CTH G	Pardeeville Rd	0.63	66	21	4	140	
	Pardeeville Rd	Pardeeville Rd	1.06	66	21	4	140	
	Pardeeville Rd	CTH P	1.93	66	21	4	140	
	CTH P	Vaughn Rd	1.22	66	21	4	140	
	Vaughn Rd	STH 33	0.88	66	22	2	120	
	STH 33	STH 44	0.62	66	22	1	75	
Total:			9.57					
CTH T	CTH CM	Town Line	0.45	66	20	3	75	Minor Collector
CTH U	Town Line	Cedar Park Rd	0.44	66	22	2	90	Minor Collector
	Cedar Park Rd	Point on CTH U (a)	0.04	66	22	2	90	
	Point on CTH U (a)	Circle Bluff Rd	0.96	66	22	2	90	
	Circle Bluff Rd	Circle Bluff Rd	0.57	66	22	2	90	
	Circle Bluff Rd	Koepp Rd	0.75	66	22	2	90	
	Koepp Rd	Blacklock Rd	0.63	66	22	2	90	
	Blacklock Rd	Point on CTH U (b)	1.49	66	22	2	90	
	Point on CTH U (b)	Konkel Rd	0.33	66	22	2	90	
	Konkel Rd	Point on CTH U (c)	0.64	66	22	2	90	

Road Segment	Starting at:	Ending at:	Length (miles)	ROW Width (feet)	Pavement Width (feet)	Shoulder Width (feet)	Estimated Avg. Daily Traffic Count	Functional Class.
CTH U (cont.)	Point on CTH U (c)	Allan Rd	0.98	66	22	2	90	Minor Collector
	Allan Rd	Eagle Bluff Trl	0.78	66	20	2	90	
	Eagle Bluff Trl	Reumann Rd	1.27	66	22	2	100	
	Reumann Rd	Ziehmke Rd	0.42	66	22	2	100	
	Ziehmke Rd	Reumann Rd	1.77	66	22	2	100	
	Reumann Rd	Weber Dr	0.46	66	22	2	100	
	Weber Dr	Cascade Mountain Rd	0.27	66	22	2	100	
	Cascade Mountain Rd	Diehl Rd	0.92	66	20	2	230	
	Diehl Rd	City of Portage	1	66	20	2	230	
Total:			13.72					
CTH V	CTH J	CTH B	0.45	66	22	4	270	Minor Collector
	CTH B	Hemlock St	0.08	66	20	4	260	
	Hemlock St	Main St	0.17	66	20	4	260	
	Main St	Parkway Dr	0.18	66	20	4	260	
	Parkway Dr	Beach Garden Rd	0.23	66	20	4	260	
	Beach Garden Rd	Stewart Dr	0.61	66	20	4	260	
	Stewart Dr	Voss Rd	0.21	66	20	4	260	
	Voss Rd	Point on CTH V (a)	0.64	66	22	2	260	
	Point on CTH V (a)	St Lawrence Bluff Rd	0.12	66	20	4	260	
	St Lawrence Bluff Rd	Oak Knoll Rd	0.29	66	22	2	260	
	Oak Knoll Rd	River Oaks Rd	0.72	66	24	2	150	
	River Oaks Rd	Schiefelbein Rd	0.3	66	24	2	150	
	Schiefelbein Rd	Rory Rd	0.1	66	24	2	150	
	Rory Rd	Black Rd	0.51	66	24	2	150	
	Black Rd	Kent Rd	0.27	66	24	2	150	
	Major Collector	Kent Rd	Holzman Rd	0.22	66	24	2	150
		Holzman Rd	Wildwood Way	1.02	66	24	2	150
		Wildwood Way	Tipperary Rd	0.03	66	24	2	150
		Tipperary Rd	CTH CS	0.82	66	24	10	1010
		CTH CS	Meadow Lark Rd	0.31	100	24	5	500
		Meadow Lark Rd	Stein Rd	0.21	100	24	5	500
		Stein Rd	Willow Ave	0.55	66	22	3	500
		Willow Ave	Corning St	0.06	66	22	3	500
		Corning St	Helleckson St	0.1	66	22	3	500
		Helleckson St	Town Line	0.32	66	22	3	500
		Town Line	N Lake Point Dr	0.07	66	24	3	1550
		N Lake Point Dr	Lakeview Dr	0.24	66	24	3	1550
		Lakeview Dr	Lake Point Dr	0.18	66	24	3	1550
		Lake Point Dr	Rodney Dr	0.05	66	24	3	1550
		Rodney Dr	Harmony Dr E	0.12	66	24	3	1550
Harmony Dr E	Elaine Dr	0.09	66	24	3	1550		

Road Segment	Starting at:	Ending at:	Length (miles)	ROW Width (feet)	Pavement Width (feet)	Shoulder Width (feet)	Estimated Avg. Daily Traffic Count	Functional Class.
CTH V (cont.)	Elaine Dr	Inlet Dr	0.06	66	24	3	1550	Major Collector
	Inlet Dr	Oakwood Dr	0.17	66	24	3	1550	
	Oakwood Dr	Michael Dr	0.17	66	24	3	1550	
	Michael Dr	Martin Ln	0.11	66	24	3	1550	
	Martin Ln	River Rd	0.09	66	24	3	1550	
	River Rd	Smith Rd	0.83	66	24	3	1550	
	Smith Rd	CTH J	0.58	66	24	3	1550	
	CTH J	Lang Dr	0.32	66	22	4	560	
	Lang Dr	Ryan Rd	1.78	66	22	4	560	
	Ryan Rd	Red Cedar Dr	0.74	66	22	4	560	
	Red Cedar Dr	Cactus Acres Rd	0.06	66	22	4	560	
	Cactus Acres Rd	Cactus Acres Rd	0.17	66	22	4	560	
	Cactus Acres Rd.	Rapp Rd	0.51	66	22	4	560	
	Rapp Rd	Point on CTH V (b)	0.31	66	22	3	240	
	Point on CTH V (b)	Town Line	0.22	66	24	5	275	
	Town Line	STH 113	0.05	66	20	6	275	
	STH 113	Morter Rd	0.45	66	22	2	450	
	Morter Rd	Slack Rd	0.26	66	22	2	450	
	Slack Rd	CTH VA	0.37	66	22	2	450	
	CTH VA	CTH VJ	0.75	66	22	2	450	
	CTH VJ	Wartner Rd	0.79	66	21	2	180	
Wartner Rd	Pustaver Rd	0.05	66	21	2	180		
Pustaver Rd	STH 188	0.14	66	21	2	180		
Total:			18.25					
CTH VA	Termini	CTH V	0.15	90	18	2	50	Local Road
CTH VJ	CTH V	Corner Rd	0.14	66	21	2	150	Minor Collector
	Corner Rd	CTH J	0.1	66	21	2	150	
Total:			0.24					
CTH W	STH 33	Mielke Dr	0.97	66	22	6	150	Local Road
	Mielke Dr	Wall Street Rd	0.18	66	22	6	150	
	Wall Street Rd	Rowley Rd	0.25	66	22	6	150	
	Rowley Rd	Beich Rd	0.24	66	22	6	150	
	Beich Rd	Hamilton Dr	0.24	66	22	6	150	
	Hamilton Dr	Owen Park Rd	2.09	66	22	6	150	
	Owen Park Rd	Owen Park Rd	0.25	66	22	6	150	
	Owen Park Rd	Luebke Rd	0.94	66	22	6	150	
Total:			5.16					
CTH WD	CTH 16	STH 127	1.12	66	20	4	35	Local Road
CTH X	CTH CX	Point on CTH X (a)	0.31	66	24	7	150	Local Road
	Point on CTH X (a)	Town Line	0.64	66	22	6	150	

Road Segment	Starting at:	Ending at:	Length (miles)	ROW Width (feet)	Pavement Width (feet)	Shoulder Width (feet)	Estimated Avg. Daily Traffic Count	Functional Class.
CTH X (cont.)	Town Line	Devine Rd	0.55	66	22	4	150	Local Road
	Devine Rd	Corning Rd	1.15	66	22	4	150	
	Corning Rd	Muskrat Rd	0.89	66	22	4	150	
	Muskrat Rd	Bridge Rd	2.3	66	21	4	150	
	Bridge Rd	Menominee Rd	0.79	66	20	4	300	
	Menominee Rd	3rd Ave	0.16	66	20	4	300	
	3rd Ave	Anacker Rd	0.36	66	20	2	350	
Total:			7.15					
CTH XX	Town Line	Kassner Rd	0.77	66	24	2	170	Local Road
	Kassner Rd	Boots Rd	1.3	66	24	2	170	
	Boots Rd	Cheese Factory Rd	0.02	66	24	2	170	
	Cheese Factory Rd	Graack Rd	0.21	66	24	2	170	
	Graack Rd	STH 127	0.5	66	24	2	170	
Total:			2.8					
CTH Y	STH 60	Town Line	0.6	66	22	3	220	Local Road
CTH Z	CTH B	CTH A	0.5	66	22	3	260	Minor Collector
	CTH A	Point on CTH Z (a)	0.03	66	21	3	170	
	Point on CTH Z (a)	Mallon Dr	0.11	66	22	3	180	
	Mallon Dr	Doylestown Rd	1.09	66	22	3	180	
	Doylestown Rd	STH 146	0.58	66	22	3	180	
	STH 146	CTH CD	1.01	50	22	3	130	
	CTH CD	Schrab Dr	0.98	66	22	3	90	
	Schrab Dr	Reinhold Dr	0.26	66	22	3	90	
	Reinhold Dr	Mc Donald Rd	0.74	66	22	3	90	
Mc Donald Rd	CTH DG	0.4	66	22	3	90		
Total:			5.7					

Source: WI Department of Transportation, Local Road Inventory

3.9 COUNTY ROAD DESIGN STANDARDS

The Columbia County Land Division and Subdivision Ordinance establishes design standards for roadways in the unincorporated areas of the County. The design standards vary among roadways, as different roads serve different functions within the transportation system. The existing standards are outlined in Table 3-7.

TABLE 3-7
Existing Columbia County Minimum Road Design Standards, 2004

Road Type	Right-of-Way Minimum Width	Minimum Pavement Width
Urban Principal Arterial	180 feet	To be determined by the governing body that has jurisdiction with advice from the County Highway Commissioner.
Urban Minor Arterials, Major Collectors, & Minor Collectors	100 feet	To be determined by the governing body that has jurisdiction with advice from the County Highway Commissioner.
Urban Local Streets	66 feet	32 feet
Urban Pedestrian Ways	10 feet	5 feet
Rural Principal Arterial	To be determined by the governing body that has jurisdiction with advice from the County Highway Commissioner.	To be determined by the governing body that has jurisdiction with advice from the County Highway Commissioner.
Rural Major and Minor Collectors	100 feet	To be determined by the governing body that has jurisdiction with advice from the County Highway Commissioner.
Rural Local Streets	66 feet	20 feet

Source: Title 16 – Chapter 2 of Columbia County Code of Ordinances

The existing roadway standards should be reviewed and evaluated to determine if they are meeting their intended purpose and whether they meet current recommended roadway standards. A full evaluation of the existing roadway standards should be conducted and the necessary changes made to bring the standards up to date.

3.10 COUNTY HIGHWAY DEFICIENCIES

The ability to identify and address deficiencies in the County's road system is important in developing a safe and high quality transportation system. The information provided in Table 3-6 provides information on the current characteristics of the county trunk highway system in Columbia County. The standards from the Columbia County Land Division Ordinance listed in Table 3-7 provide a means to evaluate the current county trunk highway system against the current county standards. In addition, County Trunk Highway Standards within the Wisconsin Administrative Code provide an additional means of evaluating

the highway system. These standards were used due to their general availability within the Administrative Code, however it should be noted that the Wisconsin Department of Transportation Facilities Development Manual (FDM) provides more technical and up to date standards that should be used in actual road construction.

The county trunk highway system in Columbia County contains approximately 334 miles of county highways. Most county highways, 222 miles, are functionally classified as collector highways with the remaining, 112 miles, classified as local roads. The current Columbia County Land Division Ordinance standards require roads that are classified as collector highways to have a right-of-way of 100 feet and roads classified as local roads to have a right-of way of 66 feet. Most County highways have a right-of-way of at least 66 feet, with only six segments or 2.2 miles having right-of-ways with less than 66 feet. However, most county highways classified as collector highways do not have the 100 feet of right-of way required in the County Land Division Ordinance. Most of these county highways existed prior to the adoption of the land division ordinance and, in most cases, it is unnecessary to increase the right-of-way width. The current requirements for right-of-way width in the County Land Division Ordinance should be examined to determine if these standards are still appropriate.

The Columbia County Land Division Ordinance also provides standards for pavement width. For roads classified as local roads the ordinance currently requires 20 feet of pavement. The land division ordinance currently does not provide a minimum pavement width for collector highways, but rather leaves the width to be determined by the local jurisdiction and the county highway commissioner. In addition, the Wisconsin Administrative Code also provides standards for county trunk highways. Current County Trunk Highway Standards within the Wisconsin Administrative Code require all county highways with design speed limits of 40 and 50 mph to have a minimum of 22 feet of pavement and county highways with design speed limits of 55 and 60 mph to have a minimum pavement width of 24 feet, regardless of the functional classification. In Columbia County, approximately 248 miles of highway have pavement widths less than 24 feet and 96 of those highway miles have pavement widths below 22 feet. The current requirements for pavement width in the County Land Division Ordinance should also be examined to determine if these standards are still appropriate and be adjusted to meet state standards when appropriate.

The Wisconsin Administrative Code County Trunk Highway Standards also require minimum shoulder widths for county highways. Shoulder widths are not addressed in the County Land Division Ordinance. State required shoulder widths on county highways, regardless of the functional classification, are as follows: county trunk highways with design speeds of 40 mph require shoulder widths of two to four feet, county trunk highways with design speeds of 50 or 55 mph require shoulder widths of six feet, and county trunk highways with design speeds of 60 mph require shoulder widths of eight feet. Approximately 6.5 miles of Columbia County highway have shoulder widths below two feet and only 20 miles of county highway have shoulders widths of six feet or more. In an effort to bring all Columbia County highways up to current standards, an evaluation of all potentially deficient segments of county highway should be conducted and a plan established to correct the deficiencies in the most economical manner possible.

3.11 THE TRANSPORTATION SYSTEM

The transportation system that serves Columbia County provides for the transport of goods and people into, out from, and within the County. Some elements of the system are not located in the County itself. While the County has little direct influence on transportation links outside its boundaries, it may be in its best interest to encourage the improvement of these links to better serve the County's residents. The transportation system operates in the air and on land and water. Land based transport includes pedestrian, bicycles, and rail as well as highway.

3.11.1 Rivers and Seaports

Water born transport of goods is efficient, but the river systems in Columbia County are not suitable for commercial transportation. The Mississippi River, approximately 100 miles west of the County, is the closest river system with commercial transportation service. The nearest international seaport is the Port of Milwaukee, approximately 100 miles from Columbia County. Columbia County should support improvements to this port that benefit the interests of business and industry in the County.

3.11.2 Airports

Air transportation is an important transportation mode for moving both goods and people. Its use is substantial and increasing. Convenient access to at least a general airport is critical to many businesses. A system of properly designed and coordinated airports is essential for efficient air transportation in the State of Wisconsin and Columbia County. In Columbia County, commercial aviation services are provided by the Dane County Regional Airport in Madison. Commercial airline service is also available from the Central Wisconsin Airport in Wausau and by General Mitchell International Airport in Milwaukee.

The Wisconsin Department of Transportation, Bureau of Aeronautics in conjunction with the Bureau of Planning has developed the Wisconsin State Airport System Plan 2020. Most airports included in the State Plan are eligible for State and Federal improvement grant. The State Plan identifies four general classifications of airports based upon the type of service they provide. Table 3-8 provides descriptions of the different airport classifications.

The Portage Municipal Airport is the only airport in Columbia County that is part of the State's Airport System Plan. The Portage Municipal Airport is classified as a General Utility Airport and is expected to remain at this classification for the duration of the 20-year planning period. The Wisconsin DOT's Five Year Airport Improvement Program includes the Portage Municipal Airport as a facility slated for improvement. Under the Airport Improvement Program, the Portage Municipal Airport is to be relocated to a new site on the north side of the City. Construction of the new airport is scheduled for no earlier than 2005 depending on funding availability.

In addition to the Portage Municipal Airport, Columbia County has 19 other airport facilities. Most of these airport facilities are small privately owned and operated airstrips or heliports. The two exceptions are Gilbert Field in Rio that is a privately owned facility open for public use and the Lodi Lakeland Airport that is publicly owned by the Town of Lodi but is not open to public use. Table 3-9 lists the Airports located in Columbia County and Map 3-5 in Appendix I illustrates the location of the facilities in the County.

TABLE 3-8
State of Wisconsin Airport Classifications

Airport Type	Description
<i>Air Carrier/Cargo (AC/C)</i>	<p>Airports designed to accommodate virtually all aircraft up to and, in some cases, including, wide body jets and large military transports. Airports in this category are usually referenced by the type of air carrier service being provided.</p> <ul style="list-style-type: none"> ○ Short-haul air carrier airports serve scheduled, nonstop, airline markets and routes of less than 500 miles. Short-haul air carriers typically use aircraft weighing less than 60,000 pounds. In Wisconsin, short-haul air carrier airports normally have a primary runway length of 6,500 to 7,800 feet. ○ Medium-haul air carrier airports serve scheduled, nonstop, airline markets and routes between 500 and 1,500 miles. Medium-haul air carriers typically use aircraft weighing 60,000 to 300,000 pounds. In Wisconsin, medium-haul air carrier airports normally have a primary runway length of 7,800 to 8,800 feet. ○ Long-haul air carrier airports serve scheduled, nonstop, airline markets and routes of over 1,500 miles. Long-haul air carriers typically use wide-bodied jet aircraft weighing more than 300,000 pounds. In Wisconsin, long-haul air carrier airports normally have a primary runway length of 8,800 to 9,800 feet.
<i>Transport/Corporate (T/C)</i>	<p>Airports intended to serve corporate jets, small passenger and cargo jet aircraft used in regional service and small airplanes (piston and turboprop) used in commuter air service. These aircraft generally have a gross takeoff weight of less than 60,000 pounds, with approach speeds below 141 knots and wingspans of less than 118 feet. In Wisconsin, airports in this category normally have a primary runway length of 4,800 to 6,800 feet.</p>
<i>General Utility (G/U)</i>	<p>Airports intended to serve virtually all small general aviation single and twin-engine aircraft, both piston and turboprop, with a maximum takeoff weight of 12,500 pounds or less. These aircraft generally have approach speeds below 121 knots and wingspans of less than 79 feet. Typically, these aircraft are used for business and charter flying and for personal reasons. In Wisconsin, airports in this category normally have a primary runway length of 3,900 to 4,800 feet.</p>
<i>Basic Utility (B/U)</i>	<p>Airports intended to serve all small single-engine piston aircraft and many of the smaller twin-engine piston aircraft with a gross takeoff weight of 12,500 pounds or less. These aircraft typically seat from two to six people and are now commonly used for business and some charter flying as well as a wide variety of activities including recreational and sport flying, training, and crop dusting. In Wisconsin, airports in this category normally have a primary runway length of 2,800 to 3,900 feet. Basic utility airports are divided into two subcategories.</p> <ul style="list-style-type: none"> ○ Basic Utility-B (BU-B) airports are designed to accommodate aircraft of less than 12,500 pounds gross weight, with approach speeds below 121 knots and wingspans of less than 49 feet. Such aircraft can be either single-engine or twin-engine piston. ○ Basic Utility-A (BU-A) airports are designed to accommodate aircraft of less than 6,000 pounds gross weight, with approach speeds below 91 knots and wingspans of less than 49 feet. Such aircraft are typically single-engine piston.

Source: Wisconsin DOT, Bureau of Aeronautics

TABLE 3-9
Columbia County Airports, 2004

Airport Name & Municipality	Town, Range, & Section	Airport Classification	Type of Ownership	Type of Use	Elevation (feet)	Runways (feet)
Portage Municipal Airport City of Portage	T 13 N, R 9 E Section 31	General Utility	Public	Public Use	825	3,010 Asphalt 3,775 Asphalt
Lodi Lakeland Airport Town of Lodi	T 10 N, R 8 E Section 22	N/A	Public	Private Use	844	1,900 Turf
Del Monte Airport Town of Leeds	T 10 N, R 10 E Section 21	N/A	Private	Private Use	1,060	2,400 Turf
Mill House Field Town of Wyocena	T 12 E, R 10 E Section 23	N/A	Private	Private Use	820	2,000 Turf
Gilbert Field Town of Lowville	T 11 N, R 10 E Section 1	N/A	Private	Public Use	925	1,092 Turf
Prescott Field Town of Wyocena	T 12 N, R 10 E Section 27	N/A	Private	Private Use	870	1,900 Turf
Horton Field Town of Pacific	T 12 N, R 9 E Section 26	N/A	Private	Private Use	820	2,500 Turf
Bancroft East Airport Town of Springvale	T 12 N, R 11 E Section 16	N/A	Private	Private Use	840	2,600 Turf
Bancroft Field Town of Dekorra	T 11 N, R 9 E Section 16	N/A	Private	Private Use	840	3,000 Turf
Columbus Hospital Heliport City of Columbus	T 10 N, R 12 E Section 23	N/A	Private	Private Use	859	60 Asphalt
Coleman Field Town of Pacific	T 12 N, R 9 E Section 2	N/A	Private	Private Use	800	1,700 Turf
Rohde's Airport Town of Marcellon	T 13 N, R 10 E Section 35	N/A	Private	Private Use	840	1,700 Turf
Higgins Airport Town of Otsego	T 11 N, R 11 E Section 10	N/A	Private	Private Use	950	2,000 Turf
Knutson Field Town of Wyocena	T 12 N, R 10 E Section 28	N/A	Private	Private Use	820	1,600 Turf 2,300 Turf
Weatherbee Field Airport Town of Wyocena	T 12 N, R 10 E Section 31	N/A	Private	Private Use	960	1,200 Turf
Fountain Prairie Field Airport Town of Fountain Prairie	T 11 N, R 12 E Section 36	N/A	Private	Private Use	880	3,000 Turf
Sopha Field Airport Town of Dekorra	T 11 N, R 9 E Section 17	N/A	Private	Private Use	890	2,683 Turf
Divine Savior Hospital Heliport City of Portage	T 13 N, R 9 E Section 31	N/A	Private	Private Use	813	75 Concrete
McDaniel Field Town of Caledonia	T 11 N, R 8 E Section 30	N/A	Private	Private Use	1,000	2,000 Turf
Marshall Field Town of Courtland	T 12 N, R 12 E Section 31	N/A	Private	Private Use	Unknown	2,600 Turf
Slinger Field Town of Courtland	T 12 N, R 12 E Section 1&2	N/A	Private	Private Use	Unknown	2,100 Turf
Currie Field Town of Arlington	T 10 N, R 8 E Section 22	N/A	Private	Private Use	Unknown	2,600 Turf
Swart Airport Town of Randolph	T 13 N, R 12 E Section 21	N/A	Private	Private Use	Unknown	2,600 Turf

Source: Wisconsin DOT, Bureau of Aeronautics & Columbia County Planning and Zoning

3.11.3 Railroads

Railroads are an important segment of the transportation system in Wisconsin. Approximately 3,664 miles of track are currently in service in Wisconsin. Because Columbia County is centrally located in the state, the County provides a vital link in the State's rail system and has a significant network of rail lines. Three freight rail companies currently serve the County with approximately 102.1 miles of track. The three freight rail companies consist of the Canadian Pacific Railway with 64.6 miles of track in the County, the Wisconsin & Southern Railroad Company with 21.6 miles of track, and the Union Pacific Railroad with 15.9 miles of track. Rail lines pass through 16 of the 21 Towns in the County. Those Towns not directly served by freight rail are Hampden, Springvale, Marcellon, Fort Winnebago, and Caledonia. Freight rail is important to industry and the economy of Columbia County. Efforts to maintain a high quality freight rail system in the County should be encouraged whenever possible. The rail lines in Columbia County are illustrated on Map 3-6 in Appendix I

Passenger rail service is also an important function of the rail system in Columbia County. Amtrak's Empire Builder passes through Columbia County on its run between Chicago and the Pacific Northwest. The Empire Builder operates one train per day in each direction and stops in Columbus, Portage, and Wisconsin Dells as it passes through the County. The number of passengers traveling to and from Columbia County stations is illustrated in table 3-10. The Columbus station is the most heavily used station in the County most likely due to its proximity to Madison and the quality road connections to the station via USH 151. The number of passengers declined at all County stations in 2001 and 2002 due likely to the economic recession. The Empire Builder route through Columbia County is illustrated on Map 3-6 in Appendix I.

TABLE 3-10
Number of Empire Builder Passengers Using Columbia County Stations, 2000 - 2003

Year	Columbus	Portage	Wisconsin Dells
2000	15,300	6,300	11,400
2001	12,400	4,900	9,500
2002	10,700	4,000	9,000
2003	12,500	6,300	10,200

Source: Wisconsin Department of Transportation

In addition to the Empire Builder, passenger rail in Columbia County may be expanded in the near future to include high-speed trains under the Midwest Regional Rail System (MWRRS). The Wisconsin Department of Transportation has been studying and planning for the implementation of the 3,000 mile MWRRS that will serve nine states using Chicago as a hub. A proposed route connecting Chicago, Milwaukee, Madison, and Minneapolis/St. Paul will pass through Columbia County. The route would have six round-trip trains (a total of 12 trains per day) passing through the County each day, with three round-trip stops in Portage and Wisconsin Dells and three round trip express trains that do not stop. Implementation of the MWRRS is contingent on the availability of federal funding. Currently no federal funding exists for the project, however several funding bills appropriating money for the project are being considered in Congress.

The proposed route for the MWRRS in Columbia County will use the existing Canadian Pacific Railway track that runs from Madison north through the Town of Leeds, the Town and Village of Arlington, the Village of Poynette, and the Towns of Dekorra and Pacific to the City of Portage. From Portage, the trains will follow the Canadian Pacific Railway track that parallels STH16 through the Towns of Lewiston and Newport and continue on to the City of Wisconsin Dells. The MWRSS trains will travel at

speeds up to 110 mph. As a result of the high speeds, significant improvements will be needed to the entire rail corridor. These improvements will include track upgrades, grade separation or closure of road crossings, improved crossing gates, and the fencing of the entire rail corridor. High-speed trains can have a significant impact on lands adjacent to the rail corridor, such as accessibility to the land, noise, and safety. As a result, careful consideration should be given to the types of land uses that are allowed near or adjacent to the proposed rail corridor. The proposed route for the MWRRS in Columbia County is illustrated on Map 3-5 in Appendix I.

3.11.4 Trucking

Trucking is an important part of the economy of Columbia County and the State of Wisconsin. Trucking on the highway system is the preferred method of transporting freight, with 90 percent of freight in Wisconsin being hauled in this manner. The highway infrastructure to support trucking in Columbia County and the surrounding region is sufficient to meet the needs of the trucking industry. All Interstate and U.S highways in the County, as well as most State Highways, are designated as official truck routes by the Wisconsin Department of Transportation. The County has two State waysides on combined interstate 39, 90, 94 in the Town of Dekorra and private truck parking areas are available on State Highways 33 and 78 to serve the needs of the trucking industry. A continued commitment to providing an adequate transportation system for trucking is important to economic growth in the County.

3.11.5 Public Transit

Public transit in Columbia County consists of bus service, shared ride taxi service, and the state vanpool. Greyhound Bus Company serves the Columbia County City of Wisconsin Dells with regularly scheduled service. Other charter bus lines also provide charter service to the County.

Shared-ride taxi services offer a public transportation alternative in smaller communities lacking traditional fixed-route bus service. Users call in advance for taxi rides that may be shared with other riders. The City of Portage is the only community in Columbia County offering this service.

The Wisconsin Department of Administration offers a Vanpool to assist commuters in their ride to work. The State Vanpool provides alternate transportation for state and non-state employees commuting to Madison from outside communities. Participants can join a group that is already established or, if there are enough interested people, they can form a new vanpool. Vanpools are based on sharing commute expenses. Generally, one member of the group volunteers to drive and riders share the cost of operating the Vanpool. Several Vanpools serve Columbia County.

There are no current plans for the expansion of public transit in the County during the planning period.

3.11.6 Bicycles

Bicycling can play an important role in the overall transportation system in the County. Bicycles are used by Columbia County residents for a variety of purposes including adults commuting to work and children riding bikes to school. The State of Wisconsin DOT has prepared the Wisconsin Bicycle Transportation Plan 2020. The purpose of this Plan is to establish bicycling as a viable, convenient, and safe transportation choice in the State. The Plan outlines the benefits offered by improving and expanding bicycling opportunities in the State. These benefits include the following: an alternative means of transportation, reduced traffic congestion, decreased need for parking, reduced pollution, increased physical activity, added roadway safety from paved shoulders (for both bicycles and motorists), and economic benefits from bicycle sales, service, and tourism. The Plan also outlines the roles and responsibilities of counties in implementing the State Plan. These roles and responsibilities include:

- Consider the needs of bicyclists in all road projects and build facilities accordingly.
- Develop, revise, and update long-range bicycle plans and maps.
- Consider adopting a shoulder paving policy.
- Promote land use policies that are bicyclist-friendly.
- Educate county sheriffs on the share-the-road safety techniques and enforcement strategies for specific high-risk bicyclist and motorist infractions of the law.

Bicycle facilities in Columbia County currently consist mainly of shoulder areas on existing roads. Shoulders on Town roads are usually narrow and unpaved making bicycle travel difficult. State and County highways tend to have wider shoulders, but traffic levels on these roads make bicycle traffic unsafe or undesirable. Local streets in incorporated municipalities offer some opportunity for bicycling with paved areas between traffic lanes and curbs, however arterial roads in these communities with the absence of marked bike lanes combined with high traffic levels can discourage bicycle traffic. No officially designated off road bicycle routes currently exist in the County.

A number of possibilities exist to improve bicycling opportunities and the safety of bicyclists in Columbia County and help in implementing the State Bicycle Plan. The preparation of a Bicycle and Pedestrian Improvement Plan for Columbia County can aid in promotion and improvement of conditions for bicycling in Columbia County and should be a priority. A good starting point for this Plan is the Wisconsin State Bike Map published by the Bicycle Federation of Wisconsin (a statewide, nonprofit, bicycle advocacy organization) in partnership with the Wisconsin DOT. This map classifies State and County roads throughout the State in terms of bicycling conditions. It also identifies recreational bicycle trails and mountain bike facilities, and provides contacts for local bicycle route information. Town roads are not rated for their bicycling conditions but are identified with their road names. The portion of the State Bike Map for Columbia County is illustrated on Map 3-7 in Appendix I. The State Bicycle Map can help in identifying roads that need improvements to accommodate bicycles. Efforts should be made to improve bicycling conditions on roads in Columbia County as the roads are periodically reconstructed. Improvements to the roads typically include wider paved shoulders and marked lanes for bicycles.

In addition to improving existing roads, Columbia County should examine the possibility of developing off road bicycle trails. Abandoned rail corridors provide unique opportunities for the development of bicycle trails. Several abandoned rail corridors exist in the County and the feasibility of converting these corridors into bike trail should be thoroughly examined. In addition, preserving future abandoned rail corridors for the development of bike trails should be a priority. Bike trail possibilities also exist on active rail corridors with the bike trail being located on a route parallel to the rail tracks and separated by fencing. Bicycle trails along active rail lines are most appropriate when used to provide a connection between other bicycle trails.

3.11.7 Pedestrian Transportation

The pedestrian transportation system in Columbia County consists mainly of sidewalks and paths within the municipal limits of cities and villages. The Marquette segment of the Ice Age Trail also provides a means of pedestrian transportation in the County. Walking as a means of transportation is important to Columbia County. In 2000, the US Census reported that 834 people in the County walked to work.

The State of Wisconsin DOT has prepared the Wisconsin Pedestrian Policy Plan 2020 to outline statewide and local measures to increase walking and promote pedestrian safety. The Plan's three goals include increasing the number and improving the quality of walking trips in Wisconsin, reducing the number of pedestrian crashes and fatalities, and increasing the availability of pedestrian planning, design guidance, and other general information for state and local officials and citizens. The Plan further encourages local

levels of government to consider the needs of pedestrians in their plans. Pedestrian transportation should be considered in new development projects, as well as redevelopment projects and road construction projects. These projects should look for ways to accommodate pedestrians and to provide missing links within the existing pedestrian transportation system. A full evaluation of the pedestrian transportation system in Columbia County should be conducted to evaluate needs and provide recommendation for the improvement and further development of the pedestrian transportation system in the County.

3.11.8 Transportation for the Disabled

Transportation services are available to the elderly and disabled in Columbia County through the County Department of Health & Human Services Division of Aging & Long Term Care Support. Transportation Services are available to people who are over age 60 or are disabled and have no other access to affordable transportation. The Department provides a vehicle that transports older and disabled people from their homes to medical facilities located in Madison. The elderly and disabled also can get transportation for medical appointments or other important personal business from available Department vehicles or through volunteers willing to drive them.

3.11.9 Waysides (Rest Areas)

A total of eight state owned wayside facilities exist in Columbia County. Six of the facilities are rustic waysides and are discussed under the park section of the Utilities and Community Facilities Element. The remaining two waysides are modern waysides (rest areas) located on the interstate highway system in the Town of Dekorra. These facilities provide an important resting area for motorists using the interstate system and are among the most highly used in the State. Current plans call for an expansion of these facilities to meet current and future demands of the facilities.

3.11.10 The Merrimac Ferry

The Colsac III ferry, which crosses the Wisconsin River between Columbia and Sauk counties, is Wisconsin's only free ferry. It shuttles traffic on Wisconsin Hwy 113 between the Town of West Point near Okee on the east bank of the river to Merrimac on the west bank. Colsac III was commissioned in 2003. The ferry is open for service 24 hours a day, 7 days a week, normally from April 15 thru November 30. It is now the only ferry remaining on the state trunk highway network.

Ferry service has been provided in this area for more than a century. In 1844, a settler by the name of Chester Mattson obtained charters to provide ferry service at this location. Another investor took over the service in 1849 and for many years it continued as a private operation. The original "Colsac" (a phonetic combination of the two names, Columbia and Sauk counties) was built in 1924. It was operated as a toll ferry by Columbia and Sauk counties until 1933, when it was acquired by the old Wisconsin State Highway Commission. It has operated as a free ferry since it was acquired by the state. Colsac II was christened on April 6, 1963, replacing the original Colsac, and was retired from service on November 4, 2002. The current Colsac III. was dedicated on May 16, 2003. Columbia County should continue to support this important transportation link.

3.11.11 Horse Drawn Vehicles & Agricultural Equipment

In addition to the usual motorized vehicles using the roadways in Columbia County, roads in certain parts of the County are heavily used by horse drawn vehicles and agricultural equipment. The use of roads by these types of vehicles introduces additional challenges to planning for future transportation needs. Horse drawn vehicles are slow moving and horses can be startled by motorized vehicles that come up rapidly from behind and pass the horse drawn vehicle. Lack of an adequate shoulder on many roads can further

complicate the interactions between horse drawn vehicles and motorized vehicles by forcing the two to utilize the same travel lanes. Likewise for agricultural machinery using county roadways, the lack of adequate shoulders and the slow speed of the vehicles can cause hazardous situations on county roadways. Efforts should be made to educate the public about the hazards associated with approaching and passing horse drawn vehicles and agricultural equipment. In addition, the systematic improvement of roads to accommodate these types of vehicles, such as wider shoulders, should be considered as roads are periodically reconstructed.

4.0 UTILITIES AND COMMUNITY FACILITIES

This element contains information about existing utilities and community facilities in Columbia County. Facilities discussed in this element include sewer and water, storm water management, solid waste & recycling, parks, utilities, cemeteries, health and childcare facilities, police, fire and rescue, libraries, schools, and other facilities such as the County's buildings and facilities.

4.1 UTILITIES AND COMMUNITY FACILITIES VISION

- ◆ Adequate utilities and community facilities to meet the needs of County residents with new development providing for its own infrastructural needs so as to not burden existing taxpayers.

4.2 UTILITIES AND COMMUNITY FACILITIES GOALS AND OBJECTIVES

Goal 1: A full range of community services and infrastructure that meet the needs of County residents.

- Objective 1:* Direct more intensive development to areas where a full array of utilities, community facilities, and public services are available.
- Objective 2:* Consider the impacts that the development of community facilities and utility systems have on land use, transportation, and natural and cultural resources.
- Objective 3:* Encourage the installation of public sewer and water systems where appropriate for new and existing development.
- Objective 4:* Continue to enforce County ordinances regulating private on-site wastewater treatment systems (POWTS) and authorize the use of new technologies when appropriate.
- Objective 5:* Work with telecommunication service providers to expand local calling areas within the County.
- Objective 6:* Encourage the improvement of wireless communication services in the County.
- Objective 7:* Encourage the collocation of wireless facilities in the County to limit the number of new communication towers constructed.
- Objective 8:* Promote the extension of energy services, such as gas and electric service, to areas of the County not presently served when appropriate.
- Objective 9:* Explore the utilization of environmental impact fees to protect and preserve the natural environment of the County.
- Objective 10:* Encourage the expansion and diversification of the health care industry serving Columbia County in anticipation of an aging population.
- Objective 11:* Ensure that law enforcement agencies in the County have the proper facilities and equipment to operate effectively.
- Objective 12:* Ensure that a full range of fire, rescue, and emergency medical services are available to serve the people of Columbia County.
- Objective 13:* Assist fire, rescue, and emergency medical services in shortening emergency response times when possible.
- Objective 14:* Plan for the future needs of Columbia County administrative facilities.

Goal 2: Support high quality educational opportunities for all County residents

- Objective 1:* Encourage the timely expansion or contraction of public school facilities in anticipation of fluctuations in the school age population.
- Objective 2:* Continue to support the technical and vocational school system serving Columbia County.
- Objective 3:* Support efforts to improve services provided by libraries in the County.

Goal 3: Protect public health through proper solid waste disposal.

- Objective 1:* Encourage municipalities to continue to utilize County facilities for the composting and disposal of solid waste.
- Objective 2:* Continue to support recycling and Clean Sweep programs in the County.

Goal 4: A high quality county-wide system of park and recreational lands that helps preserve significant natural, cultural, or historical resources and meets the needs and demands of the citizens of Columbia County and its visitors.

- Objective 1:* Consider forming a County Park and Recreation Department.
- Objective 2:* Update the County Park, Outdoor Recreation, and Open Space Plan every five years using SCORP guidelines to maintain eligibility for grants from the state.
- Objective 3:* Solicit input and resources from interested residents, organizations, municipalities, and others regarding planning, development, operation, and new acquisitions of the County Park System.
- Objective 4:* Develop site plans for all County parks that illustrate future development plans for the facility and implements the recommendations of the Americans with Disabilities Act.
- Objective 5:* Design park and recreational facilities with the natural environment in mind by considering the project's impacts on the environment.
- Objective 6:* Identify and acquire upland woods that are threatened by development pressures, important natural and historic areas, and shoreline areas of appropriate size to become County parks.
- Objective 7:* Utilize, where practical, a multi-jurisdictional approach to acquiring and developing park and open space areas.
- Objective 8:* Coordinate and utilize the resources and expertise of different County departments, staff, and officials, particularly where projects meet mutual goals and objectives.
- Objective 9:* Retain tax delinquent lands acquired through foreclosure that would be an appropriate addition to the County Park System.
- Objective 10:* Support the continued development of the Ice Age National and State Scenic Trail.
- Objective 11:* Continue to support the County's snowmobile trail system.
- Objective 12:* Work to preserve lands for recreational uses along the Wisconsin and Fox River Systems.
- Objective 13:* Incorporate parks, recreation areas, and trails as a key component of Columbia County's overall tourism and economic development strategies.

4.3 UTILITIES AND COMMUNITY FACILITIES PROGRAMS

4.3.1 Knowles-Nelson Stewardship Program

The Wisconsin Legislature established the Knowles-Nelson Stewardship Program in 1989 to preserve valuable natural areas and wildlife habitat, protect water quality and fisheries, and expand opportunities for outdoor recreation. The program is named for two of Wisconsin's conservation leaders, Governor Warren Knowles and Senator Gaylord Nelson. The two main goals of the program are to preserve Wisconsin's most significant land and water resources for future generations and to provide the land base and recreational facilities needed for quality outdoor experiences. These goals are achieved by acquiring land and easements for conservation and recreation purposes, developing and improving recreational facilities, and restoring wildlife habitat.

The program is funded with general obligation bonds. The state sells bonds to investors now and then pays back the debt over the next 20 years. This spreads the cost over time so it is shared with future users of public lands. A total of \$60 million dollars is available each year. Foundations, businesses, and private citizens also contribute to Stewardship projects, and landowners may donate land and easements too.

The leveraging of private resources with public funds is an important part of the Stewardship Program. Under the program, the WDNR provides 50 percent matching grants to local governments and private nonprofit organizations for eligible projects. These grants enable the state to stretch its dollars by leveraging those dollars with other funding sources. The utilization of these grants by Columbia County can help to build and improve the County's park system and should be pursued.

4.3.2 Clean Sweep Program

The Clean Sweep Program is a voluntary state and county program that provides a legal, safe, and convenient means of disposing of hazardous wastes from homes, farms, and businesses. The Clean Sweep Program protects the environment by properly disposing of hazardous chemicals rather than allowing them to get into local landfills, neighborhood soils, or groundwater. County residents can dispose of unwanted hazardous items at specified drop off point on specific days that the program is offered. Clean Sweep is funded through grants from Wisconsin DNR and the Wisconsin Department of Agriculture, Trade, and Consumer Protection as well as by local contributions from Columbia County and others.

4.3.3 Crime Stoppers

The Columbia County Sheriff's Department works along with partners at the Portage Daily Register and the Portage School District in implement the Crime Stoppers Program. Under the program, the Sheriff's Department provides information to the Portage Daily Register that then publishes the "Top Ten Most Wanted" list and the "Crime of the Month". The "Top Ten Most Wanted" list includes the most sought after offenders while the "Crime of the Month" highlights a recent unsolved crime and seeks anonymous information that may lead to the identification of a suspect or the arrest of the offenders.

At the Portage School District, the Columbia County Crime Stoppers has implemented the "Fast Cash Program". The "Fast Cash Program" pays rewards to persons who provide information to Crime Stoppers concerning the possession of alcohol, drugs, or weapons within any of the Portage schools. The Portage High School media department students have also worked with Columbia County Crime Stoppers by producing broadcast videos highlighting recent crimes. These short informational segments are aired on the local cable channels on a frequent basis.

4.3.4 Columbia County D.A.R.E. Program

Drug Abuse Resistance Education (D.A.R.E.), a nationally recognized program that teaches school age children to say "NO" to drugs, was piloted by the Los Angeles Police Department in September of 1983. The program was so successful that it spread to all 50 states as well as American military posts throughout the world. D.A.R.E. is a collaborative effort between law enforcement, schools, parents, and the community. D.A.R.E. teaches children to recognize and resist the direct and subtle pressures that influence them to experiment with alcohol, tobacco, marijuana, inhalants, and other drugs.

The D.A.R.E. Program can be introduced to K-2 children and continue with 3-4th grades with the core curriculum usually taught to 5th graders. A new D.A.R.E. curriculum challenges students by having them participate in active learning. The benefit to children is the strong foundation of decision-making skills that they apply to real life situations. The new D.A.R.E. curriculum has been shortened to nine lessons and a culmination. The Columbia County Sheriff's Office has supported the D.A.R.E. program since 1996. The Columbia County Sheriff's Office has several certified D.A.R.E. instructors who have been actively involved with schools in the following townships and communities: Arlington, Caledonia, Dekorra, Fort Winnebago, Lewiston, Marcellon, and Pardeeville.

The Columbia County Sheriff's Office has received generous support from the community to continue their efforts. Both businesses and private individuals have made contributions. In addition, the Portage Elks Club sponsors an annual golf outing to help raise money for local D.A.R.E. programs.

4.3.5 Columbia County Drug Education And Enforcement

The Columbia County Sheriff's Department is committed to providing education about the resistance to drug abuse, as well as a commitment to proactive enforcement of controlled substance laws. The Columbia County Sheriff's Department has successfully applied for federal drug task forces grants. The Sheriff's Department works jointly with local agencies to create a multi-jurisdictional task force designed to target drug traffickers and manufactures. Street level drug dealers also receive additional enforcement attention. The grant is administered by the State of Wisconsin, Office of Justice Assistance. Seventy-five percent of the funds awarded are made available to the state through the federal Byrne Memorial State and Local Law Enforcement Assistance Program. In addition to the Sheriff's Department, the following agencies participate in the CCDEE Task Force-Portage Police Department, Cambria Police Department, Columbus Police Department, Fall River Police Department, Lake Delton Police Department, Lodi Police Department, Wisconsin Dells Police Department, Rio Police Department, and The Poynette Police Department. The Columbia County District Attorney's Office is also a participating agency serving in an advisory role.

4.3.6 Hope House/D.A.R.T.

Hope House of Columbia County and The Columbia County DART (Domestic Abuse Response Team) program offers services to persons in need during domestic violence incidents. Members of the DART team respond to domestic violence calls along with Law Enforcement in Columbia County. DART offers assistance with safety planning, counseling, temporary restraining orders and many other functions. Hope House offers additional services including temporary placement of families during crisis, a 24-hour crisis phone line, options counseling, information and referrals, Women's and Children's support groups, and community education. In cooperation with The Columbia County Sheriff's Office, Hope House/DART offers 911 emergency cell phones to victims in need. The cell phone project involves the use of mostly donated cell phones. The cell phones only dial emergency 911.

4.3.7 Columbia County Cannabis Enforcement And Suppression Effort (CEASE)

The Columbia County Sheriff's Department is an active member agency involved in the CEASE program. The Cannabis Enforcement and Suppression Effort (CEASE) is a law enforcement program directed at the reduction of cultivated and non-cultivated marijuana throughout the State of Wisconsin. The CEASE program is focused on supporting federal, state and local law enforcement agencies in order to curb marijuana cultivation, distribution and use.

The primary goal of the CEASE program is to augment local law enforcement efforts in locating indoor and outdoor marijuana grow operations and arrest of those responsible. CEASE also provides support for the eradication of non-cultivated, wild marijuana. CEASE program management compiles statewide statistics, intelligence data and distributes funds to be used for the investigation and eradication of domestic marijuana grows. Reports on CEASE activity are prepared and forwarded to the U.S. Drug Enforcement Administration and law enforcement throughout Wisconsin. Agencies involved in the CEASE program are individual Sheriff's Departments, Drug task Forces, Wisconsin Department of Natural Resources, U.S. Forest Service, and Civil Air Patrol. The division of Narcotics Enforcement is responsible for program management, which is funded by the U.S. Drug Enforcement Administration and directly supported by the Wisconsin National Guard Drug Control Program.

4.4 UTILITIES AND COMMUNITY FACILITIES

4.4.1 Sanitary Sewer Service

Public sanitary sewer service in Columbia County is available in 15 communities in the County. Most of these systems are municipal systems located in cities and villages. However the Harmony Grove and Okee sanitary districts provide public sanitary sewer within the Town of Lodi, the Dekorra Utility District #1 provides public sanitary sewer within the Town of Dekorra, and the City of Portage provides sewer service to the Oakwood Terrace Mobil Home Park in the Town of Lewiston and Saddle Ridge Estates in the Town of Pacific. The Village of Doylestown is the only incorporated municipality in Columbia County that does not provide sanitary sewer service. Two other sanitary districts, Dekorra Sanitary District #1 and Dekorra Sanitary District #2, have been formed but do not provide any services at this time. Detailed information about the types of treatment, design flow, and capacity of the public sanitary sewer systems in the County are described in Table 4-1. The location of these municipal systems in the County is illustrated on Map 4-1 in Appendix I.

In addition, four privately owned "municipal type" sanitary sewer systems, otherwise known as package treatment facilities, exist within the County. These systems include the J&L Gas Station and Portage Petro in the Town of Caledonia, Crystal Lake Campground in the Town of West Point, and the Wisconsin Academy in the Town of Columbus. These systems are constructed and operated under the supervision of the Wisconsin Department of Natural Resources. There is also one large scale Private Onsite Waste Treatment System (POWTS) located in the County. This system serves the Selwood Subdivision in the Town of West Point. Since the daily flow of sewage sent to this system is in excess of 8,000 gallons per day, it also is controlled by the Department of Natural Resources, with regular reports on its operation going to that Department. The location of these five systems is also illustrated on Map 4-1 in Appendix I.

Several other large POWTS are located throughout the County. Due to differences in the means of construction and size, these systems are not considered "municipal type" sewer systems. These systems handle volumes of less than 8,000 gallons of sewage per day and therefore are constructed and operated under the supervision of the Wisconsin Department of Commerce. Examples of these systems include the

Cascade Mountain Ski Area and the Comfort Suites Motel in the Town of Caledonia, as well as the Americinn Hotel and the Mobil Travel Plaza in the Town of Arlington.

TABLE 4-1
Public Waste Water Treatment Plants, Columbia County, 2005

Plant Location	Type of Treatment	Maximum Design Flow (gallons per day)	Average Daily Flow (gallons per day)	% Capacity Being Used	Year Built
Village of Arlington	Recirculating sand filter.	117,000	40,000	34.2%	2000
Village of Cambria	Oxidation ditch, chlorine disinfection, liquid sludge storage.	126,000	85,000	67.5%	1983
City of Columbus	Activated sludge with extended aeration, tertiary filters, chlorine disinfection, phosphorus treatment, sludge digestion, sludge storage as solid.	1,000,000	650,000	65.0%	1984
Village of Fall River	Stabilization ponds and storage lagoon.	182,000	125,000	68.7%	1985
Village of Friesland	Stabilization ponds.	27,000	2,000	7.4%	1989
Harmony Grove / Okee Sanitary District	Sequencing batch reactor, effluent seepage ponds.	500,000	200,000	40.0%	2003
City of Lodi	Biotower, UV disinfection, chemical phosphorus removal, liquid sludge storage.	620,000	376,000	60.7%	1997
Village of Pardeeville	Aerated lagoons, fill & draw effluent discharge.	314,200	200,000	63.7%	1985
City of Portage	Rotating biological contactors, chemical phosphorus removal, chlorine disinfection, anaerobic digesters, cake sludge storage.	2,000,000	1,466,000	73.3%	1983
Village of Poynette	Oxidation ditch, ultraviolet disinfection, bio-phosphorus removal, liquid sludge storage.	470,000	200,000	42.6%	1997
Village of Randolph	Activated sludge and aeration (no lagoon).	300,000	124,000	41.3%	1982
Village of Rio	Aerated lagoons, fill & draw effluent discharge.	115,000	70,000	60.9%	1982
City of Wisconsin Dells	Oxidation ditch, bio and chemical phosphorus removal, chlorine disinfection, cake sludge storage.	2,830,000	1,474,000	52.1%	1983
Village of Wycocena	Aerated lagoons, effluent land disposal.	122,000	65,000	53.3%	1999

Source: Wisconsin Department of Natural Resources

4.4.2 Storm Water Management

The intent of storm water management is to reduce or eliminate runoff from the washing of pollutants or sediments into water bodies, wetlands, or other adjacent properties. In Columbia County, storm water management is addressed independently by each community. The primary methods for handling storm water management in the unincorporated areas of the County include the use of ditches, culverts, grassed waterways, rock chutes, and drainage swales that follow local topography. In the incorporated portions of the County the storm water management is often addressed through the use of storm sewers, curb and gutter, and retention ponds. However, some techniques that are used in unincorporated areas are sometimes used in urbanized areas as well. Permits for storm water discharge are required from the WDNR for construction sites of more than one acre, all non-metallic mines, and industrial sites. Incorporated municipalities of less than 50,000, including all cities and villages in Columbia County, are exempt from WDNR. Columbia County currently has no regulations regarding storm water management.

4.4.3 Water Supply

Public water supply systems are available in 14 communities in Columbia County, including the Harmony Grove Sanitary District. The Wisconsin Public Service Commission Annual Reports from water utilities as well as WDNR system inspections provide information about the existing infrastructure and capacities of the public water systems in Columbia County. The locations of public water supply systems are illustrated on Map 4-1 in Appendix I

◆ Arlington Waterworks

The Arlington Waterworks was established in 1949. There are approximately 321 metered customers served by the system. Groundwater is the only source of water for the utility. The utility has one active well with a depth of 450 feet. The well pump capacity is 326 gpm with an average daily pumpage of 49,900 gallons and a maximum daily pumpage of 373,000 gallons. System water pressures range from 56 to 72 psi. Water in the system is treated with chlorine and fluoride. Water storage for the system consists of one elevated storage tank with a capacity of 250,000 gallons. The utility has approximately 25,000 feet of water mains and 50 hydrants.

◆ Cambria Waterworks

The Cambria Waterworks was established in 1925. There are approximately 375 metered customers served by the system. Groundwater is the only source of water for the utility. The utility has two active wells with depths of 290 and 620 feet. The well pumping capacities are 925 gpm and 400–1000 gpm with an average daily pumpage of 188,300 gallons and a maximum daily pumpage of 721,000 gallons. System water pressures range from 35 to 97 psi. Water in the system is treated with chlorine. Water storage for the system consists of one elevated storage tank with a capacity of 209,000 gallons. The utility has approximately 38,000 feet of water mains and 72 hydrants.

◆ Columbus Water and Light Department

The Columbus Water and Light Department was established in 1898. There are approximately 2,030 metered customers served by the system. Groundwater is the only source of water for the utility. The utility has three active wells with depths of 565, 568, and 677 feet. The well pumping capacities are 555, 525, and 850 gpm with an average daily pumpage of 516,000 gallons and a maximum daily pumpage of 787,000 gallons. System water pressures range from 35 to 97 psi. Water in the system is treated with chlorine, fluoride, and polyphosphate. Iron removal and zeolite softening is also performed on the water in the system. Water storage for the system consists of one elevated storage tank with a capacity of 250,000 gallons, a concrete reservoir with a capacity of 230,000 gallons, and a concrete reservoir with a 300,000 gallon capacity. The utility has approximately 154,000 feet of water main and 250 hydrants.

◆ Fall River Waterworks

The Fall River Waterworks was established in 1943. There are approximately 495 metered customers served by the system. Groundwater is the only source of water for the utility. The utility has two active wells with depths of 240 and 300 feet. The well pumping capacities are 167 gpm and 400 gpm with an average daily pumpage of 181,800 gallons and a maximum daily pumpage of 402,000 gallons. System water pressures range from 60 to 72 psi. Water in the system is treated with fluoride. Water storage for the system consists of two elevated storage tanks with capacities of 50,000 and 250,000 gallons. The utility has approximately 42,000 feet of water mains and 89 hydrants.

◆ Friesland Waterworks

The Friesland Waterworks was established in 1955. There are approximately 155 metered customers served by the system. Groundwater is the only source of water for the utility. The utility has two active wells with depths of 350 and 402 feet. The well pumping capacities are 355 gpm and 225 gpm with an average daily pumpage of 20,800 gallons and a maximum daily pumpage of 62,000 gallons. System water pressures range from 40 to 55 psi. No treatment is provided for water in the system. Water storage for the system consists one elevated storage tank with a capacity of 50,000 gallons. The utility has approximately 14,000 feet of water mains and 28 hydrants.

◆ Harmony Grove Sanitary District

The Harmony Grove Sanitary District was established in 1964. There are approximately 668 metered customers served by the system. Groundwater is the only source of water for the utility. The utility has two active wells with depths of 400 feet each. The well pumping capacities are 275 gpm and 300 gpm with an average daily pumpage of 117,800 gallons and a maximum daily pumpage of 301,000 gallons. System water pressures range from 25 to 75 psi. Water in the system is treated with chlorine and fluoride. Water storage for the system consists of one elevated storage tank with a capacity of 126,900 gallons. The utility has approximately 53,000 feet of water mains and 85 hydrants.

◆ Lodi Waterworks

The Lodi Waterworks was established in 1896. There are approximately 1,195 metered customers served by the system. Groundwater is the only source of water for the utility. The utility has three active wells with depths of 300, 334, and 418 feet. The well pumping capacities range from 500 to 1,000 gpm with an average daily pumpage of 349,700 gallons and a maximum daily pumpage of 1,114,000 gallons. System water pressures range from 62 to 81 psi. Water in the system is treated with chlorine and fluoride. Water storage for the system consists of three elevated storage tanks with capacities of 185,400, 146,500, and 200,000 gallons. The utility has approximately 90,000 feet of water mains and 148 hydrants.

◆ Pardeeville Waterworks

The Pardeeville Waterworks was established in 1939. There are approximately 958 metered customers served by the system. Groundwater is the only source of water for the utility. The utility has three active wells with depths of 300, 334, and 418 feet. The well pumping capacities range from 500 to 1,000 gpm with an average daily pumpage of 349,700 gallons and a maximum daily pumpage of 1,114,000 gallons. System water pressures range from 62 to 81 psi. Water in the system is treated with chlorine and fluoride. Water storage for the system consists of two elevated storage tanks with capacities of 50,000 and 300,000 gallons. The utility has approximately 62,000 feet of water mains and 148 hydrants.

◆ Portage Waterworks

The Portage Waterworks was established in 1886. There are approximately 3,640 metered customers served by the system. Groundwater is the only source of water for the utility. The utility has four active wells with depths of 125, 129, 145, and 269 feet as well as a new well under construction with a depth of 274 feet. The well pumping capacities range from 1,000 to 2,150 gpm with an average daily pumpage of 1,597,200 gallons and a maximum daily pumpage of 2,200,000 gallons. System water pressures range from 35 to 70 psi. Water in the system is treated with chlorine, fluoride, and polyphosphate. Iron removal is also performed on the water in the system and zeolite softening is performed on water from one well. Water storage for the system consists of three elevated storage tanks with capacities of 500,000, 500,000 and 750,000 gallons. The utility has approximately 300,000 feet of water mains and 435 hydrants.

◆ Poynette Waterworks

There are approximately 958 metered customers served by the Poynette Waterworks. Groundwater is the only source of water for the utility. The utility has two active wells with depths of 126 and 502 feet. The well pumping capacities range from 348 to 860 gpm with an average daily pumpage of 215,500 gallons and a maximum daily pumpage of 447,000 gallons. System water pressures range from 43 to 70 psi. Water in the system is treated with chlorine and fluoride. Water storage for the system consists of one elevated storage tank with a capacity of 250,000 gallons and a ground reservoir with a capacity of 94,000 gallons. The utility has approximately 92,000 feet of water mains and 139 hydrants.

◆ Randolph Water Department

The Randolph Water Department was established in 1907. There are approximately 712 metered customers served by the system. Groundwater is the only source of water for the utility. The utility has three active wells with depths of 352, 525, and 552 feet. The well pumping capacities for all three wells are 350 gpm with an average daily pumpage of 146,000 gallons and a maximum daily pumpage of 361,000 gallons. System water pressures range from 68 to 75 psi. Water in the system is treated with chlorine and polyphosphate. Water storage for the system consists of one elevated storage tank with a capacity of 75,000 gallons and one ground reservoir with a capacity of 75,000 gallons. The utility has approximately 45,000 feet of water mains and 96 hydrants.

◆ Rio Waterworks

The Rio Waterworks was established in 1920. There are approximately 473 metered customers served by the system. Groundwater is the only source of water for the utility. The utility has two active wells with depths of 391 and 405 feet. The well pumping capacities for both wells is 500 gpm with an average daily pumpage of 82,200 gallons and a maximum daily pumpage of 144,000 gallons. System water pressures range from 36 to 88 psi. Water in the system is treated with chlorine and fluoride. Water storage for the system consists of one elevated storage tank with a capacity of 150,000 gallons. The utility has approximately 41,000 feet of water mains and 72 hydrants.

◆ WI Dells Waterworks

The WI Dells Waterworks was established in 1889. There are approximately 1,540 metered customers served by the system. Groundwater is the only source of water for the utility. The utility has six active wells with depths ranging from 200 to 454 feet. The well pumping capacities for the wells range from 460 to 1,000 gpm with an average daily pumpage of 677,600 gallons and a maximum daily pumpage of 1,700,000 gallons. System water pressures range from 60 to 70 psi. Water in the system is treated with chlorine, fluoride, and sodium hydroxide. Water storage for the system consists of four elevated storage tank with capacities ranging from 80,000 to 300,000 gallons. The utility has approximately 144,000 feet of water mains and 234 hydrants.

◆ Wyocena Waterworks

The Wyocena Waterworks was established in 1977. There are approximately 280 metered customers served by the system. Groundwater is the only source of water for the utility. The utility has two active wells with depths of 205 and 310 feet. The well pumping capacities for the wells are 260 and 330 gpm with an average daily pumpage of 61,600 gallons and a maximum daily pumpage of 176,000 gallons. System water pressures range from 35 to 80 psi. Water in the system is treated with chlorine. Water storage for the system consists of one elevated storage tank with a capacity of 100,000 gallons. The utility has approximately 34,000 feet of water mains and 50 hydrants.

4.4.4 Solid Waste Disposal and Recycling

Solid Waste Disposal and Recycling in Columbia County is conducted mainly by the County Solid Waste Department. The Department operates a recycling and composting facility on State Highway 16 in the Town of Pacific. Recyclables are transported to the facility where they are sorted and prepared for shipment to market. The facility handles 22 tons of recyclables a day. Solid waste collected in the County is transported to the county composting facility to be processed by one of two composting machines at the facility. During the composting process, solid waste material is placed into the machine's drum that slowly rotates and tumbles the material. Spikes in the drum tear open bags while moisture and heat are added to the waste to initiate the composting process. Only municipal garbage is processed by the compost machines, demolition materials are sent directly to the landfill and yard waste is processed and composted separately from the garbage. It takes five days for waste materials to work through the machine. About half the material removed from the machine is used as agricultural compost. The other half consists of non-compostable materials, such as plastic bags, and is sent to a landfill in Winnebago County. The two compost machines process 70 tons of waste per day with a maximum capacity of 80 tons per day. The composting facility is expected to meet the needs of the County for the next ten years. However, the composting machines are likely to need maintenance during this time frame including the replacement of the drums in both machines. A concrete pad for processing yard waste may also be needed in the future. The location of the Columbia County Composting and Recycling Facility is illustrated on Map 4-2 in Appendix I.

Most of the municipalities in Columbia County use the County Solid Waste Department to process their solid waste and recyclables. All towns in the County, with the exception of the Town of Newport, use the county facility for recycling. Likewise, all towns, with the exceptions of the Towns of Newport, Columbus, Caledonia and Otsego, use the county composting facility for solid waste disposal. The Town of Newport contracts with Onyx Waste Services for both solid waste disposal and recycling, the Towns of Columbus and Caledonia contracts with Waste Management Inc. for solid waste disposal, and the Town of Otsego contracts with Badger Disposal for solid waste disposal. All other towns have individual contracts for hauling solid waste and recyclables from their town drop off sites to the county composting and recycling facility. In addition, the County Solid Waste Department staffs and runs the drop off site in Town of West Point. The locations of town solid waste and recycling drop off sites are illustrated on Map 4-2 in Appendix I.

All villages in Columbia County use the county composting and recycling facility for solid waste and recycling disposal. Most villages have private contracts for the curbside pickup of solid waste and recyclables and for the transport of these materials to the county composting and recycling facility. The Village of Poynette has a contract with the County Solid Waste Department to pick up solid waste and recyclables in the village. Recycling drop off sites are also available in many villages. The locations of village drop off sites are also illustrated on Map 4-2 in Appendix I.

All cities in Columbia County use the county composting and recycling facility for solid waste and recycling disposal. The City of Portage and the City of Wisconsin Dells use city staff and resources for curbside pickup of solid waste and for the transporting of this waste to the county composting facility. Curbside pickup of recyclables in the City of Portage is conducted through a contract with the County Solid Waste Department. The City of Wisconsin Dells contracts with Onyx Waste Services for the pickup and processing of recyclables at their facility. The City of Columbus and the City of Lodi have private contracts for the curbside pickup of solid waste and recyclables and for the transporting of the material to the county composting and recycling facility. Recycling drop off sites are available in the City of Portage and the City of Lodi.

In addition, numerous former solid waste dumpsites also exist around Columbia County. These sites include former industrial and municipal dumps. Map 4-2 in Appendix I also illustrates the known locations of former solid waste dumpsites in Columbia County.

4.4.5 Private On-Site Wastewater Treatment Systems (POWTS)

Private on-site wastewater treatment systems are the predominant method of treating waste-water in the unincorporated portions of Columbia County. POWTS are systems that collect domestic wastewater and either treat it and discharge it to the soil or retain it in a holding tank. The three main types of on-site treatment facilities that are currently used in Columbia County are conventional systems, mound systems/at-grade systems, and holding tanks. Between 1990 and 2004, 4,352 permits were issued for all on-site sanitary systems in Columbia County including new and replacement systems. The US Census indicates that there were 8,190 existing private on-site sanitary systems in the County in 1990. Table 4-2 illustrates the number of permits issued for different types of on-site sanitary systems over the 15 years between 1990 and 2004. Adding the total number of permits issued over the last 15 years to the 1990 Census total indicates that there are potentially over 12,500 private on-site wastewater treatment facilities in Columbia County.

TABLE 4-2
Number of Permits Issued for On-Site Sanitary Systems by Year
Columbia County, 1990-2004

Year	Conventional	Mound /At-Grade	Holding Tank	Total
1990	168	55	13	236
1991	189	38	17	244
1992	226	57	15	298
1993	192	55	14	261
1994	242	64	25	331
1995	244	67	19	330
1996	248	52	22	322
1997	229	77	19	325
1998	220	78	23	321
1999	227	74	11	312
2000	191	66	23	280
2001	172	53	11	236
2002	229	57	9	295
2003	221	50	13	284
2004	194	63	20	277
Total:	3,192	906	254	4,352

Source: Columbia County Planning and Zoning

4.4.6 Parks and Recreational Facilities

Columbia County contains a variety of parks and recreational facilities that are provided by Columbia County, as well as the cities, villages, and towns within the County. The following section of this Plan provides an overview of the parks and recreational facilities provided by local government in Columbia County. Other recreational resources, such as wildlife preserves and hunting grounds, provided by the state or federal government are covered in the Agricultural, Natural, and Cultural Resources Element of this Plan.

4.4.6.1 Park Definitions

Different types of parks serve different purposes. Below are definitions used in this Plan to help classify and define the existing recreation system in Columbia County and to guide plans for its future. These definitions are modifications of definitions used by the National Recreation and Park Association (NRPA). They begin with the smallest and most intensely developed and used, and proceed to the largest and least developed parks and recreation areas.

◆ Neighborhood Playgrounds

A neighborhood playground mainly serves the active recreational needs of children from 5 to 15 years of age, and it may offer passive recreation opportunities to adults. Neighborhood Playgrounds are typically developed for intensive recreational activities and usually offer play apparatus; open areas for games; fields for baseball or football, courts for basketball or volleyball; and toilet and shelter facilities. Buffered play areas are desirable. If size permits, an area for more constrained activities, such as quiet games or handicrafts, is advisable. Neighborhood Playgrounds are sometimes associated with or are located in close proximity to elementary school

sites. Population density is important for determining the space needs and service area of a neighborhood playground. Walking distance of about one-half mile should be the maximum service area. A one-quarter mile service area is desirable, particularly for younger children and the elderly with mobility limitations.

◆ Neighborhood Parks

A neighborhood park provides open space for the passive recreation of all age groups in a neighborhood and enhances the overall neighborhood environment. An attractive natural setting such as a lake, stream or woods is a desirable location for a neighborhood park. Facilities may include trees, lawn, benches and tables, open areas for sitting and sunning, walks, paths, shelters, drinking fountains, lighting and toilet facilities. Population density is important in determining the space needs and service area of a neighborhood park. It should be within easy walking distance of intended users, not to exceed one-half mile. Neighborhood playgrounds may be included within neighborhood parks.

◆ Community Playfields

The community playfield provides for the active recreational needs of several neighborhoods. It provides more facilities than a neighborhood playground. Such facilities may include: tennis complex, swimming pool, multi-purpose courts, community center, fields for sporting competition, ice-skating area, sanitary facilities, a playground and landscaping to buffer the playfields from surrounding properties. A community playfield might adjoin a public junior or senior high school. Population size and density are important for determining the space needs of a community playfield. It should serve an area with a radius of up to two miles. Neighborhood facilities might be included in a community playfield.

◆ Community Parks

The community park is intended to serve the passive recreational needs of a number of neighborhoods or a medium sized municipality. It may include wooded areas, varied topography and water features, undisturbed natural areas, scenic lookouts, picnic areas, hiking or riding trails, boating and swimming areas, and some area for active recreation on a less formal scale than the community playfield. The park may also be utilized for winter activities. The area served by a community park should have a radius of about two miles. Community park size should be determined by size and density of population. Community parks also serve as neighborhood facilities for the surrounding neighborhood.

◆ County and Regional Parks

The county or regional park fills the gap between intensively developed urban facilities and resource protection oriented state parks and resource areas. County parks should offer a variety of active and passive recreational experiences and be designed for day-long or overnight use by the entire family. Proximity to significant population centers and scenic areas, accessibility from highways, location in relation to existing recreation areas and a maximum travel time of one-half hour must be weighed when considering locations for county parks. In general, a location for a county park should emphasize interesting topography and be characterized by scenic views, wooded areas, lakes or rivers. Generally 100 - 200 acres is a desirable size range.

◆ Special Purpose Parks

Special purpose parks may be created by a municipality or by a larger unit of government. These areas are located to take advantage of natural or unusual features of the landscape or to preserve areas of historic value and provide a variety of outdoor recreation activities. Special purpose parks might be created to provide access to lakes and rivers or to protect ledges and areas with steep slopes. Sites of cultural, archaeological or historical importance and certain recreation

facilities such as golf courses, boat launching ramps and marinas might be considered special purpose parks. Waysides and historical markers are special purpose parks designed to serve motorists. They are important to a tourist industry as a means of providing rest and information. They may include restrooms, picnic areas, shelters and other facilities needed by motorists. The size and location of special purpose parks depends upon natural features and the functions they are intended to serve. If oriented to motorists, traffic volumes must be considered. Size requirements, specific functions and service radius are difficult to assign to special purpose parks because of their variety and uniqueness.

◆ Reservations, Preserves and Greenbelts

Reservations and preserves are usually located outside urban concentrations and include large tracts of land, which are undeveloped or have limited development potential. Such areas have the primary function of resource protection. Reservations and preserves may be established to conserve forest lands, marshlands, floodplains, wildlife habitats and other areas having cultural, scenic or natural values. Normally, reservations and preserves include several hundred acres of undeveloped land, although some improvements may be provided which are incidental to the enjoyment of the natural scenery. Improvements are usually located in one section on the reservation or preserve so that the area remains largely undeveloped. Improvements may include parking areas, interpretive centers and scenic waysides. Hunting may be a primary recreational activity in such areas. Other recreational uses might include backpacking, camping, trail use, picnicking, swimming, boating, fishing, and water sports.

The greenbelt has basically the same characteristics and function as the reservation or preserve. However, a greenbelt may be used to shape urban development. It may be a buffer between an urban area and surrounding rural areas and may connect parks within an urban area.

◆ Linear Parks

Linear parks are areas developed for one or more varying modes of recreational travel such as hiking, biking, snowmobiling, horseback riding, cross country skiing, canoeing and pleasure driving. Typically linear parks are built on or follow existing natural or man-made corridors. Examples of these include, railroad or utility right-of-ways, bluff lines, rivers and streams, roads and other systems that link facilities or components of a recreational system. Linear parks can be located within communities to link schools, parks, downtown areas, and other community facilities or they can be located within rural areas to link other communities, park systems or significant facilities or sites. There are no particular size standards for linear parks, but they do need to have sufficient width to protect the resource or provide a buffer between adjacent uses. Additionally, the types of uses allowed, the expected amount of use and future use potential all should help determine the desired width. Linear park development has been the most significant growth sector in recreation facilities over the past 10 to 20 years and all indications are that this will continue. Rail-Trails (trails built on abandoned railroad beds) and even Rails-With-Trails (trails built alongside active railroad beds) are increasing in popularity and quantity. Linear parks can also serve as important transportation links for alternative modes of transportation.

4.4.6.2 *County Parks and Recreational Facilities*

Columbia County maintains six parks and recreational facilities in the County. The County park system is jointly administered by the Columbia County Highway and Transportation Department and the Columbia County Land and Water Conservation Department. Two employees from the Highway and Transportation Department perform maintenance work on the parks during the summer months. The Columbia County facilities include two County Parks and four Special Purpose Parks. The

names and locations of these facilities are detailed in Table 4-3 and illustrated on Map 4-3 in Appendix I. Descriptions of the parks are also provided below.

TABLE 4-3
Inventory of County Owned Park and Recreational Facilities, Columbia County

Park or Recreational Facility	Location	Type
Wyona Park	Town of Wyocena	County Park
Governor's Bend	Town of Fort Winnebago	County Park
Owen Memorial Park	Town of Caledonia	Special Purpose Park
Lake George Access	Town of Pacific	Special Purpose Park
Park Lake Boat Landing	Town of Wyocena	Special Purpose Park
Whalen Grade	Town of Dekorra	Special Purpose Park

Source: Columbia County Planning and Zoning

◆ **Wyona County Park**

At 109.24 acres in size, Wyona County Park is Columbia County's largest recreation facility. The park is located on County Highway GG, just east of the Village of Wyocena. The park has water frontage on the Wyocena Millpond. The main area of the park has a paved access road and parking lot along with a permanent shelter with toilet facilities, a barrier free portable toilet, and picnic tables. Several picnic areas with pedestal tables and grills are located nearby along with a children's playground.

◆ **Governor's Bend County Park**

Governor's Bend County Park is a 3.39 acre park located west of County Highway F on Lock Road in the Town of Fort Winnebago. Most of the park is located on an island in the Fox River. A bridge connects the island to the parking area at the end of Lock Road. The park contains the historic location of navigational locks on the Fox River. The Marquette Segment of the Ice Age Trail also passes through the park. A barrier free portable toilet is located in the parking area and picnic tables and grills are located on the island. The park provides passive recreation opportunities in the form of hiking, picnicking, fishing, and canoeing.

◆ **Owen Memorial County Park**

Owen Memorial County Park is a 0.75 acre park located between Portage and Merrimac in the Town of Caledonia. This park functions mainly as a wayside with its main attraction being the view of the Wisconsin River Valley and Lake Wisconsin. The park contains a paved parking area, picnic tables, a grill, and a barrier free portable toilet. The park is mainly used for picnicking and viewing scenery.

◆ Lake George Access

Lake George Access is a one-acre facility located off of County Highway P on the north side of Lake George in the Town of Pacific. The facility has a paved parking lot and boat launch, a barrier free portable toilet, pit toilets, and a picnic area with a grill and pedestal table.

◆ Park Lake Access

Park Lake Access is 0.7 acre facility located off of State Highway 44 on the east side of Park Lake north of the Village of Pardeeville. The facility has a paved parking lot, boat launch with a dock, picnic tables, grill, and a barrier free portable toilet.

◆ Whalen Grade

Whalen Grade is a roadside area of less than an acre located along County Highway V in the Town of Dekorra. The grade is an enlarged portion of roadbed that crosses Lake Wisconsin and provides fishing opportunities along its banks. No formal parking is provided.

Several potential sites exist for future County parks or recreational facilities in Columbia County and for the expansion of existing park facilities. The following sites are being listed because they may contain features that make them suitable to become a County park or recreational facility. No plans currently exist to acquire these properties and these sites are expected to remain in current ownership unless a decision is made to purchase the property. Listed below are some sites that have potential to become future County parks or recreational facilities. The locations of these potential County parks are also illustrated on Map 4-3 in Appendix I. Also included are potential land additions to existing County parks.

- The Historic Fort Winnebago site near the intersection of State Highway 33 and County Highway F.
- Develop a County Park around the wayside on State Highway 16 in the Town of Newport. The wayside contains several Indian mound groups and a former Indian village site. The wayside is owned and managed by the Ho-Chunk Nation.
- Limekiln site in the Town of Springvale, northwest of the intersection of County Highways B and G.
- A bike trail following the abandoned rail corridor from Portage to Cambria through the Towns of Pacific, Wyocena, and Springvale.
- An extension of the Ice Age Trail north from Governor's Bend County Park following an abandoned rail corridor along the Fox River.
- Expansion of Owen County Park in the Town of Caledonia to protect the view from the park.
- Expansion of Wyona Park in the Town of Wyocena to include additional shoreline on the Wyocena Millpond.
- Durward Glenn in the Town of Caledonia.
- Flood prone lands in the Black Hawk Park area, Town of Caledonia
- Undeveloped shoreline on Lake Wisconsin, Town of West Point

4.4.6.3 *City, Village, and Town Parks and Recreational Facilities*

In addition to the County Parks, numerous other park and recreational facilities exist in the cities, villages, and towns in Columbia County. Table 4-4 lists the park and recreational facilities operated by the municipalities in Columbia County and classifies the facilities by type using the previously discussed definitions.

TABLE 4-4
Inventory of City, Village, and Town Park and Recreational Facilities
Columbia County

Owner/Provider	Park or Recreational Facility	Type
City of Columbus	Fireman's Park	Community Park and Playfield
	Kiwanis Park	Neighborhood Park
	Rotary Park	Neighborhood Park
	Washington Park	Mini-Park
	Davis Park	Mini-Park
	Meister Park	Neighborhood Park
	Columbus Aquatic Center	Special Purpose Park
City of Lodi	Goeres Park	Community Park and Playfield
	Habermann Park	Neighborhood Park
	Veterans Memorial Park	Neighborhood Park
	Strangeway Playlot	Neighborhood Playground
	Glenview Park	Neighborhood Playground
	Spring Creek Park	Neighborhood Park
City of Portage	Pauquette Park	Neighborhood Park
	Collipp-Worden Park	Community Park and Playfield
	Sanborn Park	Neighborhood Playground
	Sunset Park	Neighborhood Park
	Sunrise Park (The Gully)	Neighborhood Park
	Lincoln Park	Neighborhood Playground
	Cattail Park	Neighborhood Playground
	Pine Meadow Park	Neighborhood Park
	Blue Star Park	Neighborhood Playground
	Veteran's Memorial Fields	Community Park and Playfield
	Riverside Park	Neighborhood Playground
	Silver Lake Park and Beach	Neighborhood Park
	Goodyear Park	Neighborhood Playground
Village of Arlington	Fireman's Park	Community Park and Playfield
Village of Cambria	Cambria Tarrant Park	Community Park and Playfield
	White Rose Park	Neighborhood Park
Village of Doylestown	Fireman's Park	Community Park and Playfield
Village of Fall River	Village Park	Community Park and Playfield
	Mill Street Boat Launch	Special Purpose Park
Village of Friesland	Village Park	Community Park and Playfield
Village of Pardeeville	Chandler Park	Community Park and Playfield
	Legion Park	Neighborhood Park

TABLE 4-4 (cont.)
Inventory of City, Village, and Town Park and Recreational Facilities
Columbia County

Owner/Provider	Park or Recreational Facility	Type
Village of Poynette	Jamieson Park	Community Park and Playfield
	Memorial Park	Neighborhood Park
	Mobil Estate Park	Neighborhood Playground
	Pauquette Park	Community Park and Playfield
	South Side Park	Neighborhood Park
	Southwest Side Park	Neighborhood Playground
	West Side Park	Neighborhood Playground
Village Randolph	Randolph Village Park	Community Park and Playfield
Village of Rio	Fireman's Park	Community Park and Playfield
Village of Wyocena	Wyocena Park	Community Park and Playfield
Town of Arlington	Sunset Hills Park	Neighborhood Park
Town of Dekorra	Corning Street park	Neighborhood Park
	Camp Perry Park	Neighborhood Park
	James Whalen Memorial Park	Neighborhood Park
	Happy Hollow Park	Community Park and Playfield
	Camp Rest Park & Access	Special Purpose Park
	St. Lawrence Bluff Park	Neighborhood Park
	Riverside Park	Neighborhood Park
	Dekorrra Park	Neighborhood Park
Gates – Hickory Oaks Park	Neighborhood Park	
Town of Fountain Prairie	Sleepy Hallow Road Boat Launch	Special Purpose Park
	Lazy Point Road Boat Launch	Special Purpose Park
	Oak Lane Boat Launch	Special Purpose Park
Town of Lodi	Kalscheur Park	Neighborhood Park
	Linda Circle Park	Neighborhood Park
	Lewis Byrnes Park	Neighborhood Park
	Michael Park	Neighborhood Park
	Okee Park	Neighborhood Park
	Okee Lake Park	Neighborhood Park
	Okee School House	Special Purpose Park
	Wildenberg Park	Neighborhood Park
Thistledown Park	Neighborhood Park	
Town of Otsego	Otsego Park	Neighborhood Park
Town of West Point	Ryan Park	Neighborhood Park
	Selwood Park	Neighborhood Park

Source: Columbia County Planning and Zoning

4.4.6.4 *Other Park and Recreational Facilities*

Several other park and recreational facilities exist within Columbia County including waysides, boat landings, and trails. These facilities are described below.

◆ Rustic Waysides

In addition to the park facilities discussed above, six state owned rustic wayside facilities exist in the County and provide limited recreational opportunities. These facilities include the Kingston Mounds Wayside on State Highway 16 in the Town of Newport, the Highway 33 Wayside on State Highway 33 in the Town of Caledonia, the Okee Wayside on State Highway 113 in the Town of West Point, the Fort Winnebago Wayside on State Highway 33 in the Town of Pacific, the John Muir View Wayside on US Highway 51 in the Town of Arlington, and the Highway 16 Wayside on State Highway 16 in the Town of Otsego. The Columbia County Highway and Transportation Department also provides maintenance to these facilities through an agreement with the State. These wayside areas provide important open space areas in the County. Should these areas no longer be needed as waysides consideration should be given to converting them into local parks. The locations of these rustic waysides are illustrated on Map 4-3 in Appendix I.

◆ Boat Landings

Approximately 28 public boat landings exist in Columbia County. Many of these facilities are located within one of the above-mentioned park or recreational facilities. Public access to water features in the County is an important function of these facilities and additional access to public water bodies should be pursued when appropriate and necessary. The locations of existing public boat landings are illustrated on Map 4-3 in Appendix I.

◆ Ice Age National and State Scenic Trail

The Ice Age National and State Scenic Trail is one of eight Congressionally designated National Scenic Trails located throughout the United States. The Trail was authorized by Congress in 1980 and when completed will be a 1,200 mile footpath that meanders through 31 Wisconsin counties along the terminal moraine left by the glacier over 10,000 years ago. The Trail traces features left by the advance of the last glacier – the Wisconsin Glacier – from Potawatomi State Park in Door County to Interstate State Park on the St. Croix River in Polk County. Today, approximately half of the trail is complete. Over two million visitors use the Trail each year. The Wisconsin Department of Tourism recognizes the Ice Age Trail as Wisconsin's number one outdoor recreation resource.

A variety of partners own and manage segments of the Trail. Among them: the Wisconsin Department of Natural Resources, the Ice Age Park & Trail Foundation (a non-profit organization), the U.S. Forest Service, county and municipal park and forestry departments, other public entities, and many generous private landowners. The Trail is funded through federal, state, and local governments as well as through private donations.

Two segments of the Ice Age Trail have been completed in Columbia County. The Portage Canal and Marquette Segment starts at a trailhead in Pauquette Park in the City of Portage and follows the Portage Canal through the city and then northeast past the Indian Agency House. The Trail then follows the Fox river north to Governor's Bend County Park where the Trail then begins to follow local roads north to Marquette County. The length of the segment from Pauquette Park in the City of Portage to Governor's Bend County Park is approximately 11.5 miles. The Lodi Marsh Segment starts near the border of Dane and Columbia counties and runs north through the 1,000-acre Lodi Marsh State Wildlife Area. The Trail travels along the edge of the marsh

through lowland prairie and hilltops 300 feet in height. The total length of the segment is approximately 5 miles. Map 4-3 in Appendix I illustrates the location of the Ice Age Trail segments in Columbia County.

◆ Snowmobile Trail System

Counties in Wisconsin are eligible to apply for funding through the Wisconsin DNR to provide a system of well-signed and well-groomed snowmobile trails for public use in their county. Eligible projects for the funds include the maintenance and development of trails and the rehabilitation of existing snowmobile bridges and trail segments. Columbia County participates in this program for the maintenance of 298.7 miles of snowmobile trails within the County. The majority of the snowmobile trails in Columbia County are located on private land and have been established through an easement with the landowner. In 2004, the Wisconsin DNR awarded \$74,675 to Columbia County for the County's snowmobile trail system. This money is distributed to 10 snowmobile clubs that operate in the County. These clubs are responsible for the signing, maintenance, and grooming of snowmobile trails in their assigned portion of the County. Clubs also operate club trails in addition to the ones funded through the State. Map 4-3 in Appendix I illustrates the location of the snowmobile trail system in Columbia County.

Parks and recreational facilities provide many benefits to the residents and visitors of Columbia County. National Recreation and Park Association (NRPA) and other sources indicate that the demand for outdoor recreation resources has been increasing for some years and will most likely continue to grow based on lifestyles that allow for increased leisure time, greater mobility, and larger incomes to spend on recreational activities. Also, as the resident and tourist population of the area continues to grow, demand for recreational facilities will increase. It is important to keep pace with these trends in order for Columbia County and all government levels to adequately provide parks and recreational facilities to their residents.

4.4.7 Telecommunications Facilities

Three telecommunications companies provide telephone service in Columbia County splitting the County into various service areas. The three companies are as follows: CenturyTel Inc. which provides telephone service to the south-central and northeastern portions of the County, AT&T which provides service to the southeastern portion of the County, and Verizon Communications which provides service to the western and north-central portion of the county. Map 4-4 in Appendix I illustrates the telephone service provider boundaries for telecommunication service in Columbia County. A quality telecommunication system in Columbia County is important for economic development, with some businesses relying heavily on the telecommunication system. The telecommunications system is also important to public safety, providing contact with police, fire, and emergency services. Maintaining a quality telecommunications system should be a priority for the County.

Wireless communication is also provided throughout the County by various providers. Signal strength in the County is influenced by the number and location of towers as well as topography. The locations of existing communication towers in the County is also illustrated on Map 4-4 in Appendix I. Effort should be made to utilize the existing towers before approving additional towers. Such practices reduce the proliferation of unnecessary towers and the negative visual impacts the towers can have on the County.

4.4.8 Electrical Service, Power Generating Plants, and Transmission Lines

Electrical service in Columbia County is provided by two utility companies and four municipal electric utilities. Alliant Energy is the largest electric service provider in the County serving most of the central and southeastern portions of the County as well as an area along the east side of the County. Adams-

Columbia Electric Cooperative provides electric service to an area in the northwestern portion of the County and an area in the east central portion of the County. The Columbus Water and Light Department provides electrical service to customers in the City of Columbus. The Lodi Municipal Light and Water Utility provides electrical service to the City of Lodi and some adjacent areas in the Town of Lodi. The Pardeeville Electric Utility provides electrical service to the Village of Pardeeville and some adjacent areas in the Town of Wyocena. The Wisconsin Dells Municipal Electric Utility provides electric service to a portion of the City of Wisconsin Dells the remainder of the City is served by Alliant Energy. Map 4-4 in Appendix I illustrates the electric service territories in Columbia County.

Major electrical infrastructure such as power plants, substations, and high voltage transmission lines form the backbone of the electrical system in Columbia County. Three power generating facilities exist in or adjacent to Columbia County. The Columbia Power Plant is located south of Portage on US Highway 51. The plant consists of two coal fired generation units. The first unit began operating in 1975 and the second in 1978. Each unit produces 527 megawatts of electricity for a total plant output of 1,054 megawatts. The Kilbourn Hydroelectric Dam is located on the Wisconsin River in Wisconsin Dells. The dam was built in 1909 and is capable of producing 10 megawatts of electricity. The Prairie Du Sac Hydroelectric Dam is located on the Wisconsin River in Prairie Du Sac. The dam was built in 1913 and is capable of producing 29 megawatts of electricity. Columbia County has 28 substations located along the various high voltage transmission lines that traverse the County. These high voltage lines operate at voltages of 69 kilovolts, 138 kilovolts, and 345 kilovolts. Map 4-5 in Appendix I illustrates the locations of the electrical infrastructure in Columbia County.

Demand for electricity increases each year. As a result of increasing demand several projects to improve the capacities and reliability of the electrical system are being planned by American Transmission Company (ATC) the company that owns and operates major transmission lines in Columbia County and all of Wisconsin. Three projects are currently being planned or have recently been completed. The first project, the Portage to Montello Electric Reliability Project will rebuild a 20 mile long transmission line mostly along an existing route roughly paralleling County Highway F. Two segments of the line will be rerouted to move the power line out of the French Creek Wildlife Area and to accommodate the Portage Municipal Airport relocation. The second project, the Columbia Rio Electric Reliability Project will build a new 69 kilovolt transmission line from the Columbia Power Plant to the Rio substation north of the Village of Rio and to a new substation in the Village of Wyocena. Routes for the new line are currently being evaluated. The third project, the Dane and Columbia County Electric Reliability Project will replace an existing 138 kilovolt line that runs from the Columbia Power Plant to the North Madison Substation in the Town of Vienna in Dane County. The project will use existing right-of-way and existing towers. The project will increase the voltage of the 138 kilovolt line to 345 kilovolts to match the voltage of the other existing line using the towers.

Reliable electric service is important to the economy of Columbia County. Efforts should be made to support improvements to the electrical system in the County, when appropriate. Furthermore, the County should carefully review all proposed projects to ensure that they are in the best interest of the County and that they do not negatively impact the County's natural or cultural resources. Every effort should be made to examine all options and to proceed with the choice that has the fewest negatives and most positives for the County.

4.4.9 Natural Gas Utilities and Pipelines

Three gas companies provide natural gas service in Columbia County. The service area for these companies covers most of the County. The areas not included in the natural gas service areas include all of the Towns of Marcellon, Scott, and Hampden as well as the east half of the Town of Otsego and the Village of Doylestown. Alliant Energy's natural gas service area covers most of the northern two thirds

of the County. Wisconsin Gas Company's service area covers the southeastern corner of the County. Madison Gas Company's service area covers the southern and southeastern portions of the County. Natural gas is not available in all parts of a company's service area, but rather these areas are the parts of the County that the company has the right to serve. Map 4-6 in Appendix I illustrates the natural gas service areas in Columbia County.

Natural gas is brought into Columbia County by large underground pipelines that deliver gas to local distribution systems. Several large underground natural gas pipelines run through Columbia County and are illustrated on Map 4-6 in Appendix I. The location and capacity of these natural gas lines is important to economic development in the County. In particular, access to natural gas can be a major factor in a business or industry choosing to locate in the County. Support should be given to maintaining and improving access to natural gas in Columbia County, when appropriate.

In addition to natural gas pipelines, one additional underground pipeline crosses Columbia County. The Lakehead Pipeline runs diagonally in a north-south direction through the County. This pipeline is part of the longest liquids pipeline in the world delivering over 2 million gallons of crude oil from Canada to the Chicago area per day. No direct access to the oil in the pipeline exists within Columbia County, however pumping stations are located within the County. The location of the pipeline is illustrated on Map 4-6 in Appendix I. The location of pipelines in the County should be considered when determining the location of residential uses in the County.

4.4.10 Cemeteries

Columbia County contains 110 known cemeteries. These cemeteries range from small family plots to large municipal facilities with some dating back to the 1800's. Map 4-7 shows the locations of known cemeteries in the County. Cemetery space appears to be adequate for timeframe covered by this Plan.

4.4.11 Health Care Facilities

The availability of adequate health care facilities and services are important for measuring the attractiveness of a community in which to live and work. Columbia County has a wide variety of health care facilities available within the County. In addition, the County's close proximity to Dane County and the City of Madison provides access to additional health care resources that are not available in Columbia County.

The following two hospitals are located in Columbia County and serve its residents:

◆ Divine Savior Healthcare

In October 2003, Divine Savior opened a new state-of-the-art facility in the City of Portage, replacing an undersized and outdated facility. The inpatient facility includes a 40-bed medical/surgical unit with private rooms and a 6-bed intensive care unit. The hospital has a staff of 640 people and many volunteers. Divine Savior's Emergency Department physicians and nurses provide comprehensive, round-the-clock emergency services. They also maintain their own EMS service, which is integrated with the Emergency Department. Other services include nursing therapy, dietary, laboratory, radiology, cardiopulmonary, social services, speech, audio logy, extended and home care and spiritual care personnel.

◆ Columbus Community Hospital

Columbus Community Hospital, located in the City of Columbus, is a 53-bed acute care facility offering a wide range of inpatient and outpatient services. The hospital employs 200 employees and 100 volunteers. A new 15,000 square foot Emergency Department was opened in March 2004. The

\$3.4 million renovation addressed spatial needs and improved patient flow. In addition, the construction of a 27,000 square foot Medical Office Building at the hospital was also completed in April 2004.

In addition to the two hospitals located within Columbia County, hospitals in adjacent counties also serve the residents of Columbia County. These hospitals include:

- The Beaver Dam Community Hospital, City of Beaver Dam, Dodge County
- The Waupun Memorial Hospital, City of Waupun, Dodge County
- St. Clare Hospital, City of Baraboo, Sauk County
- Reedsburg Area Medical Center, City of Reedsburg, Sauk County
- Sauk Prairie Memorial Hospital, Prairie Du Sac, Sauk County
- St. Mary's Medical Center, City of Madison, Dane County
- University of Wisconsin Hospital, City of Madison, Dane County
- Meriter Hospital, City of Madison, Dane County

Access to hospitals and quality health care appears to be adequate for the duration of the planning period. In addition to the hospital facilities listed above, there are several medical and health care clinics throughout Columbia County. These include clinics affiliated with UW Health University and St. Mary's/Dean Ventures Inc. There are also numerous chiropractic clinics, dentists, optometrists, and physical therapy providers to accommodate the needs of the County's residents.

Population projections included in the Issues and Opportunities Element of this Plan indicated that the County's population is aging, a fact consistent with national trends. As the County's population ages, the demand for long-term care, nursing homes, community based residential facilities, and similar elder care facilities increases. The shifting of baby-boomers into older age groups further indicates that the demand for these facilities will increase.

The following facilities are currently located in Columbia County:

- Columbus Nursing & Rehabilitation Center, Columbus, 97 beds, for profit
- Lodi Good Samaritan Center, Lodi, 91 beds, voluntary nonprofit corporation
- Divine Savior Healthcare Inc., Portage, 110 beds, voluntary nonprofit church
- Wisconsin Dells Health & Rehabilitation Center, 90 beds, proprietary corporation
- Columbia Health Center, Wyocena, 124 beds, county owned
- The Barrington I, Wisconsin Dells, 20 person capacity
- The Barrington II, Wisconsin Dells, 20 person capacity
- The Remington House, Pardeeville, 20 person capacity
- Edelweiss Gardens I, Portage, 14 person capacity
- Edelweiss Garden II, Portage, 15 person capacity
- Lake Place Group Home, Portage, 8 person capacity
- Larson House I, Columbus, 20 person capacity
- Larson House II, Columbus, 18 person capacity
- Maple Ridge Elderly Care, Portage, 20 person capacity
- Northview II, Portage, 14 person capacity
- Northview III, Portage, 14 person capacity
- Our House LLC, Lodi, 16 person capacity
- Sunny Ridge LLC, Rio, 8 person capacity

Columbia County should continue to monitor the need for these types of facilities and assist whenever possible and practical in meeting the demand for assisted living facilities.

4.4.12 Childcare Facilities

The availability of quality childcare facilities is important to the wellbeing of Columbia County's children and to the County's economy. Quality childcare provides children a safe and secure place while their parents are away at work allowing parents to hold a job and contribute to the area's economy.

A license from by the Wisconsin Department of Health and Family Services is required for childcare providers that care for four or more children under the age of seven. Two types of licenses are available, a group childcare license for nine or more children and a Family childcare license for four to eight children. Columbia County also provides certification of childcare providers who care for up to three children. Licensing or certification of a childcare provider is required if they care for children whose family receives funding assistance from a government program. In addition to licensed or certified childcare providers, numerous in home childcare providers exist in the County. The availability of childcare appears adequate for the duration of the planning period. Table 4-5 lists the licensed childcare providers in Columbia County in 2003.

TABLE 4-5
Licensed Childcare Providers, Columbia County, 2003

<p><u>Village of Arlington</u></p> <ul style="list-style-type: none"> ○ St. Peters Day Care & Preschool 	<p><u>City of Lodi</u></p> <ul style="list-style-type: none"> ○ Adela's Day Care ○ Country Charm Child Care ○ Crystal Lake Campground Day Camp ○ Donna's Day Care ○ Diaper's To Diplomas ○ Kiddie Korner of Lodi, Inc. ○ Kelley's Day Care ○ Lodi Nursery Center Preschool ○ Manke Family Day Care ○ Right Track Day Care ○ Starbright Day Care ○ Sunshine Playhouse Development Center ○ Tender Heart Day Care ○ TLC Learning Center, Inc.
<p><u>Village of Cambria</u></p> <ul style="list-style-type: none"> ○ Amkids ○ Country Rascals Christian Day School 	<p><u>City of Portage</u></p> <ul style="list-style-type: none"> ○ Alphabet Express ○ Hugs & Kisses Day Care ○ Kathy's Country Kids ○ Kiddie Korral ○ Learning Tree Day Care Center, Inc. ○ Linda's Child Care ○ Lisa's Little People ○ The Little School ○ Nikki's Family Day Care ○ Open Arms Day Care Center ○ Playday Day Care ○ Portage Before/After School Program ○ Portage Head Start Center Renewal Unlimited ○ Precious Years Day Care ○ Tammy's House ○ Teddy Bear Family Day Care ○ UMOs Migrant Day Care
<p><u>Village of Fall River</u></p> <ul style="list-style-type: none"> ○ Ann Taurick Family Day Care ○ Bunny Hop Day Care 	<p><u>City of Wisconsin Dells</u></p> <ul style="list-style-type: none"> ○ Jim McClyman Family Day Care ○ Joyce Ragan Family Day Care ○ Kountry Kids ○ Little Tots ○ Mawbey Day Care ○ St. Cecelia's Day Care ○ Sweeney's Family Day Care
<p><u>Village of Pardeeville</u></p> <ul style="list-style-type: none"> ○ A Home Away From Home Day Care ○ Diane's Family Day Care ○ Koality Care Day Care ○ Kountry Cuddlers Family Day Care ○ Once Upon A Time Day Care ○ Pine Playhouse Child Care Center ○ Sunshine Preschool 	
<p><u>Village of Poynette</u></p> <ul style="list-style-type: none"> ○ Country Critters Day Care ○ Main Street Youngsters ○ Teddy Bear Day Care ○ TLC Family Day Care 	
<p><u>Village of Randolph</u></p> <p>None in Columbia County (Available in Dodge County)</p>	
<p><u>Village of Rio</u></p> <ul style="list-style-type: none"> ○ Bev's Day Care ○ Margie's Learning Express ○ Precious Moments Family Day Care ○ Rio Street Rascals ○ Teddy Bear Day Care 	
<p><u>Village of Wvocena</u></p> <ul style="list-style-type: none"> ○ The Punkin Patch ○ Storybook Center 	
<p><u>City of Columbus</u></p> <ul style="list-style-type: none"> ○ Beal's Day Care ○ Cardinal Country Day Care ○ Columbus Club House ○ Columbus Preschool ○ Head Start/Central WI-Columbus Renewal Unlimited ○ Mary's Family Dare Care ○ Redbud Day Care LLC ○ Sylvester and Tweety Day Care 	

Source: Columbia County UW-Extension Office

4.4.13 Law Enforcement

The Columbia County Sheriff has jurisdiction over all areas of the County including all 21 Towns. Law enforcement services are provided by the County Sheriff's Department in all parts of the County not covered by a municipal police force. The County Sheriff's Department also has contracts with the Villages of Arlington, Doylestown, Friesland and Pardeeville to provide police services. In communities with their own police force the municipal police force handles law enforcement matters, these municipal departments are discussed in more detail below.

The main duties of the Columbia County Sheriff's department are to maintain the County Jail, serve civil process, investigate deaths and crimes, provide court services, provide 911 dispatch services, and enforce Federal and State laws and County ordinances. The Department's staff currently includes 92 full-time employees. Due to population growth, increased criminal activity, and reduction in federal and state funding the staff will need to be increased by two deputies per shift within the next 10 years. The department's vehicle inventory includes 39 active law enforcement vehicles. The Department also has 21 special use vehicles that include two Harley Davidson patrol motorcycles. In addition, the Department loans 26 vehicles to other County departments.

Additional duties of the Department include the Boat and Snowmobile Patrol and the County's K9 units. Boat Patrol duties include patrolling the waterways of Columbia County, enforcement of State laws and County Ordinances pertaining to water safety, and search for drowned or missing persons in water-related incidents. The Snowmobile Patrol duties include patrolling County snowmobile trails, on a limited basis, in cooperation with the Wisconsin Department of Natural Resources. The main duties of the K9 units for the Columbia County Sheriff's Office are to remain active responding to increased calls for canine searches involving vehicle, building and school searches. They also provide public services and awareness programs in public demonstrations as well as assist in a drug interdiction program throughout the year.

Aside from providing law enforcement patrols of the County, the largest responsibility of the Sheriff's Department is the County Jail. The Columbia County Jail has the responsibility of accepting and housing persons sentenced to the jail by the court system. In addition persons are held in the county jail after being arrested by warrant, being arrested without a warrant pending a court appearance, or for violations of probation. The Columbia County Jail also holds inmates from state institutions and other county inmates as requested. Every year the number of offenders escalates and sentences are getting longer, therefore increasing the demand to house inmates securely and safely. As a result, the Sheriff's Department has recently expanded the County Jail and Huber facility.

In addition to the Columbia County Sheriff's Department, seven villages and all four cities in Columbia County provide law enforcement services. The Wisconsin State Patrol also has nine full-time employees who are assigned to Columbia County.

Local police departments operating in Columbia County include the following:

- ◆ Cambria Police Department

The Cambria Police Department is located at 111 W. Edgewater in Cambria and provides law enforcement service to the Village of Cambria. The staff includes one full-time chief and three part-time employees. There is the need to increase the staff by one additional person in the next few years.

- ◆ Columbus Police Department

The Columbus Police Department provides law enforcement services to the City of Columbus. The Police Department facility was built in 1892 and is located on N. Dickason Blvd. The facility is too small for current needs and lacks security, safety and a holding area. There are current plans for a new facility scheduled to be complete in 2005. The staff includes one chief, two lieutenants, one acting investigator, seven full-time officers and one part-time officer, one administrative assistant/dispatch supervisor, five full-time dispatchers and one part-time dispatcher and eight crossing guards.
- ◆ Fall River Police Department

The Fall River Police Department is located at 641 S. Main Street in Fall River. The Police Department provides all law enforcement services for the Village of Fall River. They currently have five employees and plan to hire an additional person in the near future.
- ◆ Lodi Police Department

The Lodi Police Department is located at 142 S. Main Street in Lodi. The Lodi Police Department provides law enforcement services within the City of Lodi. Staff includes one full-time chief, four officers and one civil administrative assistant.
- ◆ Portage Police Department

The Portage Police Department provides law enforcement services to the City of Portage which consists of approximately 25 square miles. The staff includes 22 officers, five dispatchers and three secretaries. Equipment includes ten squad cars, two bullet-proof shields, bullet proof vests, defibrillators, and a dispatch center.
- ◆ Poynette Police Department

The Poynette Police Department provides law enforcement services to the Village of Poynette. It is located at 106 S. Main Street in Poynette. Staff includes one full-time chief and one administrative secretary, three officers, and one school liaison. Additional staff and computer upgrades will be needed in the next 5-10 years to accommodate population growth.
- ◆ Randolph Police Department

The Randolph Police Department is located at 136 West Stroud Street in the Village of Randolph. Staff includes two full-time officers, one of which is the chief, and three part-time officers. The Department has two squad cars. Current space for the Department is limited, however vacant office space adjacent to the Department is available and may be utilized in the near future.
- ◆ Rio Police Department

The Rio Police Department provides law enforcement services for the Village of Rio. Staff includes one full-time chief and one officer and one part-time officer. The Police Department resides in the Village Hall on Lincoln Avenue.
- ◆ Wisconsin Dells Police Department

The Wisconsin Dells Police Department provides law enforcement services to City of Wisconsin Dells. The Police Station is located at 712 Oak Street in Wisconsin Dells and has approximately 2400 sq. ft of office space. This facility includes two holding cells. A new facility is planned for 2007, which would increase space significantly. Current staff includes 12 full-time officers, one part-time officer, six full-time dispatchers, one full-time and one part-time parking control officer and several limited term employees during the summer months.

◆ Wyocena Police Department

The Wyocena Police Department provides law enforcement services to the village and is located at the newly constructed Village Hall on E. Dodge Street. Staff includes one part-time chief and two part-time officers. The Department has one squad car.

4.4.14 Fire and EMS Facilities

Columbia County's fire and emergency medical services are provided by local fire and rescue departments. There are 19 fire districts and 14 EMS districts. The location of the fire districts in Columbia County are illustrated on Map 4-8 in Appendix I and the location of EMS districts are illustrated on Map 4-9 in Appendix I.

Below are descriptions of most fire departments and/or emergency medical services providers in Columbia County:

◆ Arlington Fire Department

The Arlington Fire Department provides fire service and EMS to the Village of Arlington, Town of Arlington and portions of the Town of Leeds and Lowville. Staff includes 27 volunteer firefighters and 12 paramedics. There is currently a need for an additional 13 firefighters. The Fire Station was built in 1976 and has six bays. A new fire station will likely be needed in the next ten years. Equipment includes two pumpers, two tankers, one grass truck, one heavy rescue unit, and two ambulances. The requirement for a replacement pumper will occur in the next two to three years.

◆ Briggsville Fire Department

The Briggsville Fire Company covers Briggsville, a portion of the Town of Lewiston and two Townships outside of Columbia County. They also have mutual response contract with Wisconsin Dells, Endeavor and Oxford. The Briggsville Fire Company started in 1961 and has 27 volunteer fire fighters and six Emergency Medical Technicians. The Fire Station is located on County Highway A in Briggsville. The Building was constructed in late 1980 and has 4800 sq. ft. It is an open design which houses six units. Equipment includes one rescue truck, two pumpers, two tankers, and two brush trucks. In the future, it will be important to maintain the number of current of volunteers. It would also be desirable to add an ambulance station near the Fire Station. An additional three to four Emergency Medical Technicians will be needed to support this endeavor.

◆ Cambria Fire Department

The Cambria Fire Department covers the Village of Cambria along with portions of the Town of Courtland, Springvale, Scott and Randolph. The Fire Department consists of all volunteer members including a Fire Chief and approximately 25 fire fighters. The Fire Station is located in downtown Cambria at 224 West Edgewater Street. The Cambria Community Ambulance is also available for non-fire related emergencies.

◆ Columbus Fire Department

The Columbus Fire Department provides fire service to the City and Town of Columbus and portions of the Town of Hampden in Columbia County. EMS service is provided by Heartline EMS. The Department also provides fire protection to parts of Dodge and Dane Counties. Staff includes one full time employee and 39 paid on-call volunteers. The Fire Station was constructed in 1973 and has a total of 7500 sq. ft. A new fire station will likely be needed in the next ten years. Firefighting equipment includes three tankers, two pumpers, three trucks, and one grass truck. The department's water supply rating is good.

- ◆ Deforest Fire Department

DeForest Area Fire and EMS is headquartered in the DeForest Public Safety Building located at 305 W. Holum Street. The building was constructed in 1998 at a cost of 2.1 million dollars. The fire department occupies three offices, a training/meeting room and the fire garage. The garage has seven bays, five of which are double deep and drive through. The DeForest Police Department occupies the remainder of the space in the facility. The DeForest Area Fire and EMS covers both the Town of Hampden and Leeds in Columbia County. Staff includes 11 employees for Fire and EMS. The department maintains a fleet of nine vehicles.
- ◆ Doylestown Fire Department

The Village of Doylestown provides fire service to the Village only. EMS is provided by Rio EMS. Staff includes 23 volunteer fire fighters and the department is in need of about five more. The main fire station was constructed in 1974 and is in need of replacement. Currently trucks and equipment are stored in two buildings. It would be more efficient and convenient to house all equipment in one location. Equipment includes one engine, two tankers, one brush truck, and one equipment truck. The replacement of a tanker would increase reliability. The department's water supply rating is fair.
- ◆ Fall River Fire Department

The Fall River Fire Department provides fire service to the Village of Fall River, the Town of Fountain Prairie, six sections of the Town of Courtland, and four sections of the Town of Otsego. EMS service is provided to the Village of Fall River and the Town of Fountain Prairie only. Staff includes 35 volunteer fire fighters and 16 paramedics. The Fire Station was constructed in 2002 and has 13,750 square feet with eight bays and appears to be adequate to meet the department's needs at this time. Equipment includes an ambulance, two pumpers, two tankers, one rescue truck, one grass truck, one six wheeler, one Jeep for grass fires, one van for mutual aid response and one hazmat trailer. The need for a new ambulance is substantial at this time. The department's water supply rating is good.
- ◆ Friesland Fire Department

The Friesland Fire Department services the Village of Friesland and a portion of the Town of Randolph. The entire staff consists of volunteer members including a Fire Chief and approximately 25 volunteers. The Fire Station is located at 135 S. Madison Street in Friesland. The facility was an old school which was renovated to house the Village Hall, Post Office and Fire Station. Several volunteer first responders are available, but ambulance service is contracted with Randolph Rescue Service.
- ◆ Lodi Fire Department

The Lodi Fire Department provides fire service to the City of Lodi, the Town of Lodi, and the eastern portion of the Town of West Point. EMS is provided by Lodi EMS. There is a part-time Fire Chief and two full time Emergency Medical Technicians. There are 32 firefighting volunteers, 19 volunteer EMT's and 15 drivers. The current Fire Station was built in 1954 with an addition in 1973. The building is 6,467 square feet with seven bays. A new building is needed within the next 10 years. Firefighting equipment includes three engines, two ambulances, one heavy rescue, two tankers, two ATV's, one rescue sled, and three emergency generators. There is concern over the declining volunteers and increased call volume. Possible full-time staff should be considered for the future. The department's water supply rating is good.
- ◆ Merrimac Fire Department

The Merrimac Fire Department provides fire service to the southwestern corner of the Town of Caledonia. EMS is provided by Devine Savior EMS. In addition, they have contracts with the Village

of Merrimac and the Town of Merrimac. There are approximately 30 volunteers on call. The current facility was built in 1967 and has 2,800 sq. ft. An addition of 3,500 sq. ft. was built in 1999. Firefighting equipment includes two engines, two tankers, two brush trucks, one response truck, one personnel van, and one rescue boat. There is the need for a new engine and brush truck. The department's water supply rating is good.

◆ Pardeeville Fire Department

The Pardeeville Fire Department covers the Village of Pardeeville and the Town of Marcellon and a portion of the Town of Scott, Springvale, and Wyocena. Current staff includes 36 volunteers and two emergency medical technicians. The need for at least 15 additional people will occur in the future. The Fire Station is located at 110 Third Street in Pardeeville and was built in 1986. Equipment includes three engines, two tankers, two brush trucks, one squad car, and a variety of rescue equipment.

◆ Portage Fire Department

The Portage Fire Department provides fire service to the City of Portage, all of the Towns of Fort Winnebago and Pacific, and parts of the Towns of Caledonia and Lewiston. Divine Savior EMS provides emergency medical services in this area. The Portage Fire Department has a mutual aid agreement with all Columbia County fire departments as well as the Baraboo and Lake Delton Fire Departments. The department employs seven full-time firefighters and has 23 paid-on-call firefighters available. The current Fire Station was constructed in 1972 and has six double deep drive-through bays. Plans for a second station are being considered for the future. Firefighting equipment includes one command vehicle, one inspection vehicle, three engines, two tankers, one grass unit, one brush unit, one hovercraft, one heavy rescue, one squad-hazmat vehicle, one aerial platform, one boat and two extrication units. There is the need for replacement equipment and increased full-time firefighters. The department's water supply rating is fair in the Towns and excellent in the City of Portage.

◆ Poynette - Dekorra Fire Department

The Poynette - Dekorra Fire Department provides fire service and EMS to the Village of Poynette, the entire Town of Dekorra, and part of the Town of Lowville. There are 55 volunteers that serve the department. Future personnel needs include the possibility of full-time fire fighters. The fire station was constructed in 1979 with 9000 sq. ft and has four bays. A building is planned for 2008 that will have 14,000 sq. ft. Firefighting equipment includes three ambulances, one CPM Engine, two quints, one airboat, and a 3,200 gallon tank truck. The department's water supply rating is excellent.

◆ Randolph Fire Department

The Randolph Fire Department provides fire service and EMS to the Village of Randolph and parts of the Towns of Randolph and Courtland in Columbia County. The Department also serves parts of two Towns in Dodge County. The Fire Station has 8000 sq. ft with six bays and was built in 1994 with an addition in 1997. Firefighting equipment includes three engines, two tankers, two brush units, one ambulance and three special units. The department's water supply rating is good.

◆ Rio Fire Department

The Rio Fire Department services the Village of Rio along with the Towns of Otsego, Wyocena, Lowville, Springvale, Leeds and Hampden. Staff includes 34 volunteer fire fighters and 25 Emergency Medical Technicians. The Fire Station was constructed in 1979 with 9600 sq. ft of space and five bays. Equipment includes three pumpers, four tankers, and miscellaneous rescue equipment.

◆ Sauk City

The Sauk Fire District services the Western portion of the Town of West Point. The staff includes 37 volunteers. The current Fire Station, located in Sauk City, was built in 1960 and has 15,960 sq. ft. Remodeling to the facility will occur in 2005. Equipment includes three engines, one platform ladder, two tankers, one squad car, one suburban truck, one brush truck and an ATV.

◆ Sun Prairie Fire Department

The Sun Prairie Fire Department services the City of Sun Prairie along with the Towns of Sun Prairie, Burke and Bristol in Dane County and part of the Town of Hampden in Columbia County. The Fire Station is located at 135 N. Bristol Street in Sun Prairie. The current Fire Station has three drive through bays and one additional bay on the side. A new Public Safety Building is scheduled to begin construction in August of 2005. The staff consists of 40 volunteer members. Equipment includes three fire trucks, two tankers, one ladder, one squad, two brush trucks and an antique parade truck.

◆ Wisconsin Dells Fire Department (Kilbourn Fire Department)

The Kilbourn Fire Department protects an area of 210 square miles that includes areas in the Towns of Newport and Lewiston. The Fire Department operates out of one station, which is located at 712 Oak Street in Wisconsin Dells. The department was formed in 1891 and is a completely unpaid volunteer fire department.

◆ Wyocena Fire Department

The Village of Wyocena Fire Department services fire response for the entire Village of Wyocena. EMS is provided by Rio EMS. There are approximately 18 on-call volunteers. The need for additional volunteers is important at this time. The Fire Station is 2400 sq. ft. and has 3 bays. The plans for a new Fire Station are in the preliminary discussions with the Village of Wyocena. Fire equipment includes one pumper, one tanker, one brush truck, and one parade truck. A request for a new rescue pumper has been submitted through the Fire Act Program, which is a Federal Grant program.

4.4.15 Libraries

Public libraries serve an important function in making a wide range of informational materials available to the County's population. Demand for library services has been on the increase and is expected to continue to increase for the foreseeable future. Support should be given to improve and expand libraries whenever possible to ensure all county residents have at least a minimal level of access to informational materials.

Columbia County has 12 municipal libraries that serve the County as listed below:

- | | |
|--|--|
| ◆ Angie W. Cox Public Library
119 N. Main Street
Pardeeville, WI 53954 | ◆ Poynette Public Library
118 N. Main Street
Poynette, WI 53955 |
| ◆ Columbus Public Library
223 W. James Street
Columbus, WI 53925 | ◆ Prairie du Sac Public Library
560 Park Ave.
Prairie Du Sac, WI 53578 |
| ◆ Jane Morgan Memorial Library
109 W. Edgewater Street
Cambria, WI 53923 | ◆ Hutchinson Memorial Library
228 N. High Street
Randolph, WI 53956 |
| ◆ Kilbourn Public Library
620 Elm Street
Wisconsin Dells, WI 53965 | ◆ Rio Public Library
324 W. Lyons Street
Rio, WI 53960 |
| ◆ Lodi Woman's Club Public Library
130 Lodi Street
Lodi, WI 53555 | ◆ Sauk City Public Library
515 Water Street
Sauk City, WI 53583 |
| ◆ Portage Public Library
253 W. Edgewater Street
Portage, WI 53901 | ◆ Wyocena Public Library
284 S. Columbus Street
Wyocena, WI 53969 |

4.4.16 Schools

Columbia County is served by all or parts of 15 public school districts. These public school districts contain 43 elementary schools, 15 middle schools, 15 high schools, two alternative high schools, two charter schools, and two academies. However, not all of these facilities are located in Columbia County. Map 4-10 in Appendix I illustrates the boundaries of the school districts and the locations schools in Columbia County. Public school districts serving Columbia County are as follows:

- Baraboo School District
- Cambria – Friesland School District
- Columbus School District
- Deforest Area School District
- Fall River School District
- Lodi School District
- Markesan School District
- Pardeeville Area School District
- Portage Community School District
- Poynette School District
- Randolph School District
- Rio Community School District
- Sauk Prairie School District
- Sun Prairie School District
- Wisconsin Dells School District

Enrollments at eight of the 15 public school districts in the County have declined between 2000 and 2004. The largest declines in enrollment were at the Markesan School District with a loss of 135 students or 13.64 percent, however only a small portion of the district exists in Columbia County. Of districts with a significant portion of their area within Columbia County, the Columbus School district had the largest numerical decline in students losing 59 students or 4.74 percent. The Pardeeville Area School District and the Rio School District each lost 55 students for declines of 5.65 and 9.63 percent respectively over the four years. The Cambria-Friesland School District also had a significant decline, losing 19 students for a 3.76 percent decrease.

In contrast, six school districts that serve the County have increased enrollments between 2000 and 2004. The Sun Prairie School District had the highest increase adding 464 students for a 9.72 percent increase, however only a small portion of the district exists in Columbia County. Of districts with a significant portion of their area within Columbia County, the Randolph School District had the highest percentage increase adding 39 students for a 7.68 percent increase followed by the Lodi School District that added 98 students for a 6.18 percent increase. The number of students in Portage School District stayed even during the four years. Table 4-6 provides enrollment information between 2000 and 2004 for all school districts serving Columbia County including enrollment information for individual schools in each district.

TABLE 4-6
Public School District Enrollment, Columbia County

District/ School	Grades	2000-2001	2001-2002	2002-2003	2003-2004	# Change 2000 - 2004	% Change 2000 -2004
BARABOO	All Grades	3,087	3,046	3,053	3,013	(74)	(2.40%)
East Elementary School	PK thru 5	354	336	318	320	(34)	(9.60%)
Fairfield Center Elementary School	PK thru 5	115	122	118	97	(18)	(15.65%)
North Freedom Elementary School	PK thru 5	183	180	177	178	(5)	(2.73%)
South Elementary School	PK thru 5	243	233	229	236	(7)	(2.88%)
West Elementary School	K thru 4	109	104	106	114	5	4.59%
Wilson Elementary School	PK thru 5	309	307	316	327	18	5.83%
Baraboo Middle School	6 thru 8	747	739	753	700	(47)	(6.29%)
Baraboo High School	9 thru 12	1,027	1,025	1,036	1,041	14	1.36%
CAMBRIA - FRIESLAND	All Grades	505	514	471	486	(19)	(3.76%)
Cambria-Friesland Elementary	Pre-K thru 5	234	245	210	227	(7)	(2.99%)
Cambria-Friesland Mid/High	6 thru 12	271	269	261	259	(12)	(4.43%)
COLUMBUS	All Grades	1,244	1,224	1,185	1,185	(59)	(4.74%)
Columbus Elementary	K thru 3	300	295	295	297	(3)	(1.00%)
Columbus Middle School	4 thru 8	465	432	434	435	(30)	(6.45%)
Columbus High School	9 thru 12	479	497	456	453	(26)	(5.43%)
DEFOREST AREA SCHOOL	All Grades	3,028	3,037	3,111	3,151	123	4.06%
Holum Kindergarten Center	PK thru K	225	204	233	37	(188)	(83.56%)
Eagle Point Elementary	K thru 4	254	215	202	292	38	14.96%
Morrisonville Elementary School	1 thru 4	58	35	60	54	(4)	(6.90%)
Windsor Elementary	K thru 4	374	323	311	379	5	1.34%
Yahara Elementary	K thru 4	433	340	333	410	(23)	(5.31%)
De Forest Middle School	5 thru 8	715	943	964	986	271	37.90%
DeForest High School	9 thru 12	969	977	1008	993	24	2.48%
FALL RIVER	All Grades	439	448	452	437	(2)	(0.46%)
Fall River Elementary	Pre-K thru 5	203	216	224	224	21	10.34%
Fall River High School	6 thru 12	236	232	228	213	(23)	(9.75%)
LODI	All Grades	1,585	1,641	1,654	1,683	98	6.18%
Lodi Primary School	K thru 2	362	376	374	375	13	3.59%
Lodi Elementary School	3 thru 5	380	389	382	379	(1)	(0.26%)
Lodi Middle School	6 thru 8	366	385	399	402	36	9.84%
Lodi High School	9 thru 12	456	476	483	500	44	9.65%
Charter School	N/A	21	15	16	27	6	28.57%
MARKESAN	All Grades	990	948	858	855	(135)	(13.64%)
Markesan Elementary School	PK thru 6	369	349	319	397	28	7.59%
Markesan Middle School	7 thru 8	226	235	219	152	(74)	(32.74%)
Markesan High School	9 thru 12	395	364	320	306	(89)	(22.53%)
PARDEVILLE AREA	All Grades	973	935	1016	918	(55)	(5.65%)
Marcellon Elementary	Pre -K thru 1	55	65	60	51	(4)	(7.27%)
Pardeville Elementary School	K thru 6	475	423	462	392	(83)	(17.47%)
Pardeville Jr. High School	7 & 8	145	145	175	173	28	19.31%
Pardeville High School	9 thru 12	298	302	319	302	4	1.34%
PORTAGE COMMUNITY	All Grades	2,561	2,542	2,622	2,561	0	0.0%
Caledonia Elementary	K thru 6	75	78	69	64	(11)	(14.67%)
Endeavor Elementary School	K thru 6	100	106	115	121	21	21.00%
Fort Winnebago Elementary	K thru 6	93	74	82	75	(18)	(19.35%)
Lewiston Elementary School	K thru 6	79	71	71	73	(6)	(7.59%)
Rusch Elementary School	3 thru 6	285	272	317	289	4	1.40%
Woodbridge Primary/John Muir Elem.	Pre-K thru 6	598	619	656	651	53	8.86%
Portage Junior High School	7 & 8	403	397	377	387	(16)	(3.97%)
Portage High School	9 thru 12	904	899	885	857	(47)	(5.20%)
River Crossing Charter School	9 thru 12	N/A	N/A	20	15	15	100.00%
Portage Academy of Achievement	N/A	24	26	30	29	5	20.83%

TABLE 4-6 (cont.)
Public School District Enrollment, Columbia County

District/ School	Grades	2000-2001	2001-2002	2002-2003	2003-2004	# Change 2000 - 2004	% Change 2000 -2004
POYNETTE	All Grades	1,094	1,095	1,072	1,103	9	0.82%
Arlington Elementary School	K thru 4	90	92	88	81	(9)	(10.00%)
Dekorra Elementary School	K thru 4	99	95	92	75	(24)	(24.24%)
Poynette Elementary School	1 thru 5	281	301	281	327	46	16.37%
Poynette Middle School	6 thru 8	281	264	265	270	(11)	(3.91%)
Poynette High School	9 thru 12	343	343	346	350	7	2.04%
RANDOLPH	All Grades	508	492	521	547	39	7.68%
Randolph Grade/Middle School	Pre-K thru 8	333	308	324	341	8	2.40%
Randolph High School	9 thru 12	175	184	197	206	31	17.71%
RIO COMMUNITY	All Grades	571	557	556	516	(55)	(9.63%)
Rio Elementary School	Pre-K thru 5	265	273	267	253	(12)	(4.53%)
Rio Middle/High School	6 thru 12	306	284	289	263	(43)	(14.05%)
SAUK PRAIRIE	All Grades	2,621	2,625	2,672	2,639	18	0.69%
Black Hawk Elementary	K thru 2	127	126	126	120	(7)	(5.51%)
Grand Avenue Elementary	3 thru 5	398	397	389	403	5	1.26%
Merrimac Elementary	K thru 4	75	69	71	51	(24)	(32.00%)
Spruce Street Elementary	PK thru 2	389	348	365	368	(21)	(5.40%)
Tower Rock Elementary	3 thru 5	110	123	107	112	2	1.82%
Sauk Prairie Middle School	6 thru 8	683	703	683	654	(29)	(4.25%)
Sauk Prairie High School	9 thru 12	839	859	931	931	92	10.97%
SUN PRAIRIE	All Grades	4,776	4,931	4,987	5,240	464	9.72%
Bird Elementary	PK thru 5	405	384	444	480	75	18.52%
Eastside Elementary	PK thru 5	382	489	473	483	101	26.44%
Northside Elementary	PK thru 5	430	451	414	512	82	19.07%
Royal Oaks Elementary	PK thru 5	571	484	487	529	(42)	(7.36%)
Westside Elementary	PK thru 5	378	452	433	435	57	15.08%
Patrick Marsh Middle School	6 thru 8	547	554	582	587	40	7.31%
Prairie View Middle School	6 thru 8	514	536	557	584	70	13.62%
Sun Prairie High School	9 thru 12	1521	1535	1,552	1593	72	4.73%
Sun Prairie Alternative High School	9 thru 12	28	40	37	28	0	0.00%
Dane County Transition High School	9 thru 12	0	6	8	9	9	100.00%
WISCONSIN DELLS	All Grades	1,779	1,735	1,777	1,724	(55)	(3.09%)
Lake Delton Elementary	K thru 5	207	213	199	195	(12)	(5.80%)
Neenah Creek Elementary	K thru 5	99	93	86	83	(16)	(16.16%)
Spring Hill Elementary	Pre-K thru 5	467	430	445	430	(37)	(7.92%)
Spring Hill Middle School	6 thru 8	412	412	443	420	8	1.94%
Wisconsin Dells High School	9 thru 12	584	577	592	579	(5)	(0.86%)
Kilbourn Academy	9 thru 12	10	10	12	17	7	70.00%

Source: Wisconsin Department of Public Instruction

In addition to public schools, Columbia County is served by ten private schools. These private schools consist mainly of schools associated with local churches. Most of the private schools provide instruction up to the eighth grade level with the exception of the Wisconsin Academy in Columbus that provides instruction for grades 9 through 12. Similar to some public schools, many private schools have experienced a decline in enrollment over the four school years between 2000 and 2004. Of the three private schools that showed increases in enrollment during this period, Petersen Elementary in the City of Columbus had the largest percentage increase adding 11 students for 91.7 percent increase in students. St. John's in the Village of Pardeeville had the largest numerical increase adding 12 students for a 46.2 percent increase. Table 4-7 provides enrollment information for private schools serving Columbia County.

TABLE 4-6
Private School Enrollment, Columbia County

Community/School	Grades	2000-2001	2001-2002	2002-2003	2003-2004	# Change 2000 - 2004	% Change 2000 -2004
City of Columbus							
Petersen Elementary	01 thru 07	12	15	21	23	11	91.7
Saint Jerome Parochial	KG thru 08	162	162	156	151	(11)	(6.8)
Wisconsin Academy	09 thru 12	135	126	114	112	(23)	(17.0)
Zion Lutheran School	PK thru 08	107	99	92	81	(26)	(24.3)
Village of Pardeeville							
St. Johns	PK thru 02	N/A	26	27	38	12	46.2
City of Portage							
Saint John's Lutheran	PK thru 08	167	151	124	120	(47)	(28.1)
Saint Mary Catholic	PK thru 08	154	144	134	136	(18)	(11.7)
Village of Randolph							
Faith Christian	KG thru 08	27	29	31	35	8	29.6
Randolph Christian	PK thru 08	145	139	127	115	(30)	(20.7)
City of Wisconsin Dells							
Trinity Lutheran School	PK thru 06	52	65	70	72	20	38.5
Totals:	All Grades	961	956	896	883	(104)	(10.82)

Source: Wisconsin Department of Public Instruction

Residents of Columbia County also have access to a variety of post-secondary schools and technical colleges. Madison Area Technical College has a campus in the City of Portage, with its main campus 30 miles away in the City of Madison. The University of Wisconsin has a two-year center in the City of Baraboo in Sauk County. The UW Madison campus is a four-year campus, located approximately 30 miles from the County in the City of Madison, and is one of two doctoral universities in the UW System. Another four-year campus, UW Steven's Point, is located 60 miles north of Columbia County in the City of Steven's Point. In addition, both Ripon College in the City of Ripon and Edgewood College in the City of Madison are located approximately 40 miles from Columbia County.

4.4.17 Other Governmental Facilities

A variety of other governmental facilities provide services to Columbia County. Many of these facilities are listed below:

4.4.17.1 Columbia County Administrative Facilities

Columbia County maintains several public buildings or facilities. Most of these facilities are located in the City of Portage and the Village of Wyocena. Columbia County's public buildings and facilities are listed below. The locations of Columbia County's public buildings or facilities are illustrated on Map 4-11 in Appendix I.

- ◆ Carl C. Frederick Administration Building
The Carl C. Frederick Administration Building is located at 400 DeWitt Street in Portage. This facility houses the following departments: Building & Grounds, Accounting, Corporate Counsel, County Clerk, County Treasurer, District Attorney, Land Information, Planning & Zoning, Register of Deeds, Veterans Service, Real Property Lister, Circuit Courts, Clerk of Circuit Court, Child Support, Court Commission and Register in Probate.
- ◆ Health and Human Services Building
The Health and Human Services Building is located at 2652 Murphy Road in Portage. This facility houses the Health and Human Services Department.
- ◆ Columbia County Annex Building
The Columbia County Annex Building is located at 120 W. Conant Street in Portage. This facility houses the following departments: Human Resources, Land & Water Conservation, Management Information Services, University of Wisconsin Extension Service and Dairy Herd Improvement Agency.
- ◆ Highway and Transportation Department
The Highway and Transportation Department is located at 303 W. Old Hwy 16 in Wyocena. This facility houses the Highway and Transportation Department. The new highway building is a \$7.5 million facility approved as part of a bonding resolution in 2003. The project was originally proposed six years earlier because the existing facility was nearly a century old and had numerous inefficiencies and workplace hazards. Construction of the new 127,000 square-foot highway facility began in the summer of 2004 and was completed by year-end. Some of the new building's features include in-floor heat from 7.5 miles of underground tubing, a ventilated, heated painting facility, a moisture-free sandblasting facility, heated storage space for 62 truck and other large vehicles, a large parts department, and an indoor truck wash. The new facility greatly improves the safety, efficiency and working conditions for county highway employees. The new facility is anticipated to satisfy the county needs for decades to come. The Highway and Transportation Department also maintains five satellite shops at Cambria, Columbus, Lodi, Portage and Poynette.
- ◆ Columbia County Economic Development Corporation
The Columbia County Economic Development Corporation is located at 311 E. Wisconsin, Suite 108 in Portage.
- ◆ Columbia County Jail
The Columbia County Jail is located at 403 Jackson Street in Portage. A jail expansion project was approved as part of a \$20 million bonding resolution in 2003. The project was constructed on the site of the former Sheriff's Department Administrative Building and Columbia County Job Service Building that were demolished for the jail expansion project. The new structure is 76,000 sq. ft and have five stories. The facility will include a 192-beds for housing county inmates under the Huber provision. The lower level includes a kitchen, laundry facility, male/female locker rooms, a booking area and two administrative offices. The existing jail and new addition are connected with a hallway to accommodate the transfer of food and laundry.
- ◆ Law Enforcement Center
The Law Enforcement Center is located at 711 E. Cook Street in Portage. This facility houses the County Sheriff's Department and dispatch center, Medical Examiner's Office, Emergency Management Office and ARC of Columbia County. The Law Enforcement Center is located in the former John Roche Building that was remodeled as part of the Columbia County Jail

expansion project. The former Sheriff's Department Administrative Building was demolished as part of the project.

◆ Solid Waste Facility

The Solid Waste Facility is located at W7465 Hwy 16 in the Town of Pacific. This facility houses the Solid Waste Department and the County' composting and recycling facilities. These facilities were discussed in more detail in the Solid Waste Disposal and Recycling section of this element.

◆ Columbia Health Care Center

Columbia Health Care Center is located at 323 W. Monroe Street in Wyocena. This facility is a County run 124 bed assisted living facility.

◆ Columbia County Fairgrounds

The Columbia County Fair Grounds are located in Veteran's Memorial Park in the City of Portage. This 41.9-acre park is located on the southeast portion of the City between Superior Street and Wauona Trail. The park includes ball fields, play equipment, restroom facilities, showers, camping, and R.V. facilities. The park also hosts many of Portage's citywide celebrations and major softball tournaments.

4.4.17.2 Town Halls

Each Town government in Columbia County operates a town hall. The town halls are used to conduct town government meetings and to serve as administrative office for each town. The locations of town halls in Columbia County are illustrated on Map 4-11 in Appendix I.

4.4.17.3 Post Offices

Columbia County has 14 United States Post Offices that provide mail service to County residents. The locations of these Post Offices and their associated Zip Codes are listed below.

Zip Code			
Arlington	53911	Pardeeville	53954
Cambria	53923	Portage	53901
Columbus	53925	Poynette	53955
Doylestown	53928	Randolph	53956
Fall River	53932	Rio	53960
Friesland	53935	Wisconsin Dells	53965
Lodi	53555	Wyocena	53969

4.4.17.4 Correctional Institutions

In 1986, the Wisconsin Department of Corrections opened a maximum-security prison in Portage, known as the Columbia Correctional Institution. It encompasses 110 acres of land and houses adult male felons. It has an operating capacity of 600 inmates and a current population of 825. Within the perimeter, there are ten living units, each containing 50 cells and one 150-bed barrack unit currently housing minimum-security inmates. In addition to the living complexes, the physical plant of the institution includes a large visiting room, chapel, meeting rooms, health services area, staff offices, an intake and reception area, canteen, laundry, main kitchen, library, recreation field and gymnasium, an

industry building, school and vocational education workshops. The location of the Columbia Correctional Institution is illustrated on Map 4-11 in Appendix I.

5.0 AGRICULTURAL, NATURAL, AND CULTURAL RESOURCES

This element contains information on the agricultural, natural, and cultural resources of Columbia County. Items covered in this element include ground water, woodlands, prime agricultural areas, environmentally sensitive areas, threatened and endangered species, stream corridors and surface water, floodplains, wetlands, wildlife habitat, mineral resources, open spaces, recreational areas, historical and cultural resources, and community design. The reader is also encouraged to review the 2013 Columbia County Farmland Preservation Plan for additional data, maps, and policies related to agricultural resources.

5.1 AGRICULTURAL, NATURAL, AND CULTURAL RESOURCE VISION

- ◆ Columbia County's agricultural, natural, and cultural resources are regarded as irreplaceable resources to be protected for future generations.

5.2 AGRICULTURAL, NATURAL, AND CULTURAL RESOURCE GOALS AND OBJECTIVES

Goal 1: Preserve the most productive agricultural areas of the County.

- Objective 1:* Preserve and protect the best agricultural soils by developing and implementing appropriate land use regulations.
- Objective 2:* Focus new development in areas, on sites, and in forms (e.g., clusters) that will not adversely impact productive farmland in the County.
- Objective 3:* Review residential and other development proposals for potential impacts and encroachments on the land needed for agriculture.
- Objective 4:* Maintain the integrity of the agricultural (farmland preservation) zoning district by restricting the uses in this district to those related to agriculture.
- Objective 5:* Limit non-farm development on prime agricultural soils.
- Objective 6:* Implement a density-based standard for limited housing on lands planned for farmland preservation, including modest incentives for clustering of smaller lots as opposed to large residential parcels.
- Objective 7:* Encourage the owners of farmland to follow best practices to minimize impacts to the County's natural resources.
- Objective 8:* Support animal agriculture in the County, considering the management of large herds using livestock siting rules from the State of Wisconsin.
- Objective 9:* Encourage efforts to slow and reduce the fragmentation of agricultural lands.
- Objective 10:* Support the continuation and enhancement of State income tax credits to those farmers who wish to take advantage of that program.
- Objective 11:* Support town and farmer initiatives to preserve farmland via approaches that go beyond farmland preservation zoning.
- Objective 12:* Encourage the continued growth of the agricultural economy in Columbia County.

Goal 2: Maintain, preserve, and enhance Columbia County's natural resources, scenic views, and unique natural features.

- Objective 1:* Develop adequate storm water management plans and erosion control regulations to protect surface and groundwater resources throughout the County.

- Objective 2:* Encourage the development of natural buffer areas along watercourses and drainage ways.
- Objective 3:* Discourage the application of chemicals and land spreading along watercourses and drainage ways.
- Objective 4:* Identify environmental corridors consisting of a buffer along water bodies, FEMA Floodplains, WDNR mapped wetlands, publicly owned lands and parks, slopes over 12 percent, shallow soils, and adjacent woodlots.
- Objective 5:* Protect the integrity of the environmental corridors from the negative impacts of development.
- Objective 6:* Develop appropriate land use regulations to provide protection to the sensitive natural resource areas included in the environmental corridors.
- Objective 7:* Consider the impacts of development on the habitat of rare, threatened, or endangered species or natural communities.
- Objective 8:* Consider the development of an ordinance that prohibits the construction of new structures in the FEMA 100-year floodplains and limits the rebuilding of structures that are seriously deteriorated, damaged, or destroyed.
- Objective 9:* Discourage concentrated animal numbers in the FEMA 100-year floodplains, but encourage other forms of agriculture.
- Objective 10:* Protect wetlands from siltation and runoff by encouraging a buffer area around all WDNR designated wetlands.
- Objective 11:* Prohibit further draining or filling of wetlands.
- Objective 12:* Discourage agricultural cultivation in wetlands.
- Objective 13:* Encourage the proper management of forestlands in the County and discourage parcel fragmentation and clear cutting of any existing woodlots, when appropriate.
- Objective 14:* Control development in areas that possess valuable wildlife habitat.
- Objective 15:* Protect the integrity of the designated State Natural Areas in the County.
- Objective 16:* Inventory the locations of commercially viable non-metallic mineral resources in the County and consider the locations of these resources during the review of development proposals.
- Objective 17:* Support the development of outdoor recreation areas for use as public hunting grounds, wildlife preserves, and waterfowl production areas.
- Objective 18:* Consider alternative methods to protect the natural environment.
- Objective 19:* Develop policies that will preserve the rural character, open space, and scenic views of the County.
- Objective 20:* Accommodate both active and passive recreational uses of streams, rivers, and lakes. Encourage more passive uses during the early morning and later in the day. Discourage more active and noisy uses during these times.

Goal 3: Preservation of the County's historic and cultural resources.

- Objective 1:* Require a site evaluation by a State approved archeologist for development proposals on or near a known archeological or burial site.
- Objective 2:* Prohibit development on identified archeological and burial sites.
- Objective 3:* Evaluate the impacts of development proposals on historic buildings and sites in Columbia County and mitigate those impacts whenever possible.
- Objective 4:* Create and maintain an inventory of the remaining historic and archaeological sites and structures throughout Columbia County.
- Objective 5:* Assist local organizations in the promotion of historic and cultural resources in their communities.

Objective 6: Assist local historical societies and museums in preserving structures and artifacts that reflect Columbia County’s past.

Goal 4: Establish and maintain long-term funding programs for the County Park System.

Objective 1: Examine the ability of the County to modify the Land Division Ordinance to allow park fees collected under the ordinance to be used to fund the County Park System.

Objective 2: Examine alternative funding sources for the County Park System.

Objective 3: Utilize, to the extent possible, state and federal resources and grant programs to offset local expenditures to develop and maintain the County Park System.

Objective 4: Encourage the creation of a volunteer group to help advocate for the County Park System and help with volunteer activities and fund raising for the parks.

Objective 5: Develop and implement a County Capital Improvement Plan that includes expenditures for park development.

5.3 AGRICULTURAL, NATURAL, AND CULTURAL RESOURCE PROGRAMS

5.3.1 Farmland Preservation

The Farmland Preservation Program is a State program to preserve farmland, provide tax relief to farmers, and promote proper land and water conservation practices. In 2009, the State adopted the “Working Lands” law. This was a rewrite of Chapter 91 of Wisconsin Statutes, which articulates the State’s farmland preservation program. Under that program, Columbia County adopted a new Farmland Preservation Plan in 2013, as part of the County comprehensive plan. A new farmland preservation plan, certified by the State, is an essential first step to enable farmers in designated “farmland preservation areas” to obtain farmland preservation credits on their State income taxes. The standard tax credit rate is \$7.50 per acre. To be eligible for tax credits, farmers owning lands in planned “farmland preservation areas” must also be zoned in a State-certified farmland preservation zoning district (such as the County’s A-1 Agriculture district), meet minimum farm income requirements, and have been issued a Certificate of Compliance by the Columbia County Land and Water Conservation Department that certifies they are in compliance with the NR 151 Agricultural Performance Standards and Prohibitions incorporated into ATCP 50.

Once current farmer-State contracts expire, farmers that are not zoned in a State-certified farmland preservation zoning district may only obtain tax credits (at a lower \$5 per acre rate) if they own land within a State-approved “Agricultural Enterprise Area.” Farmers that are zoned in a farmland preservation zoning district and in an “Agricultural Enterprise Area” are eligible for tax credits at the highest \$10 per acre rate. However, these “Agricultural Enterprise Area” rates are possible only if the farmer enters into a new contract with the State restricting land from development for 15 years.

There is \$27 million available annually to provide farmland preservation tax credits to eligible State landowners. In the 2010 tax year, 758 farmers in Columbia County collected income tax credits, with the average credit being \$1,227.

One way in which the County can attempt to preserve its rural character and agricultural heritage is to encourage more farmers to participate in the Farmland Preservation Program. Map 5-1 in Appendix I shows the lands in Columbia County that had been enrolled in the Farmland Preservation Program during at least one point between the 1970s and 1990.

5.3.2 Conservation Reserve Program (CRP)

The Conservation Reserve Program (CRP) is the Federal Government's largest environmental improvement program in existence. Administered by the U.S.D.A., the purpose of the program is to reduce erosion, increase wildlife habitat, improve water quality, and increase forestland. CRP is a voluntary approach to improving the environment using partnerships between government and private landowners. The program provides incentives to farmers (and ranchers) for establishing conservation practices which benefit resources both on and off the farm. Incentives are in the form of annual rental payments and cost-share assistance in return for establishing long-term resource-conserving cover on eligible lands. Rental payments are based on the agricultural rental value of the land, and cost-share assistance is provided in an amount up to 50 percent of the participant's costs to establish approved practices. The contract duration is from ten years up to 15 years (if planting hardwood trees, restoring croppped wetlands, etc.), and is transferable with a change in ownership.

To be eligible, land must:

- have been planted or considered to be planted for two years of the five most recent crop years,
- be marginal pasture land that is either enrolled in the Water Bank Program or is suitable for use as a riparian buffer to be planted to trees.

In addition, the cropland must meet at least one of the following conditions:

- be highly erodible
- croppped wetland
- subject to scour erosion
- located in a national or state CRP conservation priority area (all of Columbia County)
- cropland associated with non-croppped wetlands.

5.3.3 Conservation Reserve Enhancement Program (CREP)

The Conservation Reserve Enhancement Program (CREP) program is a partnership between the USDA Farm Service Agency, Wisconsin Department of Agriculture, Trade and Consumer Protection, USDA, Natural Resources Conservation Service, the Wisconsin Department of Natural Resources, and participating county land conservation departments throughout the state. It is an opportunity for Wisconsin landowners to enroll agricultural lands into various practices including riparian buffers, wetland restoration, and establishment of native grassland areas, among others. There is no waiting period for this program, and there is no competition with other applicants; however, enrollment and eligibility determinations are on a first-come, first-serve basis. In Columbia County, landowners in 11 towns are eligible to participate in the program. The 11 towns include Arlington, Columbus, Courtland, Dekorra, Fountain Prairie, Hampden, Leeds, Lodi, Lowville, Otsego, and West Point.

5.3.4 Glacial Habitat Restoration Area (GHRA) Project

The Glacial Habitat Restoration Area (GHRA) Project is a regional approach to wildlife habitat management that focuses on establishing a patchwork of restored wetlands and grasslands in combination with croplands to provide all of the elements necessary for the life cycle of waterfowl, wild pheasants and non-game songbirds. The goals of the program are to establish 38,600 acres of permanent grassland nesting cover and restore 11,000 acres of wetlands within 24 townships in Columbia, Dodge, Fond du Lac and Winnebago Counties, which totals about 530,000 acres. In Columbia County, the Towns of Courtland and Fountain Prairie are included in the target areas for the program. With this additional habitat restored on the landscape, existing wildlife populations will be allowed to increase and expand. In order to attain these goals, the WDNR is purchasing, as well as securing perpetual easements, on properties ranging in size from ten acres up to a few hundred acres. Only those properties that are

purchased by the state become public property and are open to public hunting. Those properties that have perpetual easements are still under the control of the landowner and access is only granted by permission of that landowner. To date, WDNR land purchases in Columbia County amount to two parcels with a total of 327 acres in the Town of Courtland.

5.3.5 Managed Forest Law and Forest Crop Law

The Wisconsin Managed Forest Law was created in 1985 from the combination of two previous laws, the Forest Crop Law and the Woodland Tax Law. The Managed Forest Law is designed to give tax credit to owners of forestlands at least ten acres in size to prevent premature cutting of timber for short run economic gain. In exchange for the tax credit, the landowner agrees not to burn or graze the land and to only harvest the timber under the direction of a trained forester. The landowner can also agree to open the land to public hunting, fishing, and other outdoor recreation in exchange for a larger tax credit. The idea behind the Managed Forest Law is to encourage the growth of future commercial crops through sound forestry practices. At the same time, the program takes into account the individual property owners' objectives and society's needs for compatible recreational activities, forest aesthetics, wildlife habitat, erosion control, and protection of endangered resources.

The Forest Crop Law, enacted in 1927, was the precursor to the Managed Forest Law. The guidelines of the two programs are very similar to one another except that the Forest Crop Law was directed toward landowners with large forested parcels. The Forest Crop Law Program is no longer open to new participants, except through purchase of land which is currently under contract. As the contracts expire landowners may switch over to the Managed Forest Law Program.

In Columbia County, 292 landowners with approximately 19,148 acres of woodlands are enrolled in the Managed Forest Law Program. Encouragement of the Managed Forest Law program is another way the County can help to preserve its rural character. Map 5-2 in Appendix I illustrates the locations of the parcels with woodlands enrolled under these programs.

5.3.6 Wetlands Reserve Program

The Wetlands Reserve Program (WRP) is a voluntary program to restore and protect wetlands on private property. It is an opportunity for landowners to receive financial incentives to restore wetlands that have been drained for agriculture. Landowners who choose to participate in WRP may sell a conservation easement or enter into a cost-share restoration agreement with United States Department of Agriculture (USDA) to restore and protect wetlands. The landowner voluntarily limits future use of the land, yet retains private ownership. The landowner and Natural Resources Conservation Service (NRCS) develop a plan for the restoration and maintenance of the wetland. The program offers landowners three options: permanent easements, 30-year easements, and restoration cost-share agreements of a minimum 10- year duration. Columbia County has several properties enrolled in the WRP. The locations of these properties is illustrated on Map 5-3 in Appendix I.

5.3.7 National and State Registers of Historic Places

The National Register of Historic Places is the official national list of historic properties in America worthy of preservation and is maintained by the National Park Service in the U.S. Department of the Interior. The State Register of Historic Places is Wisconsin's official listing of state properties determined to be significant to Wisconsin's heritage and is maintained by the Division of Historic Preservation at the State Historical Society of Wisconsin. Both listings include sites, buildings, structures, objects and districts that are significant in national, state or local history, architecture, archeology, engineering and culture.

These programs give honorary recognition to properties that retain their historic character and are important to understanding local, state, or federal history. Listing provides tangible benefits to private property owners and helps assist them in preserving their properties. The principal benefit to the property owner is the knowledge that they are helping to preserve local, state and national heritage. To assist the property owner, the state and federal governments also provide a number of more tangible benefits as listed below:

- eligibility for state and federal income tax credits for rehabilitating historic properties.
- eligibility for federal grants, when available.
- consideration in the planning of federally assisted and state assisted projects, as well as projects of local governments and school boards, when those projects affect the property.
- eligibility to use the state's Historic Building Code, which may facilitate rehabilitation.
- qualification for state and federal charitable income tax deductions for the donation of historic preservation easements.
- eligibility for official State Register of Historic Places plaques.

Listing a property in the registers does not impose restrictions on the private property owner. The private owner is free to sell, alter or demolish the property. However, if the property owner is utilizing any public federal or state funding or assistance, the proposed projects are reviewed to ensure that historic values of the property are taken into consideration. The 36 properties in Columbia County that are listed on both the National and State Registers are discussed in more detail in the Historic and Cultural Resources section of this element.

5.3.8 Wisconsin Historical Society - Division of Historic Preservation Subgrant Program

The Division of Historic Preservation within the State Historical Society offers grants to local units of government and non-profit organizations to conduct detailed architecture and history surveys. Funds are provided for surveys to identify and evaluate historical, architectural and archaeological resources, nominating properties and districts to the National Register of Historic Places, and carrying out a program of comprehensive historic preservation planning and education. The results for these surveys form the foundation for community historic preservation programs. Before a community can work to preserve historic resources it must know about these resources and why they are important. The surveys typically look at all of the historic properties in a community and then identify which ones are significant and potentially eligible for listing in the State and National Registers of Historic Places. Additional grants are available to communities that have a historic preservation program which is certified by the Wisconsin Historical Society.

5.3.9 Historic Preservation Tax Credits for Income-Producing Historic Buildings

Owners of historic income-producing properties in Wisconsin may be eligible for two income tax credits that can help pay for their building's rehabilitation. The Wisconsin Historical Society's Division of Historic Preservation administers both programs in conjunction with the National Park Service. The two programs are:

Federal Historic Preservation Credit - This program returns 20 percent of the cost of rehabilitating historic buildings to owners as a direct reduction in their federal income taxes.

Wisconsin Supplemental Historic Preservation Credit - This program returns an additional 5 percent of the cost of rehabilitation to owners as a discount on their Wisconsin state income taxes. Owners that qualify for the Federal Historic Preservation Credit automatically qualify for the Wisconsin supplement if they get NPS approval before they begin any work.

To qualify for the Federal Historic Preservation Credit, a property owner must:

- Own a historic building. A building is considered “historic” if it is listed on the National Register of Historic Places or if the NPS determines that it contributes to the character of a National Register historic district. A building can also receive a preliminary determination of eligibility for the Register from the NPS through the tax credit application process. The owner must later formally list the property on the National Register.
- Use the building for income-producing purposes. Income-producing buildings are those used in a trade or business or for the production of rental income.
- Formally apply to the Division of Historic Preservation. Application materials can be obtained through the DHP or through the NPS Web site.
- Rehabilitate the building in accordance with program standards. Program standards are the Secretary of Interior’s “Standards for Rehabilitation”. The NPS, in conjunction with the Division of Historic Preservation, determines if a project meets the “Standards”.
- Spend a minimum amount of money on the rehabilitation. An owner must spend at least an amount equal to the building’s depreciated value or \$5,000, whichever is greater. This amount of money must be spent in a two-year period. Phased projects are allowed a five-year period.
- Claim the credit for only eligible expenses. The cost of all work on the historic buildings, inside and out, is eligible for the credit. The cost of site work, such as landscaping or paving, and the cost of work on non-historic additions are not eligible expenses.
- Maintain ownership of the building and maintain the building’s historic character for five years. The tax credit must be repaid to the IRS and to the Wisconsin Department of Revenue (DOR) if the building is sold or altered in a way that diminishes its historic character. Repayment is pro-rated over the five year period after the building is placed in service.

5.3.10 Historic Home Owner’s Tax Credits

The Wisconsin Historical Society’s Division of Historic Preservation (DHP) administers a program of 25-percent state income tax credits for repair and rehabilitation of historic homes in Wisconsin. To qualify, your personal residence must be one of the following:

- Listed in the State or National Register;
- Contributing to a state or national register historic district; or
- Be determined through the tax credit application process to be eligible for individual listing in the state register.
- And you must spend at least \$10,000 on the following types of eligible work within a two-year period (a five-year expenditure period can be requested):
 - Work on the exterior of your house, such as roof replacement and painting, but not including site work such as driveways and landscaping;
 - Electrical wiring, not including electrical fixtures;
 - Plumbing, not including plumbing fixtures;
 - Mechanical systems, such as furnaces, air conditioning, and water heaters; and
 - Structural work, such as jacking up floors.

5.3.11 Archeological Sites Property Tax Exemption Program

The State of Wisconsin’s Archeological Sites Property Tax Exemption Program was created in 1989 and is administered through the State Historical Society of Wisconsin. The program provides property tax exemption for owners of archaeological sites listed in the National Register of Historic Places or the State

Register of Historic Places. A site not included on one of these lists can be evaluated for inclusion on a list at the owner's request.

The purpose of the program is to provide an incentive for landowners to protect significant archaeological sites on their land. In exchange for the tax exemption, the landowners must agree to place a permanent protective covenant on the area of land that contains the archaeological site. The covenant does not discourage all uses of the land containing the archaeological site, but rather encourages the landowner to plan the use of the land to avoid disturbing the site area. No landowners in the County currently participate in the program. Encouragement of this program can help to preserve open spaces and the cultural heritage of the County by preventing development on these lands.

5.4 AGRICULTURAL, NATURAL, AND CULTURAL RESOURCE AREAS

5.4.1 Ground Water and Aquifers

Columbia County has a large untapped supply of good quality groundwater found in layers of porous subsoil and bedrock known as aquifers. The water in an aquifer travels underground from its source to a discharge point such as a well, wetland, spring or lake. These aquifers supply the water to County residents through private and municipal wells.

Land use decisions can have impacts on ground water, as anything that is spilled or spread on the ground can impact the quality of the ground water. As a result, pollution of the ground water aquifers is a very real threat to the County's water supplies. Listed below are some potential sources of ground water pollution found in Columbia County:

- Over concentration of septic systems.
- Poor site location of concentrated feedlots.
- Water supplies are obtained from shallow wells screened just below the water table.
- High water table close to the land surface.
- The soil is permeable and the pollutant moves downward readily into the aquifer.
- Aquifers that consist of highly permeable sand and gravel or fractured rock.
- Shallow aquifers underlain by impermeable clay or crystalline rocks.
- Excessive and improper application of chemical fertilizers.

Problems such as these will need to be addressed in order to ensure clean drinking water supplies now and into the future.

The University of Wisconsin Geological and Natural History Survey has conducted statewide surveys of river basins in Wisconsin. This inventory includes an examination of ground water in each basin. Columbia County is situated within three river basins, the Rock-Fox Basin, the Wolf-Fox Basin, and the Wisconsin River Basin. Below is a summary of the ground water resources for the three river basins inventoried by the Wisconsin Geological and Natural History Survey as they pertain to Columbia County. The summary describes the glacial-drift and bedrock aquifers in each river basin and describes the availability and quality of ground water from the aquifers.

5.4.1.1 The Wolf-Fox River Basin

◆ Glacial-Drift Aquifer

Water availability from glacial deposits differs greatly within small areas. The best glacial-drift aquifers are thick sands and gravels outwash laid down by melt water from glaciers. Clay and silt that were deposited in glacial lakes restrict water movement and are not a good aquifer. Depending upon the thickness of the drift, yields from 5 to 100 gallons per minute can be obtained from properly constructed wells. Water in the glacial drift aquifers generally has dissolved solids that range from 100 to 300 parts per million. Higher concentrations are found locally. The quality of water in the aquifer is controlled by the type of water, type of rocks, and the rate of water movement. Water is of the calcium magnesium bicarbonate type. The water is moderately hard and excessive iron is a problem. Water from these aquifers generally is suitable for most domestic, municipal, and industrial uses.

- ◆ Bedrock Aquifer

The sandstones of Cambrian Age, the Prairie Du Chien Groups, and the St. Peter Sandstones form the principal bedrock aquifers. Properly constructed wells may yield from 500 to 1,000 gallons per minute. Water in the bedrock aquifers generally range from 200 to 400 parts per million of dissolved solids. The water is of the calcium magnesium bicarbonate. The water is hard and in some places iron is a problem. Water from the bedrock aquifers generally is suitable for most domestic, municipal, and industrial uses.

5.4.1.2 *The Wisconsin River Basin*

- ◆ Glacial-Drift Aquifer

Properly constructed wells may yield up to 2,000 gallon per minute. Generally, sand and gravel aquifers are from 100 to 250 feet thick. Water is withdrawn readily from the aquifer because of the shallow depth to water and the high permeability of the aquifer. Withdrawing large quantities of water from wells tapping the sand and gravel aquifer lowers water levels in other wells as much as 20 feet and affects water levels to a lesser amount up to a radius of half a mile. Water generally averages about 210 parts per million of dissolved solids. The water is usable for most domestic and industrial needs without treatment. The water is very hard and of the magnesium bicarbonate type.

- ◆ Bedrock Aquifer

The underlying sandstone aquifer can supply yields ranging from 500 to 1,000 gallons per minute. The sandstone aquifer is composed of a thick sequence of sandstone, shale, siltstone, and dolomites. Generally the lower part of the aquifer is more permeable. Withdrawing large quantities of water from wells tapping the sandstone aquifer lowers water levels in wells as much as 200 feet and affects water levels to a lesser amount up to a radius of 2 miles. The ground water is very hard and is of the calcium magnesium bicarbonate type. The water contains about 280 parts per million of dissolved solids. The water is usable for most domestic and industrial wastes without treatment.

5.4.1.3 *The Rock-Fox River Basin*

- ◆ Glacial-Drift Aquifer

Sand and gravel in the basin constitute a major source of ground water. Several thousand gallons of water per minute have been obtained from drilled wells in outwash sand and gravel, where the aquifer is thick and underlies a perennial stream. Buried sand and gravel aquifers yield from 10 to 500 gallons per minute. Water generally has dissolved solids from 200 to 500 parts per million. The ground water is generally of good quality and is usable for most purposes. High concentrations of iron may be locally found. These concentrations are most prevalent in poorly drained areas. Ground water in deposits of sand overlain by poorly permeable till is more highly mineralized but is generally protected from pollution.

- ◆ Bedrock Aquifer

Wells may yield from 10 to 2,000 gallons per minute depending upon the rock unit. The sandstone is the most widely used aquifer in the basin for high capacity wells. This sandstone aquifer is used for all of the municipal wells in Columbia County within the Rock-Fox River Basin. Ground water is generally of good quality and is usable for most purposes. Water generally has dissolved solids from 150 to 550 parts per billion. Water hardness is a problem in some areas.

5.4.2 Bedrock Geology of Columbia County

The bedrock of Columbia County contains the following geologic units: Upper Cambrian Sandstone Formations, St. Peter Sandstone, Prairie Du Chien Dolomite Group, Galena-Platteville Dolomite, and Precambrian rocks. Map 5-4 in Appendix I illustrates the generalized distribution of these geologic units. Below is a brief and generalized description of the bedrock formations in Columbia County.

5.4.2.1 *Upper Cambrian Sandstone Formations (Cambrian Age)*

More than 50 percent of Columbia County is underlain by bedrock formations of the Cambrian system. These formations for the most part consist of sandstone. There are four major formations within the Cambrian Systems. They are in descending order as follows:

- ◆ Ordan Sandstone
Consists primarily of sandstone which is sometimes cemented with dolomite. The Jordan may be up to 50 feet thick, but commonly less than 30 feet thick.
- ◆ St. Lawrence Dolomite
This formation consists predominantly of a dolomitic sandstone. It may be to 80 feet, but is generally less than 40 feet.
- ◆ Lone Rock Sandstone
Consists primarily of sandstone. Siltstone is sometimes encountered.
- ◆ Elk Mound Group
Sandstone is dominant, but siltstone may also be present.

5.4.2.2 *St. Peter Sandstone (Ordovician Age)*

The St. Peter Sandstone occurs in the eastern part of the County beneath the Galena-Platteville Dolomite. Good exposures of the St. Peter Sandstone also occur at the surface in the form of bedrock knolls in the southern part of the Town of Arlington. Other areas where this formation occurs are shown on the bedrock map. They are buried under many feet of glacial drift and the Galena-Platteville Dolomite. The St. Peter Sandstone has been described as being a light-colored buff to reddish, friable, sandstone, which varies in thickness from 0 to 100 feet or more.

5.4.2.3 *Prairie Du Chien Dolomite Group (Ordovician Age)*

This Prairie du Chien Dolomite consists of thick bedded, porous dolomite which commonly contains chert. Locally, above the Prairie du Chien there is found a whitish or purplish shale which grades into red sandstone. The Prairie du Chien Dolomite underlies the eastern and southern part of the County with small scattered outliers being found further west and north. In the area west of Lodi, it caps the prominent hills.

5.4.2.4 *Galena-Platteville Dolomite (Ordovician Age)*

Only small remnants of the Galena-Platteville Dolomite are found in Eastern Columbia County. The largest are, according to the bedrock geology map, is in the southeastern part of the County. This Galena-Platteville consists of a buff-to gray, thick to thin-bedded dolomite that has an abundance of chert nodules at certain horizons. In Columbia County the thickness of the unit ranges from 0 to 50

feet. It is much more extensive to the east in Dodge County where it forms the major portion of the bedrock surface.

5.4.2.5 *Precambrian Rocks*

Precambrian rocks which crop out in Columbia County include the Baraboo Quartzite Formation, and rhyolite, which is exposed beneath the quartzite. The Baraboo Bluffs are the limbs of an east-west trough-shaped fold structure formed of weather resistant Baraboo Quartzite and are the remains of great Precambrian mountain folds. The bluffs are primarily buried beneath Cambrian Sandstone. Two small areas of rhyolite are found in Columbia County. One area is in Section 3 of the Town of Caledonia on the south flank of the Baraboo Range. The second exposure is in Sections 7, 8, 17, and 18 of the Town of Marcellon.

5.4.3 Soils

Columbia County soils are a product of the deposits left by the last glacial ice age that ended approximately 12,000 years ago. The County's soils are composed of varying proportions of sand, gravel, silt, clay, and organic material resulting in soil composition that varies from one location to the next. As a result of these variations, the Soil Conservation Service within the United State Department of Agriculture has classified the soils in the County into groups called "soil associations". A soil association is an area that has a distinct and proportional pattern of soils. The soils in Columbia County have been grouped into 11 broad soil associations. Map 5-5 illustrates the locations of the 11 soil associations in Columbia County. These associations are generalized areas and have three important limitations:

- Each group contains areas of other soils in addition to those named.
- The soils in any one association may have a wide range in properties.
- Soil associations are too general to be used for specific site planning.

The information provided by the soil associations is useful in identifying suitable areas for a particular type of land use and for a general guide in determining suitable community growth areas, locating appropriate areas for recreational uses, and for the management of natural resources. However, the composition of the soils at a particular site must be evaluated prior to any development due to the varying limitations of each soil type. The characteristics of the 11 soil associations found in Columbia County are described briefly as follows:

◆ Plano-Griswold-Saybrook Association

This association comprises about 16 percent of the County's area. It generally occurs in the northeastern and southern portions of the County. The soils in this association are characterized as well drained and moderately well drained silty soils that have a silty or loamy subsoil and are underlain by sandy loam glacial till. These soils are well suited for crops. Generally this soil association is suitable for onsite sewage disposal and basements.

◆ St. Charles, Ossian, Dodge Association

This association comprises about 15 percent of the County's area. It generally occurs in the southern and eastern portions of the County. The soils in this association are characterized as well drained, moderately well drained, and poorly well drained silty soils that have a silty subsoil and are underlain by sandy loam glacial till or silty sediment. These soils are well suited for crops. Generally the St. Charles and Dodge soils in this association are suitable for onsite sewage disposal and basements. The Ossian soils in this association are not suitable for onsite sewage disposal and basements because of a high water table.

◆ Mt. Carroll-Seaton-Dresden Association

This association comprises about five percent of the County. It generally occurs in the western parts of the County in areas adjacent to the Wisconsin River. The soils in this association are characterized as well drained and moderately well drained silty and loamy soils that have a silty or loamy subsoil and are underlain by stratified silt and sand, silty sediment, or stratified sand and gravel. These soils are well suited for crops. Generally the Seaton and Dresden soils in this association are suitable for onsite sewage disposal and basements. The Mt. Carroll soils in this association have limited suitability for onsite sewage disposal and basements because of a high water table.

◆ McHenry-Baraboo-St. Charles Association

This association comprises about two percent of the County. It generally occurs in the western part of the County. The soils in this association are characterized as well drained and moderately well drained silty soils that have a dominantly silty subsoil and are underlain by stratified sandy loam glacial till or quartzite bedrock. These soils are well suited for crops however many are too steep for cultivation. Generally the McHenry and St. Charles soils in this association are suitable for onsite sewage disposal and basements in areas without excessive slope. The Baraboo soils in this association have limited suitability for onsite sewage disposal and basements because shallow depth to bedrock.

◆ Plainfield-Okee Association

This association comprises about eight percent of the County. It generally occurs in the western parts of the County as well as some areas in the central portion of the County. The soils in this association are characterized as excessively drained and well drained sandy soils that have a sandy or loamy subsoil and are underlain by sandy sediment or sandy loam glacial till. These soils are poorly suited for crops and are often wooded providing wildlife habitat. Generally both the Plainfield and Okee soils in this association are suitable for onsite sewage disposal and basements in areas without excessive slope.

◆ Boyer-Oshtemo-Dresden Association

This association comprises about five percent of the County. It generally occurs in the north-central part of the County. The soils in this association are characterized as well drained sandy and loamy soils that have a loamy subsoil and are underlain by sand or stratified sand and gravel. All but the Dresden soils in this association are of limited suitability for crops and are often used for specialty crops that suited to these soils. Dairying and pasture land is also a common uses of areas with this soil association. Generally all soils in this association are suitable for onsite sewage disposal and basements in areas without excessive slope.

◆ Oshtemo-Plainfield-Briggsville Association

This association comprises about one percent of the County. It generally occurs in the northwestern part of the County. The soils in this association are characterized as excessively drained to moderately well drained sandy and loamy soils that have a sandy, loamy, or clayey subsoil and are underlain by sandy sediment, sand and gravel, or clayey sediment. The Oshtemo and Plainfield soils are of limited suitability for crops while the Briggsville soils are well suited crops. Generally the Oshtemo and Plainfield soils in this association are suitable for onsite sewage disposal and basements in areas without excessive slope. The Briggsville soils are not suitable for onsite sewage disposal and basements due to a high water table.

◆ Lapeer-Wyocena Association

This association comprises about 22 percent of the County. It generally occurs in the central and north-central parts of the County. The soils in this association are characterized as well drained loamy and sandy soils that have a loamy subsoil and are underlain by sandy loam or loamy sand glacial till. The soils of this association have limited suitability for crops with large areas in permanent pasture. Generally the soils in this association are suitable for onsite sewage disposal and basements in areas without excessive slope.

◆ Grellton-Gilford-Friesland Association

This association comprises about 10 percent of the County. It generally occurs in the east-central parts of the County. The soils in this association are characterized as well drained, moderately well drained, and poorly drained loamy soils that have a dominantly loamy subsoil and are underlain by sandy loam glacial till, stratified silt and sand, or silty sediment. Most of the soils of this association are suitable for crops. The Grellton and Gilford soils in this association are not suitable for onsite sewage disposal and basements due to a high water table. The Friesland soils have limited suitability for onsite sewage disposal and basements.

◆ Granby-Alluvial Land, Loamy, Wet-Morocco Association

This association comprises about eight percent of the County. It generally occurs in the northwestern part of the County. The soils in this association are characterized as somewhat poorly drained to poorly drained sandy soils that have a sandy subsoil and are underlain by sandy sediments and loamy alluvial land. All soils in this association are poorly suited for crops and are often used for pasture, wildlife habitat, and woodlands. Generally all soils in this association are not suitable for onsite sewage disposal and basements due to a high water table and flooding potential.

◆ Houghton-Adrian-Palms Association

This association comprises about eight percent of the County. It generally occurs throughout the County along stream corridors. The soils in this association are characterized as very poorly drained soils that are underlain in places by sandy or loamy sediments. All soils in this association are poorly suited for crops however where they can be drained these soils are used to grow crops such as potatoes, mint, and sod. Generally the soils in this association are not suitable for onsite sewage disposal and basements due to a high water table and flooding potential.

5.4.4 Productive Agricultural Areas

Soil type is the largest determining factor in the productivity of agricultural areas. The soils in Columbia County are classified by the United States Department of Agriculture based upon their suitability for agricultural use. This classification is based upon criteria such as crop production potential, soil conditions, and other basic production related criteria. Soils are rated between Class I and Class VIII, with Class I, II, and III generally being considered good soils for agriculture. Class I, II, and the best soils of Class III are prime agricultural soils in Columbia County, while the remainder of the soils in Class III are generally recognized as unique farmland or farmland of statewide importance. In general, areas of the County that are not classified as Class I, II, and III soils include water bodies, wetlands, areas of steep slopes, and bedrock escarpments.

Prime farmland is land that has the best combination of physical and chemical characteristics for producing food, feed, forage, fiber, and oilseed crops and is also available for these uses. Unique farmland is land other than prime farmland that is used for the production of specific high-value food and fiber crops. It has the special combination of soil quality, location, growing season, and moisture supply needed to produce sustained high-quality and/or high yields of a specific crop when treated and managed according to acceptable farming methods. Examples of such crops are citrus, tree nuts, olives, cranberries,

fruit, and vegetables. Farmlands of statewide importance include those that are nearly prime farmland and that economically produce high yields of crops when treated and managed according to acceptable farming methods. Some may produce as high a yield as prime farmlands if conditions are favorable.

Protection of the best remaining farmland for agricultural purposes was shown to be of high importance to Columbia County residents in the Public Opinion Survey. However, the development of non-farm uses on agricultural lands continues to threaten the supply of the best agricultural soils in the County. In an effort to identify and recognize the most productive agricultural soils in County, this Plan identifies prime farmland as defined by the US Department of Agriculture as productive agricultural areas. Prime farmland generally consists of Class I, II, and the best soils of Class III. Map 5-6 in Appendix I illustrates the prime agricultural soils in Columbia County as determined in this Plan.

While soil type is an important component to agriculture, other issues such as the availability of space to farm, the distance from other competing land uses, the availability of adequate transportation, etc. also effect the viability of farming in the County. Efforts should be made to examine the issues facing agriculture as a comprehensive package that looks at the future viability of farming in the County including the preservation of the best and most productive soils.

5.4.5 Environmental Corridors

Environmental Corridors are areas that contain unique natural resource components that can be seriously impacted by intense development and should be preserved and protected. The Environmental Corridors include many of the most environmentally sensitive lands and provide a continuous linear system of open space. The protection and preservation of these areas is intended to serve several functions including: the protection of surface and groundwater quality and recharge areas; reducing the potential damage from floods and storm water runoff; the protection of sensitive natural resource areas; and the maintenance of important wildlife habitats or recreational areas. Map 5-7 in Appendix I illustrates the locations of Environmental Corridors in Columbia County.

The Environmental Corridors include the following areas:

- Floodplains
- Wetlands
- 35 Foot Buffers Along All Lakes, Ponds, Rivers, Streams, and Drainage Ways
- Publicly Owned Lands and Parks
- Steep Slopes Over 12%
- Shallow Soils to Bedrock
- Woodlots 20 Acres or Greater

5.4.6 Rare, Threatened, and Endangered Species and Natural Communities

Columbia County contains many rare, threatened, and endangered species of plants and animals as well as a number of rare natural communities. Both the U.S. Fish and Wildlife Service and the Wisconsin DNR maintain lists of threatened and endangered species. The U.S. Fish and Wildlife Service classifies a species as “endangered “ when there is a danger of extinction within the foreseeable future throughout all or a significant portion of its range. A species is “threatened” when they are likely to become endangered in the foreseeable future. The Wisconsin DNR’s Bureau of Endangered Resources list’s species as “endangered” when the continued existence of that species as a viable component of the State’s wild animals or plants is determined to be in jeopardy based on scientific evidence. A species is considered “threatened” when it appears likely, based on scientific information, that the species may become

endangered in the foreseeable future. The DNR also lists species of special concern that are suspected to have some problem of abundance or distribution.

The U.S. Fish and Wildlife Service does not list any endangered or threatened species that are permanent inhabitants of Columbia County. However, several threatened and endangered species, including the Bald Eagle and Whooping Crane, may use portions of the County during part of the year.

The Wisconsin DNR maintains a database on rare, threatened, and endangered species and natural communities throughout the State called the Wisconsin Natural Heritage Inventory. Included in the inventory are 155 rare, threatened, or endangered species and natural communities that are known to exist in Columbia County. Table 5-1 lists the rare, threatened, and endangered species and natural communities from the inventory that are known to exist in the County. It should be noted that parts of the state including parts of Columbia County have not yet been inventoried and therefore the list is not a complete and comprehensive list. Map 5-8 in Appendix I illustrates the generalized locations to the section level of rare, threatened, or endangered species and natural communities that have been observed in Columbia County. The map does not show the locations of specific species but rather illustrates the general locations where rare, threatened, and endangered aquatic and terrestrial species or natural communities have been observed in the County.

The intent of including information in this Plan on rare, threatened, and endangered species and natural communities in Columbia County is to raise awareness that these resources are present in the County. Further study on the impacts a particular development may have on rare, threatened, or endangered species and natural communities may be needed in areas known to contain these resources. Consideration should be given to requiring review if developments are taking place in a habitat that might contain one of these species or natural communities.

TABLE 5-1
Known Rare, Threatened, and Endangered Species, and Natural Communities,
Columbia County, 2005

Plants				
Common Name	Species Name	Status	Year Observed	Number Observed
Yellow Giant Hyssop	<i>Agastache Nepetoides</i>	Threatened	1992	1
Yellow Giant Hyssop	<i>Agastache Nepetoides</i>	Threatened	1967	2
Prairie Sagebrush	<i>Artemisia Frigida</i>	Special Concern	1905	3
Wooly Milkweed	<i>Asclepias Lanuginosa</i>	Threatened	1994	3
Wooly Milkweed	<i>Asclepias Lanuginosa</i>	Threatened	1932	1
Maidenhair Spleenwort	<i>Asplenium Trichomanes</i>	Special Concern	N/A	9
Great Indian-Plantain	<i>Cacalia Muehlenbergii</i>	Special Concern	1973	1
Drooping Sedge	<i>Carex Prasina</i>	Threatened	1992	2
Hill's Thistle	<i>Cirsium Hillii</i>	Threatened	1987	1
Autumn Coral-Root	<i>Corallorrhiza Odontorhiza</i>	Special Concern	1991	1
Glade Fern	<i>Diplazium Pycnocarpon</i>	Special Concern	1992	1
Yellow Gentian	<i>Gentiana Alba</i>	Threatened	1935	2
Yellow Gentian	<i>Gentiana Alba</i>	Threatened	1990	2
Cliff Cudweed	<i>Gnaphalium Obtusifolium Var Saxicola</i>	Threatened	1998	4
Northern Oak Fern	<i>Gymnocarpium Jessoense</i>	Special Concern	N/A	1
Violet Bush-Clover	<i>Lespedeza Violacea</i>	Special Concern	1992	4
Rock Clubmoss	<i>Lycopodium Porophyllum</i>	Special Concern	1992	1
Prairie False-Dandelion	<i>Nothocalais Cuspidata</i>	Special Concern	N/A	17
Brittle Prickly-Pear	<i>Opuntia Fragilis</i>	Threatened	N/A	3
Brittle Prickly-Pear	<i>Opuntia Fragilis</i>	Threatened	1992	10
Wilcox Panic Grass	<i>Panicum Wilcoxianum</i>	Special Concern	1942	1
Purple-Stem Cliff-Brake	<i>Pellaea Atropurpurea</i>	Special Concern	1993	5
Hooker Orchis	<i>Platanthera Hookeri</i>	Special Concern	1908	5
Christmas Fern	<i>Polystichum Acrostichoides</i>	Special Concern	1940	2
Prairie Parsley	<i>Polytaenia Nuttallii</i>	Threatened	1974	1
Prairie Parsley	<i>Polytaenia Nuttallii</i>	Threatened	1927	1
Bird's-Eye Primrose	<i>Primula Mistassinica</i>	Special Concern	1977	2
Lapland Azalea	<i>Rhododendron Lapponicum</i>	Endangered	1991	2
Fragrant Sumac	<i>Rhus Aromatica</i>	Special Concern	1993	3
Shadowy Goldenrod	<i>Solidago Sciaphila</i>	Special Concern	1995	12
Dwarf Huckleberry	<i>Vaccinium Cespitosum</i>	Endangered	1861	3
Yellow Screwstem	<i>Bartonia Virginica</i>	Special Concern	1952	1
Slim-Stem Small-Reedgrass	<i>Calamagrostis Stricta</i>	Special Concern	1927	5
False Hop Sedge	<i>Carex Lupuliformis</i>	Endangered	1990	2
Prickly Hornwort	<i>Ceratophyllum Echinatum</i>	Special Concern	1932	1
Small White Lady's-Slipper	<i>Cypripedium Candidum</i>	Threatened	1986	4
Small White Lady's-Slipper	<i>Cypripedium Candidum</i>	Threatened	1884	3
Small Yellow Lady's-Slipper	<i>Cypripedium Parviflorum</i>	Special Concern	1995	2
Showy Lady's-Slipper	<i>Cypripedium Reginae</i>	Special Concern	1971	4
Slenderleaf Sundew	<i>Drosera Linearis</i>	Threatened	1872	5
Engelmann Spike-Rush	<i>Eleocharis Engelmannii</i>	Special Concern	1975	2
Vasey Rush	<i>Juncus Vaseyi</i>	Special Concern	1959	1
Small Forget-Me-Not	<i>Myosotis Laxa</i>	Special Concern	1993	1
Georgia Bulrush	<i>Scirpus Georgianus</i>	Special Concern	N/A	2
Whip Nutrush	<i>Scleria Triglomerata</i>	Special Concern	1993	6
Sticky False-Asphodel	<i>Tofieldia Glutinosa</i>	Threatened	1964	1
Common Bog Arrow-Grass	<i>Triglochin Maritimum</i>	Special Concern	1934	1

Insects				
Common Name	Species Name	Status	Year Observed	Number Observed
A Tiger Beetle	<i>Cicindela Macra</i>	Special Concern	N/A	2
A Tiger Beetle	<i>Cicindela Patruela Patruela</i>	Special Concern	N/A	1
A Burrowing Water Beetle	<i>Hydrocanthus Iricolor</i>	Special Concern	1984	2
A Predaceous Diving Beetle	<i>Lioporeus Triangularis</i>	Special Concern	1985	2
Broad-Winged Skipper	<i>Poanes Viator</i>	Special Concern	1991	1
Regal Fritillary	<i>Speyeria Idalia</i>	Endangered	1996	1
Dion Skipper	<i>Euphyes Dion</i>	Special Concern	1989	1

Mulberry Wing	<i>Poanes Massasoit</i>	Special Concern	1990	2
Green-Striped Darner	<i>Aeshna Verticalis</i>	Special Concern	1991	1
Amber-Winged Spreadwing	<i>Lestes Etrinus</i>	Special Concern	1991	1
Elegant Spreadwing	<i>Lestes Inaequalis</i>	Special Concern	1989	1
Royal River Cruiser	<i>Macromia Taeniolata</i>	Special Concern	1995	1
Black Meadowhawk	<i>Sympetrum Danae</i>	Special Concern	1990	1
Newman's Brocade	<i>Meropleon Ambifusca</i>	Special Concern	1994	1
Silphium Borer Moth	<i>Papaipema Silphii</i>	Endangered	1995	1

Mammals

Common Name	Species Name	Status	Year Observed	Number Observed
Prairie Vole	<i>Microtus Ochrogaster</i>	Special Concern	1974	3
Western Harvest Mouse	<i>Reithrodontomys Megalotis</i>	Special Concern	1969	2
Franklin's Ground Squirrel	<i>Spermophilus Franklinii</i>	Special Concern	1960	1

Birds

Common Name	Species Name	Status	Year Observed	Number Observed
Grasshopper Sparrow	<i>Ammodramus Savannarum</i>	Special Concern	1986	1
Cerulean Warbler	<i>Dendroica Cerulea</i>	Threatened	1987	2
Loggerhead Shrike	<i>Lanius Ludovicianus</i>	Endangered	1985	4
Bell's Vireo	<i>Vireo Bellii</i>	Threatened	1986	2
Red-Shouldered Hawk	<i>Buteo Lineatus</i>	Threatened	1987	26
Yellow-Crowned Night-Heron	<i>Nyctanassa Violaacea</i>	Threatened	1987	1
Black-Crowned Night-Heron	<i>Nycticorax Nycticorax</i>	Special Concern	N/A	6
Red-Necked Grebe	<i>Podiceps Grisegena</i>	Endangered	1997	2

Fish

Common Name	Species Name	Status	Year Observed	Number Observed
Lake Sturgeon	<i>Acipenser Fulvescens</i>	Special Concern	1976	7
Pirate Perch	<i>Aphredoderus Sayanus</i>	Special Concern	1985	14
Blue Sucker	<i>Cycleptus Elongatus</i>	Threatened	1995	7
Lake Chubsucker	<i>Erimyzon Sucetta</i>	Special Concern	1980	3
Western Sand Darter	<i>Etheostoma Clara</i>	Special Concern	1994	7
Banded Killifish	<i>Fundulus Diaphanus</i>	Special Concern	1980	7
Goldeye	<i>Hiodon Alosoides</i>	Endangered	1990	2
Black Buffalo	<i>Ictiobus Niger</i>	Threatened	1980	7
Longear Sunfish	<i>Lepomis Megalotis</i>	Threatened	1925	1
Redfin Shiner	<i>Lythrurus Umbratilis</i>	Threatened	1925	3
Speckled Chub	<i>Macrhybopsis Aestivalis</i>	Threatened	1994	7
Silver Chub	<i>Macrhybopsis Storeriana</i>	Special Concern	1993	7
Greater Redhorse	<i>Moxostoma Valenciennesi</i>	Threatened	1978	1
Pugnose Shiner	<i>Notropis Anogenus</i>	Threatened	1925	3
Weed Shiner	<i>Notropis Texanus</i>	Special Concern	1978	12
Pugnose Minnow	<i>Opsopoeodus Emiliae</i>	Special Concern	1984	4
Paddlefish	<i>Polyodon Spathula</i>	Threatened	N/A	1

Reptiles

Common Name	Species Name	Status	Year Observed	Number Observed
Timber Rattlesnake	<i>Crotalus Horridus</i>	Special Concern	1936	2
Black Rat Snake	<i>Elaphe Obsoleta</i>	Special Concern	1920	2
Western Slender Glass Lizard	<i>Ophisaurus Attenuatus</i>	Endangered	1985	5
Ornate Box Turtle	<i>Terrapene Ornata</i>	Endangered	1960	2
Wood Turtle	<i>Clemmys Insculpta</i>	Threatened	1958	1
Eastern Massasauga Rattlesnake	<i>Sistrurus Catenatus</i>	Endangered	1976	22
Western Ribbon Snake	<i>Thamnophis Proximus</i>	Endangered	1975	2
Northern Ribbon Snake	<i>Thamnophis Sauritus</i>	Endangered	1929	3
Western Slender Glass Lizard	<i>Ophisaurus Attenuatus</i>	Endangered	1999	9

Invertebrate				
Common Name	Species Name	Status	Year Observed	Number Observed
Red-Tailed Prairie Leafhopper	<i>Aflexia Rubranura</i>	Endangered	1963	1
A Flat-Headed Mayfly	<i>Anepeorus Simplex</i>	Endangered	1974	3
Ebony Shell	<i>Fusconaia Ebena</i>	Endangered	1922	3
Cyrano Darner	<i>Nasiaeschna Pentacantha</i>	Special Concern	1988	1
Smoky Shadowfly	<i>Neurocordulia Molesta</i>	Special Concern	1995	10
Stygian Shadowfly	<i>Neurocordulia Yamaskanensis</i>	Special Concern	1995	5
A Small Minnow Mayfly	<i>Paracloeodes Minutus</i>	Special Concern	N/A	9
Bullhead	<i>Plethobasus Cyphus</i>	Endangered	1993	11
Round Pigtoe	<i>Pleurobema Sintoxia</i>	Special Concern	1993	11
Winged Mapleleaf	<i>Quadrula Fragosa</i>	Endangered	1922	6
Monkeyface	<i>Quadrula Metanevra</i>	Threatened	N/A	4
Salamander Mussel	<i>Simpsonaias Ambigua</i>	Threatened	1993	4
Elusive Clubtail	<i>Stylurus Notatus</i>	Special Concern	1995	3
Russet-Tipped Clubtail	<i>Stylurus Plagiatus</i>	Special Concern	1995	4
Buckhorn	<i>Tritogonia Verrucosa</i>	Threatened	1994	17
Mussel Bed	<i>Mussel Bed</i>	Special Concern	1988	1

Natural Communities				
Common Name	Species Name	Status	Year Observed	Number Observed
Cedar Glade	<i>Cedar Glade</i>	NA	1978	3
Dry Cliff	<i>Dry Cliff</i>	NA	1995	7
Dry Prairie	<i>Dry Prairie</i>	NA	1979	3
Dry-Mesic Prairie	<i>Dry-Mesic Prairie</i>	NA	1979	1
Mesic Prairie	<i>Mesic Prairie</i>	NA	1978	2
Moist Cliff	<i>Moist Cliff</i>	NA	1980	11
Northern Dry Forest	<i>Northern Dry Forest</i>	NA	1980	4
Northern Dry-Mesic Forest	<i>Northern Dry-Mesic Forest</i>	NA	1995	7
Oak Barrens	<i>Oak Barrens</i>	NA	1987	3
Oak Opening	<i>Oak Opening</i>	NA	1995	1
Pine Relict	<i>Pine Relict</i>	NA	1979	1
Sand Barrens	<i>Sand Barrens</i>	NA	1979	1
Sand Meadow	<i>Sand Meadow</i>	NA	1986	1
Southern Dry Forest	<i>Southern Dry Forest</i>	NA	1979	5
Southern Dry-Mesic Forest	<i>Southern Dry-Mesic Forest</i>	NA	1979	13
Southern Mesic Forest	<i>Southern Mesic Forest</i>	NA	1979	6
Alder Thicket	<i>Alder Thicket</i>	NA	1979	3
Calcareous Fen	<i>Calcareous Fen</i>	NA	1985	3
Emergent Aquatic	<i>Emergent Aquatic</i>	NA	1994	20
Floodplain Forest	<i>Floodplain Forest</i>	NA	N/A	10
Lake--Oxbow	<i>Lake--Oxbow</i>	NA	1978	1
Lake--Shallow; Hard; Drainage	<i>Lake--Shallow; Hard; Drainage</i>	NA	1978	1
Lake--Shallow; Hard; Seepage	<i>Lake--Shallow; Hard; Seepage</i>	NA	1985	1
Lake--Shallow; Soft; Seepage	<i>Lake--Shallow; Soft; Seepage</i>	NA	1979	1
Northern Sedge Meadow	<i>Northern Sedge Meadow</i>	NA	1979	1
Northern Wet Forest	<i>Northern Wet Forest</i>	NA	1979	6
Open Bog	<i>Open Bog</i>	NA	1979	2
Shrub-Carr	<i>Shrub-Carr</i>	NA	1979	10
Southern Sedge Meadow	<i>Southern Sedge Meadow</i>	NA	1984	16
Springs And Spring Runs; Hard	<i>Springs And Spring Runs; Hard</i>	NA	1978	1
Stream--Fast; Hard; Cold	<i>Stream--Fast; Hard; Cold</i>	NA	1979	1
Stream--Fast; Soft; Warm	<i>Stream--Fast; Soft; Warm</i>	NA	1978	4
Stream--Slow; Soft; Warm	<i>Stream--Slow; Soft; Warm</i>	NA	1978	1
Wet Prairie	<i>Wet Prairie</i>	NA	1979	1
Wet-Mesic Prairie	<i>Wet-Mesic Prairie</i>	NA	1995	3

Source: WI DNR – Bureau of Endangered Resources

5.4.7 Stream Corridors, Surface Water, and Watersheds

Approximately 23,219 acres of stream corridors and surface water cover parts of Columbia County amounting to approximately 4.5 percent of the County's land area. Included in this total are 58 named and unnamed lakes and ponds as well as 23 streams and rivers. These lakes and rivers provide the County with 742 miles of river frontage and 124 miles of lake frontage. The largest of the stream corridors is the Wisconsin River which runs through of the western half of the County. The Wisconsin River also forms the largest lake in the County, Lake Wisconsin. These streams and surface waters are located within 16 watersheds that drain the County. The Wisconsin DNR has produced a document titled "Surface Water Resources of Columbia County" that provides information on the lakes and streams in the County. The following section contains descriptions of the named lakes, ponds, streams, and rivers in the County based on information from the Wisconsin DNR. In addition Map 5-9 in Appendix I illustrates the locations of stream corridors, surface water, and watersheds in the County.

Also located in Columbia County is the sub-continental divide. This divide determines the direction in which precipitation that falls on the County will flow. Precipitation falling in the Wisconsin River basin will ultimately flow to Mississippi River and the Gulf of Mexico while precipitation falling in the Rock-Fox River Basin and the Wolf-Fox River Basin will ultimately flow to the Great Lakes and the Atlantic Ocean. In the Portage area, this divide is very narrow with the Wisconsin and Fox Rivers flowing within less than two mile of each other.

5.4.7.1 Lakes and Ponds

◆ Alder Pond

Town of West Point, T10N, R7E, Section 34

Surface Acres = 4.2, Maximum Depth = 26 feet

Alder Pond is a small landlocked kettle lake in the terminal moraine north of Fish Lake in Dane County. The pond has light brown, soft water and is bordered by floating bog fringed with alders. Because of the protection afforded its surface by high surrounding hills and the alder shoreline the lake has a very shallow layer of warm oxygenated water in midsummer. Pan fish comprise a limited fishery. Public access is not available. Waterfowl often nest and rest in the Pond.

◆ Becker Lake

Town of Marcellon, T13N, R10E, Section 14

Surface Acres = 29.6, Maximum Depth = 8 feet

Becker Lake is a shallow landlocked lake in a marshy depression in the glacial ground moraine. The water is light brown and infertile. The bottom is entirely mucky and the water is largely less than three feet deep. In dry years the lake recedes to a fresh meadow with several shallow marsh pockets. Winterkill, weeds, and fluctuating water levels are therefore obvious problems to management. There are about 57 acres of adjoining wetlands. The lake has no public access, no dwellings, and is only lightly used by waterfowl.

◆ Lake Columbia

Towns of Pacific and Dekorra, T12-11N, R9E

Surface Acres = 480, Maximum Depth = 8 feet

Lake Columbia is a man-made cooling reservoir for the Columbia Power plant just outside of Portage Wisconsin. Lake Columbia is open all year long due to warm water produced by the

power plant to its north. There is a carry-in launch for a canoe or small boat. Bass, bluegills and striped bass are common in the lake.

◆ Corning Lake

Town of Lewiston, T13N, R7E, Section 10
Surface Acres = 27.2, Maximum Depth = 4 feet

Corning Lake is a shallow bog lake in a large area of marshy deposits. Hills to the east and west rise in the glacial terminal moraine. The water is dark brown and moderately fertile. Winterkill and weeds are use problems. The lake is connected to the Wisconsin River by a channelized stream and may have pan fish fishing at times. Public access is lacking. About 53 acres of wooded swamp adjoin the lake. This could be called a wilderness lake with the exception that a hunting lodge exists near shore. Fair numbers of waterfowl use the lake.

◆ Crystal Lake

Town of Wyocena, T12N, R10E, Sections 1 and 12
Surface Acres = 27.2, Maximum Depth = 12 feet

Crystal Lake is a shallow landlocked basin in marshy deposits in the ground moraine. The water is clear and quite fertile. Weeds are a major use problem. The fishery consists of largemouth bass, pan fish and northern pike. Pan fish predominate. Public access is available through WDNR owned land. About 180 acres of wetland adjoin the lake.

◆ Dates Millpond

Town of Fort Winnebago, T13N, R9E, Section 1 & Town of Marcellon, T13N, 10E, Section 6
Surface Acres = 96.0, Maximum Depth = 6 feet

Dates Millpond is a shallow impoundment of French Creek created by a nine foot feed mill dam. The water is clear and fairly fertile. Largemouth bass, pan fish and northern pike constitute the fishery; the lake is noted for its fine northern pike fishing. Winterkill and weeds may be use problems. Rough fish are present but do not constitute a problem. Public access is not directly available, however, adjacent WDNR public lands provide some access. There are few dwellings on the lake; thus it has a semi-wilderness appearance. About 146 acres of open marshland adjoin the lake. Fair numbers of waterfowl visit the lake.

◆ Lake George

Town of Pacific, T12N, R9E, Section 13
Surface Acres = 33.2, Maximum Depth = 21 feet

Lake George is a small landlocked lake bordering glacial terminal and ground moraine. The water is clear and quite fertile. A thermocline forms at about 15 feet each summer. Weeds are a use problem. Pan fish provide a fishery, augmented by the presence of largemouth bass. The lake has public access through a county park facility on the north side of the lake. In addition a commercial camping facilities on the east side of the lake also provides a means of access. There are 36 acres of woody wetland contiguous with the lakeshore. This is primarily an important fishing lake.

◆ Goose Pond

Town of Arlington, T10N, R10E, Section 25 & Town of Leeds, T10N, R9E, Section 19
Surface Acres = 72.8, Maximum Depth = 3 feet

Goose Pond is a small landlocked lake in a marshy basin in the glacial ground moraine. The lake is presently split by a town road on the north-south section line. The water is generally turbid and hard in nature. The lake suffers from annual winterkill, fluctuating water levels, and possibly contaminants from local runoff. In past years, following mild winter conditions, bullheads have survived successfully and provided a fishery. Public access is possible from the town road. The lake provides opportunities to observe large numbers of swans and geese in spring.

◆ Lantz Pond

Town of West Point, T10N, R7E, Section 36

Surface Acres = 4.1, Maximum Depth = 7 feet

Lantz Pond is a small landlocked pond remnant of an old glacial lake. The pond has a bog-cattail marsh center and a narrow belt of water on its circumference. Winterkill and fluctuating water levels are use problems. Bluegills and bullheads have been caught here at times. Public access is not available. Farm buildings are quite near its shores; therefore, waterfowl make little use of the pond.

◆ Lazy Lake (Fall River Millpond)

Town of Fountain Prairie, T11N, R12E, Sections 26 and 27

Surface Acres = 174, Maximum Depth = 6 feet

Lazy Lake is an impoundment of the Crawfish River in the Village of Fall River. A 10-foot village-owned dam maintains the water level. The water is clear and quite fertile. Pan fish, largemouth bass, and northern pike provide the fishery, with the lake being noted for producing good northern pike and bluegill fishing. Weeds and winterkill may be use problems. A village park and two roads provide access for multiple uses, and commercial facilities provide boats. About seven acres of wetland border the lake. Waterfowl make limited use of the area.

◆ Long Lake

Town of Caledonia, T12N, R9E, Sections 12, 21

Surface Acres = 39.2, Maximum Depth = 8 feet

Long Lake is an elongate meander lake in marshy deposits seasonally inundated by the Wisconsin River. For most of the year the lake is landlocked with clear, moderately hard, slightly acid water. The basin is generally quite weedy in midsummer as water levels drop. Pan fish provide the basic fishery, however, most river species are present at one time or another. Public access is provided by an unimproved road end. Waterfowl visit the area in fall and spring when most cottage dwellers are gone. Some ducks may nest here.

◆ Lost Lake

Town of Caledonia, T12N, R8E, Section 34

Surface Acres = 1.6, Maximum Depth = 17 feet

Lost Lake is a very small kettle lake in ground moraine deposits overlying the eastern end of the Baraboo Quartzite range. This is a seepage-drainage fed lake with an intermittent outlet that becomes Rowley Creek. The water is light brown and moderately hard. Pan fish reportedly provide a fishery. Winterkill may be a major use problem. Public access is not directly available, however, adjacent WDNR public lands provide some access. The lake is wilderness in character. Since the lake is relatively remote waterfowl make little use of it.

◆ Mud Lake

Town of Lowville, T11N, R10E, Section 22
Other data unavailable

Mud Lake is not really a lake, since it is dry for most of the year or so shallow that only scattered open water areas are found. A land cover survey in 1939 described the area as sedge marsh. The wetlands inventory of 1956 gave a more detailed description, especially with respect to quality. The area was described then as principally drainable shallow marsh and non-drainable deep marsh, with scattered plots of shrub swamp. In spring and fall the open water area is much larger than otherwise, and visiting waterfowl, especially Canada geese and whistling swans are the object of much weekend sightseeing. The lake is described historically in the data summary as a wetland resource.

◆ Mud Lake

City of Portage, T12N, R9E, Section 5
Surface Acres = 11.6, Maximum Depth = 1 foot

Mud Lake is a small shallow depression in marsh deposits at the base of a glacial terminal moraine within the City of Portage. The lake is drained by wetlands to the Fox River. The water is clear and moderately fertile. Winterkill, weeds and fluctuating water levels are obvious problems, however, they do not detract from its value for waterfowl. Large numbers of ducks and geese frequent the area. City roads provide access. About 440 acres of wetland adjoin the pond.

◆ Park Lake

Town of Wycocena & Village of Pardeeville, T12N, R10E, Sections 2, 3
Surface Acres = 219, Maximum Depth = 8 feet

Park Lake is a large, quite irregular impoundment of the Fox River in Pardeeville, created by a 17 foot high dam owned by the Village of Pardeeville. The water is quite fertile and often turbid, possibly due to wind action on the large shallow basin. Largemouth bass, northern pike, and pan fish constitute the fishery. Public access is provided by a large city park which has 2, 640 feet of lake frontage and a county access site north of the village on State Highway 44. Waterfowl are commonly present, taking advantage of the extensive shallow water.

◆ Ryan Pond

Town of West Point, T10N, R7E, Section 21
Surface Acres = 7.8, Maximum Depth = 7 feet

Ryan Pond is a small man-made pond, dug in 1865 for farm purposes. The water is clear and "soft". Algae blooms are a definite recurring problem, coupled with fluctuating water levels and winterkill. At times the pond will support bullheads for several years. Public access is not available, however, a road fill borders the pond and is used on occasion by local anglers.

◆ Silver Lake

City of Portage, T12N, R9E, Section 6
Surface Acres = 51.8, Maximum Depth = 41 feet

Silver Lake is a small, irregular landlocked kettle lake in the glacial terminal moraine located in the City of Portage. The water is clear and moderately fertile. Weeds and stunted pan fish are use problems. Largemouth bass, pan fish and northern pike provide a fishery, and rainbow trout have

been stocked in the lake. A city park provides easy access. About five acres of wetland adjoin the lake and provide suitable conditions for limited numbers of migrant and nesting waterfowl.

◆ Spring Lake

Village of Pardeeville, T12N, R10E, Sections 3 and 4
Surface Acres = 17.2, Maximum Depth = 28 feet

Spring Lake is a small drainage lake at the base of the terminal moraine in the Village of Pardeeville. The lake is drained by the Fox River and has clear, fertile water. Northern pike and pan fish constitute the fishery. Public access is available with no gasoline powered motors allowed; the lake is therefore used only lightly for recreation. Waterfowl make limited use of the area for nesting and resting.

◆ Swan Lake

Town of Pacific, T12N, R9, Sections 1, 11, and 12;
Town of Wyocena, T12N, R10E, Sections 5 and 6.
Surface Acres = 419, Maximum Depth = 82 feet

Swan Lake is an elongate deep drainage lake in the valley of the Fox River. The lake is fed and drained by the river and it has no dam structure to maintain its water level. The water is clear and quite fertile. A sharp temperature gradient exists at 25 feet below the surface in midsummer. Largemouth bass, pan fish, and walleye constitute the fishery. Carp are present but do not constitute a use problem. A WDNR boat landing provides access for fishing and boating. Commercial facilities are not available. Over 300 acres of wetland adjoin the lake and outlet which provide suitable protection for waterfowl and marsh furbearers.

◆ Tarrant Lake

Village of Cambria, T12&13N, R12E, Sections 32 and 5
Surface Acres = 18, Maximum Depth = 8 feet

Tarrant Lake is an impoundment of Duck Creek at Cambria, contained by a 23 foot high dam owned by the State of Wisconsin. The pond is quite fertile and generally turbid. Weeds and algae are major summer use problems. Largemouth bass and pan fish provide a fishery; bullheads are abundant. Carp, though present, do not constitute a problem. A village park provides access. There are 68 acres of wetland contiguous with the lakeshore. Waterfowl make limited use of the area.

◆ Weeting Lake

Town of Lewiston, T13N, R7E, Sections 2 and 3
Surface Acres = 34.0, Maximum Depth = 4 feet

Weeting Lake is a small landlocked swampy lake in lowland bordering the Wisconsin River. The water is light brown and only fairly fertile. The bottom is entirely muck covered. Winterkill, weeds and fluctuating water levels are major use problems. At times following high water conditions on the river, pan fish may provide a short term fishery. Public access is not available, and the lake may be classed as wilderness. This is an important waterfowl lake with good nesting.

◆ West Lake

Town of Wyocena, T12N, R10E, Sections 4 and 5
Surface Acres = 18.8, Maximum Depth = 22 feet

West Lake is a small landlocked kettle lake in marsh deposits in the ground moraine. The lake has clear moderately fertile water and a fishery for largemouth bass, pan fish and northern pike. Abundant weed growth is a problem for fishing and the use of motorboats. Public access is available through an unimproved road end. About 60 acres of wetland adjoin the lakeshore and extend to the nearby Fox River. Waterfowl nest and rest here.

◆ Lake Wisconsin

Towns of Caledonia, Dekorra, Lodi, and WestPoint, T10, 11N, R7, 8E
Surface Acres = 9,000, Maximum Depth = 24 feet

Lake Wisconsin is a major impoundment of the Wisconsin River in southern Wisconsin created in 1914. The lake is maintained by a 38-foot high dam owned by the Wisconsin Power and Light Company. The water is brown and moderately fertile. Largemouth bass, pan fish and walleye are most common in the fishery. Other species contributing to the catch are muskellunge and northern pike and sturgeon. This lake is the most southerly lake in Wisconsin having a sturgeon population, and one of only a few. Use problems are weeds, algae, carp, and pollution. The shallow bays and backwaters are subject to winterkill during severe winters. Public access is provided at many sites, and numerous commercial facilities provide additional use opportunities. Unique access and fishing situations are provided by roads, which cross arms of the impoundment. Also, it is crossed by the one remaining inland ferry. Nearly one thousand acres of lowland marsh adjoin the lake. Waterfowl are numerous, important visitors year-round. In winter Bald Eagles are common below the dam at Prairie du Sac.

◆ Wyocena Millpond

Village and Town of Wyocena, T12N, R10E, Sections 21 and 22
Surface Acres = 90, Maximum Depth = 3 feet

Wyocena Millpond is an irregularly shaped impoundment of Duck Creek in the Village of Wyocena, maintained by an 8-foot high dam. The water is clear and quite fertile. Algae and carp present a use problem in that they prohibit more desirable weed growth and restrict the depth to which light can penetrate. A city park, a county park, and several roads provide easy access. About 55 acres of largely woody wetland adjoin the inlet area of the pond. Waterfowl nest and rest here and can be considered as important users.

◆ Unnamed Lakes

In addition to the larger named lakes, approximately 34 smaller unnamed lakes also exist throughout the County. Unnamed lakes are usually small, less than 20 acres, and may commonly have extensive adjoining wetland. They generally experience severe fluctuations in water level, which hinders any determination of their physical parameters.

5.4.7.2 *Rivers and Streams*

◆ Baraboo River

Town of Caledonia, T12N, R9E
Surface Acres = 151.5, Miles = 13.3, Gradient = 1.88 feet per mile

The Baraboo River is a major tributary to the Wisconsin River, draining a large watershed west of the Wisconsin River. The stream is generally turbid and causes extensive flooding in spring. The entire stream in Columbia County is traversable by outboard craft. Walleye, northern pike, bass, and panfishes (including catfish) constitute the fishery, however, fishing pressure is quite light.

Access is provided by two state highway crossings, by a small road and wayside park, and by navigable water both upstream and downstream. Waterfowl are common along the river, especially wood ducks which utilize the bank trees and large in stream snags. About 824 acres of wetland adjoin the stream.

◆ Beaver Creek

Town of Courtland, T12N, R12E

Surface Acres = 8.13, Miles = 6.1, Gradient = 2.46 feet per mile

Beaver Creek is a small, low gradient stream tributary to Beaver Dam Lake in Dodge County. The headwaters tributaries exhibit parallel drainage disciplined by drumlins oriented in a northeast-southwest direction. Since wetland swale drainage is the prime water source fluctuating water levels are an annual problem. Under optimum conditions the stream supports forage species. About five miles of stream have been straightened to speed drainage. Access is possible at four highway crossings. A large 424-acre wetland extends for several miles in the mainstream valley.

◆ Big Slough

Town of Lewiston T13N, R8E

Surface Acres = 50.4, Miles = 8.0, Gradient = less than 0.2 feet per mile

Big Slough is a wide slow moving stream tributary to Neenah Creek. During peak runoff periods, the stream floods. Formerly, it connected the Fox and Wisconsin River systems, since all adjoining lands are flat and marshy. Northern pike, largemouth bass, bluegills and black crappies constitute the fishery. Carp are present in problem numbers. One town road provides limited access. Over 1, 580 acres of wetland adjoining the stream. It is possible to enter the stream by boat from Neenah Creek.

◆ Crawfish River

Towns of Columbus, Fountain Prairie, and Hampden T10N, R12E

Surface Acres = 85.5, Miles = 28.2, Gradient =4.58 feet per mile

The Crawfish River is a major stream in the Rock River watershed, this stream flows first northeast, then southeast to drain much of eastern Columbia County. There are two major tributaries, Robbins Creek and North Branch, Crawfish River. Effects of impoundment at Columbus are felt more than a mile upstream. Bullheads, crappies, smallmouth bass, northern pike and walleyes are present; however, the fishery is primarily for northern pike. Buffalo, carp and suckers support an extensive spring dip-net fishery. Carp and pollution are major use problems. Access is possible at several county, town and state highway crossings. About 1,461 acres of wetland adjoin the stream.

◆ Crawfish River, North Branch

Towns of Fountain Prairie and Otsego, T11N, R12E

Surface Acres = 44.72, Miles = 24.6, Gradient =3.25 feet per mile

The North Branch of the Crawfish River is a major tributary to the Crawfish River, flowing northeast then southeast to join the mainstream south of the Fall River Millpond (Lazy Lake). A 14-foot high dam impounds nearly 2.5 miles of channel at Fall River. Largemouth bass, northern pike, and several of the pinfishes constitute the fishery. Abundant carp are a use problem. Access is possible at numerous road crossings and a launching site exists at the millpond. About 607 acres of wetland adjoin the stream.

◆ Duck Creek

Towns of Pacific and Wyocena, T12N, R9E & R10E

Surface Acres = 58.4, Miles = 11.2, Gradient = 1.8 feet per mile

The portion of stream from the Wyocena Millpond to the Wisconsin River is called Duck Creek. The North Branch and Middle Branch constitute its origin. A delta has formed at its junction with the Wisconsin River, which provides good waterfowl hunting. Bass and pinfishes afford a limited fishery. Access is possible from a county trunk and a state highway. About 2,960 acres of wetland adjoin the stream.

◆ Duck Creek, Middle Branch

Towns of Springvale and Wyocena, T12N, R10E & R11E

Surface Acres = 31.7, Miles =15.4, Gradient = 11.04 feet per mile

The middle branch of Duck Creek is a stream of moderate gradient, which flows to the Wyocena Millpond. A trout stream, Jennings Creek, is its principal spring water source; above this tributary water quality is less desirable. Bass and pan fish provide a fishery in the stream, however, forage species are the most common occupants. Several county and town roads provide access. About 321 acres of wetland adjoin the stream.

◆ Duck Creek, North Branch

Towns of Springvale and Wyocena, T12N, R10E & R11E

Surface Acres = 68.1, Miles =23.4, Gradient = 7.1 feet per mile

The north branch of Duck Creek is a meandering stream which originates above Tarrant Lake at Cambria and receives numerous ditched tributaries along its course to the Wyocena Millpond. Pollution is a continuing problem for this stream and has reduced the fishery to one of bullheads, carp, suckers and forage species which nearly every year experiences pollution-caused mortalities. Access is possible from several town roads. About 2, 427 acres of wetland adjoin the stream.

◆ Fox River

Towns of Fort Winnebago, Marcellon, Pacific, Scott, and Wyocena

T13N, R9-10-11E & T12N, R9-10E

Surface Acres = 297.8, Miles = 40.3, Gradient = 4.52 feet per mile

The Fox River is a major stream in northern Columbia County, it first flows southwest toward Portage, then north, out of the county. After coming within 2 miles of the Wisconsin River it flows on to the Lake Michigan watershed. A 17-foot high dam at Pardeeville forms Park Lake; the only other structure on the river in Columbia County is at Governor's Bend where navigation locks and a dam were operated in the past. Channel catfish, bullheads and walleyes constitute the fishery. Northern pike, largemouth bass, and yellow bass are also present in some sections. Rough fish and pollution are use problems. Access is possible at Governor's Bend from numerous road crossings, especially upstream from the Portage area. Over 13,900 acres of wetland adjoin the stream, hence waterfowl values are quite high.

◆ French Creek

Towns of Fort Winnebago and Marcellon, T13N, R9-10E

Surface Acres = 26.17, Miles =10.8, Gradient =3.74 feet per mile

French Creek is a small stream fed largely by wetland drainage, impounded at Dates Millpond, tributary to the Fox River near the Marquette County line. The WDNR owns 1,713 acres of adjoining land and operates three impoundments capable of flooding about 700 acres. Water levels are seasonally manipulated in the interests of waterfowl management. In all about 1,600 acres of wetland adjoin the stream. Channel catfish, crappies, and suckers provide a fishery, seasonally augmented by northern pike. Access with boat launching and parking is adequate. The area provides good waterfowl shooting.

◆ Hinkson Creek

Town of Dekorra, T11N, R9E

Surface Acres = 4.36, Miles = 6.0, Gradient = 4.17 feet per mile

Hinkson Creek, formerly called Wilson Creek, is a small marsh-drainage tributary to Rowan Creek located north of the Village of Poynette. The stream headwaters have been impounded, yet parts of the creek have water quality suitable for trout. A WDNR fishery area is located on the stream north of Poynette providing access. A canning factory pond located near the stream in Poynette has been a source of pollution in the past. The present fishery is limited to brook trout and forage species. About 600 acres of marshland adjoin the stream.

◆ Jennings Creek

Town of Springvale, T12N, R11E

Surface Acres = 13.24, Miles = 9.1, Gradient = 13.18 feet per mile

Jennings Creek is a small spring-fed stream tributary to the middle branch of Duck Creek. The stream has good water quality. The WDNR owns 410 acres adjacent to the stream with 3.0 miles of stream managed as public hunting and fishing grounds. Brook trout are common and there is a long history of stocking of this species. Over 212 acres of wetland adjoin the stream. Waterfowl and muskrats are present in significant numbers.

◆ Neenah Creek

Town of Lewiston, T13N, R9E

Surface Acres = 55.15, Miles = 9.1, Gradient = 1.41 feet per mile

Neenah Creek is a wide sluggish stream which flows through marshlands in northwestern Columbia County to the Fox River. Catfish, walleye, northern pike, carp, dogfish, bass and several species of pan fish sustain the fishery. The entire stream in this area is traversable by light boat. Extensive wetlands (219 acres in Columbia County, 2,874 acres in Marquette County) adjoin the stream and afford high waterfowl potential. Access is possible at two county roads and a state highway. High rough fish populations perhaps deter greater use by game species.

◆ Prentice Creek

Town of Caledonia, T11N, R8E

Surface Acres = 5.81, Miles = 8.0, Gradient = 21.87 feet per mile

Prentice Creek is a high-gradient stream draining from the Baraboo Range to Lake Wisconsin. Trout of all three stream species have been introduced here. Brook trout were first sustained but as stream conditions changed management utilized brown trout to compensate for changing conditions. Fluctuating water levels present a problem in that volume of flow in some years is insufficient to support fishes other than minnows. Access is possible at several town and county road crossings, however, much adjoining land is private property. There are no adjoining wetlands.

◆ Robbins Creek

Town of Columbus, T10N, R12E

Surface Acres = 6.25, Miles = 8.6, Gradient = 6.25 feet per mile

Robbins Creek is a small low-gradient stream draining a swale southwest of Columbus north-easterly to the Crawfish River. Several artesian wells in the stream valley may be secondary water sources. Common white suckers and a few smallmouth bass constitute the fishery. Fluctuating water levels are a use problem. Access is available at several road crossings. About 244 acres of fresh meadow adjoin the stream.

◆ Rocky Run Creek

Town of Dekorra, T11N, R9E

Surface Acres = 65.75, Miles = 21.7, Gradient = 6.22 feet per mile

Rocky Run Creek is a long low-gradient stream which originates at Mud Lake and flows to the Wisconsin River. The stream is unusual in that it originates in an open marsh and has warm water for several miles before receiving sufficient spring flow and bank cover to make conditions suitable for trout. After several miles the stream again warms and warm water fishes persist downstream to the mouth. The stream is stocked annually with brook and brown trout. Good parking and access is provided by a WDNR fishery area. Portions of the stream have been traversed by canoe. About 2,200 acres of wetland adjoin the stream.

◆ Rowan Creek

Town of Dekorra, T11N, R9E

Surface Acres = 12.84, Miles = 10.6, Gradient = 11.79 feet per mile

Rowan Creek is a fair gradient spring-fed stream tributary to the Wisconsin River. Brown trout constitute the fishery for about 5.5 miles, below which warm water fishes from Lake Wisconsin inhabit the stream. The stream has perhaps more potential than any in Columbia County for sustaining a cold water fishery. A WDNR fishery area as well as several state, county and town roads provide access. Over 800 acres of varied marshland adjoin the stream. (Note: The portion of Rowan Creek from its junction with Hinkson Creek to the Wisconsin River is sometimes referred to as Powers Creek)

◆ Rowley Creek

Town of Caledonia, T12N, R8E

Surface Acres = 2.67, Miles = 5.5, Gradient = 29.10 feet per mile

Rowley Creek is a small, high-gradient stream draining from high in the Baraboo Range westward to Sauk County and eventually the Baraboo River. The stream intermittently originates in seepage around Lost Lake and has several springs further downstream which sustain its summer flow. This stream sustains a trout population; however, in recent years ground water conditions have deteriorated. Two town roads provide access.

◆ Sand Spring Creek

Town of Scott, T13N, R11E

Surface Acres = 4.22, Miles = 5.8, Gradient = 15.52 feet per mile

Sand Spring Creek is a small stream tributary to the Fox River in the northeast corner of the county. Though the stream has fair gradient and is mostly sand-bottom, the lower half is quite

flat and some sections have been straightened. Forage fishes constitute the fishery. Access is possible at one county road and three town road crossings. Over 100 acres of fresh meadow adjoin the stream and offer excellent habitat for upland game birds.

◆ Schneberger Creek

Town of Dekorra, T11N, R9E

Surface Acres = 0.15, Miles = 0.6, Gradient = 7.00 feet per mile

Schneberger Creek is a small spring-fed creek tributary to Rocky Run Creek. The stream supports a few native brook trout, however, parts are heavily pastured and in-stream cover is gone. An extensive area of fresh meadow and a small shrub swamp border the stream near its confluence with Rocky Run Creek. Public access is not available. The small size of this stream precludes anything but light fishing pressure, and its principal value is as a spring feeder for the larger stream.

◆ Spring Creek (Lodi)

Town of Lodi, T10N, R8E

Surface Acres = 27.20, Miles = 8.0, Gradient = 6.50 feet per mile

Spring Creek is a spring-fed stream which originates in a marshy area in Dane County and flows through the Town and City of Lodi to Lake Wisconsin. Water quality remains suitable for a good population of brown and rainbow trout. These species are stocked annually to complement the native reproduction of brook trout. The WDNR owns over 393 acres in Dane County on this stream, most of which is marshland to be managed for upland game. About 735 acres of non-wooded marshland border the stream in Columbia County.

◆ Spring Creek

Town of Fort Winnebago, T13N, R9E

Surface Acres = 4.56, Miles = 4.7 Gradient = 10.64 feet per mile

Spring Creek is a small, clear spring-fed stream tributary to French Creek. Forage species constitute the fish population. Spring areas near the headwaters have been impounded as farm ponds. Downstream one impoundment of the French Creek Wildlife Area rests on the stream. There is one major feeder stream and several ditches along the stream. Three county trunk highways and 1,731 acres of public land in the French Creek Wildlife Area provide access to the stream. Use by migrating waterfowl is the prime value of this area.

◆ Wisconsin River

Towns of Caledonia, Dekorra, Lewiston, Newport, and Pacific

T11N, R8-9E; T12N, R8-9E; T13N, R7-8E

Surface Acres = 10,904, Miles = 65.8, Gradient = 0.5 feet per mile

All that portion of the river from Wisconsin Dells to the Interstate bridge is considered to be the Wisconsin River. The portion of the river from the Prairie du Sac dam north to the Interstate bridge is considered Lake Wisconsin. The river above Prairie du Sac drains over 8,944 square miles through central Wisconsin beginning in Lac Vieux Desert in Vilas County. Two dams on the river with a combined total height of 63 feet are located in Columbia County (Wisconsin Dells, 25 feet; Prairie du Sac, 38 feet). The water is normally colored reddish-brown and contains industrial by-products and organic materials assumed to cause a taste problem in river fishes. This is most noticeable in late winter and early spring in fishes caught below the dams. The river has a complex fishery. Walleye, sauger, catfish, both largemouth and smallmouth bass and rock

sturgeon are considered the dominant game fishes. An occasional muskellunge is caught below Lake Wisconsin. Bluegills, white bass, and crappies are harvested below the dams in the late spring and early summer. Paddle fish inhabit the river below the Prairie du Sac dam and are protected from capture by law.

The entire stream is navigable and heavily used by canoes and outboard motorboats. An area 3.6 miles long below the Dells Dam and the one-mile portion immediately above the dam is known as the Wisconsin Dells, an important scenic attraction. The shores rise as much as 120 feet vertically in the canyon through Cambrian sandstone. This portion of the river is deep and navigable by large boats. Extensive frontage in this area is controlled by companies capitalizing on the scenic attractions. Since much of the river shore elsewhere is subject to flooding, cottage development in low areas is not extensive and the river still has high aesthetic value with marsh and wooded lowland banks. About 0.4 miles of shoreline are in public ownership in local parks and 5.33 miles, mostly within Pine Island Wildlife Area, are in state ownership. Access is possible from Lake Wisconsin sites and from state and local public lands, though launching on state lands is rather difficult. More than 3,000 acres of wetland adjoin the stream affording excellent waterfowl habitat.

5.4.8 Floodplains

Floodplains include streams, rivers, and wetlands, and lands that are adjacent to these water resources that are periodically inundated by floodwater. This is both a real phenomenon and a legal standard; the Federal Emergency Management Agency (FEMA) has produced maps of Columbia County that show the areas of 100-year flood. A 100-year flood is defined in the Columbia County Floodplain Zoning Ordinance as a regional flood "determined to be representative of large floods known to have occurred in Wisconsin and which may be expected to occur on a particular stream because of like physical characteristics. The flood frequency of the regional flood is once in every 100 years" (Columbia County Floodplain Zoning Ordinance, Article K). Lands within the legal floodplain, as designated by the FEMA maps, are within the regulatory authority of the Columbia County Floodplain Zoning Ordinance. There are approximately 72,061 acres of floodplains in Columbia County, according to FEMA. This represents approximately 14 percent of the surface of the County. Floodplains are concentrated in the northern and western portions of the County along the Wisconsin River and its tributaries. Significant areas of floodplains also exist in the southeastern portion of the County along the Crawfish River and its tributaries. Table 5-2 lists the acres of floodplain by municipality in Columbia County. Among towns, the Town of Caledonia has the largest number of acres of floodplain at 13,900 acres and the largest percentage of land area in floodplains with 34 percent being classified as floodplain. The Town of Arlington has the fewest acres in floodplain with 18 acres or 0.1 percent of the Town's land area being classified floodplain. Among cities and villages, the City of Portage has the largest number of acres of floodplain at 2,738 acres and the largest percentage of land area in floodplain with 45 percent. The Villages of Arlington, Doylestown, Friesland, Randolph, and Rio have no floodplains. Map 5-10 in Appendix I illustrates the locations of the floodplains in Columbia County.

Structures are undesirable in floodplains because they reduce water storage capacity, retard the flow of floodwater, and can be damaged or destroyed by floods. Also, in a large flood, chemicals normally and safely stored in homes and business can escape to cause damage to land and water resources downstream. Floodplains may contain, however, rich agricultural soil and can be valuable as farmland. They can also be used for parks and recreation, and a variety of other uses that do not involve structures.

TABLE 5-2
Floodplains by Municipality
Columbia County, 2005

Municipality	Acres of Floodplains	% of Municipality's Land Area
Town of Arlington	18	0.1%
Town of Caledonia	13,900	34.2%
Town of Columbus	1,339	6.6%
Town of Courtland	1,268	5.6%
Town of Dekorra	5,046	17.5%
Town of Fort Winnebago	6,246	29.1%
Town of Fountain Prairie	1,862	8.3%
Town of Hampden	1,175	5.1%
Town of Leeds	21	0.1%
Town of Lewiston	10,157	28.6%
Town of Lodi	1,648	8.9%
Town of Lowville	451	2.0%
Town of Marcellon	953	4.2%
Town of Newport	2,881	20.3%
Town of Otsego	388	2.0%
Town of Pacific	7,795	56.3%
Town of Randolph	621	2.8%
Town of Scott	1,765	7.7%
Town of Springvale	3,954	15.0%
Town of West Point	2,564	12.3%
Town of Wyocena	4,372	18.4%
Village of Arlington	0	0.0%
Village of Cambria	7	1.1%
Village of Doylestown	0	0.0%
Village of Fall River	6	0.6%
Village of Friesland	0	0.0%
Village of Pardeeville	325	22.5%
Village of Poynette	87	5.6%
Village of Randolph*	0	0.0%
Village of Rio	0	0.0%
Village of Wyocena	173	17.3%
City of Columbus*	146	5.6%
City of Lodi	113	12.6%
City of Portage	2,739	45.2%
City of Wisconsin Dells*	41	2.9%
Columbia County	72,061	14.1%

Source: FEMA and Columbia County Planning and Zoning

5.4.9 Wetlands and Hydric Soils

Columbia County is rich in the number and quality of its wetlands. Wetlands are areas with sufficient surface moisture to support marshland and aquatic vegetation. These areas are generally associated with wet spongy conditions due to standing water and a high water table. There are approximately 75,408 acres of wetlands in Columbia County, according to the Wisconsin Department of Natural Resources. This represents approximately 15 percent of the surface of the County. Wetlands are concentrated in the northern and western portions of the County along the Wisconsin River system. However other areas of the County also contain significant wetlands. Table 5-3 lists the acres of wetland by municipality in Columbia County. Among towns, the Town of Lewiston has the largest number of acres of wetlands at 11,119 acres, while the Town of Pacific had the largest percentage of land area in wetlands with 45 percent being classified as wetland. The Town of Arlington has the fewest acres of wetlands at 186 acres and the smallest percentage at 0.8 percent. Among cities and villages, the City of Portage has the largest number of acres of wetlands, 1,416 acres, and the largest percentage of land area in wetland, 23 percent. The Villages of Arlington and Rio have no wetlands. Map 5-11 in Appendix I illustrates the locations of wetlands in Columbia County.

Wetlands are the most productive and beneficial habitat for wildlife. In agricultural areas, wetlands often represent the last remaining stable wildlife cover. They provide areas for hunting, trapping, fishing, biking, bird watching, and other forms of recreation.

Wetlands are also important for retaining storm water from rain and melting snow. Wetlands slow the movement of storm water run-off and can provide storage areas for floodwaters, thus minimizing adverse impacts to downstream areas. Preservation of wetlands can prevent needless expenses for flood and storm water control projects such as dikes, levees, concrete lined channels and detention basins.

It is also known that wetlands help to maintain water quality. Wetland plants and soils have the capacity to store and filter pollutants ranging from pesticides to animal wastes. Calm wetland waters, with their flat surface and flow characteristics, allow particles of toxins and nutrients to settle out of the water.

Some wetlands can provide a valuable service of replenishing groundwater supplies. The filtering capacity of wetland plants and substrates may also help protect groundwater quality. Groundwater discharge is the process by which groundwater is brought to the surface and released to surface water bodies. Groundwater discharge is a more common wetland function and can be important for stabilizing and maintaining stream flow, especially during dry months. This can result in an enhancement of the aquatic life communities in the downstream areas. Groundwater discharged through wetlands can contribute toward high quality water in lakes, rivers, and streams.

In addition to wetlands, several areas of the County contain wet soils known as hydric soils. Hydric soils are soils formed in areas where the saturation, flooding, or ponding of water on the soil during the growing season is long enough to reduce oxygen levels in the soil. Because of high water levels, areas with hydric soils have similar characteristics to wetlands but are not considered wetlands and do not receive the same regulatory protections as wetlands. Nonetheless, they are generally not advised for building construction. The locations of areas with hydric soils should be considered when reviewing development proposals. Map 5-11 in Appendix I also illustrates the locations of hydric soils in Columbia County.

TABLE 5-3
Wetlands by Municipality
Columbia County, 2005

Municipality	Acres of Wetlands	% of Municipality's Land Area
Town of Arlington	186	0.8%
Town of Caledonia	5,745	14.2%
Town of Columbus	2,046.0	10.1%
Town of Courtland	3,433	15.1%
Town of Dekorra	4,623	16.1%
Town of Fort Winnebago	6,147	28.7%
Town of Fountain Prairie	2,984	13.4%
Town of Hampden	1,978	8.7%
Town of Leeds	983	4.3%
Town of Lewiston	11,119	31.3%
Town of Lodi	1,212	6.6%
Town of Lowville	2,086	9.1%
Town of Marcellon	2,525	11.0%
Town of Newport	2,590	18.2%
Town of Otsego	2,413	12.2%
Town of Pacific	6,234	45.0%
Town of Randolph	1,695	7.5%
Town of Scott	3,500	15.3%
Town of Springvale	5,278	20.1%
Town of West Point	205	1.0%
Town of Wycena	5,710	24.1%
Village of Arlington	0	0.0%
Village of Cambria	82	12.9%
Village of Doylestown	397	15.5%
Village of Fall River	174	17.0%
Village of Friesland	6	0.9%
Village of Pardeeville	210	14.5%
Village of Poynette	195	12.5%
Village of Randolph*	1	0.7%
Village of Rio	0	0.0%
Village of Wycena	130	13.0%
City of Columbus*	40	1.5%
City of Lodi	26	2.9%
City of Portage	1,416	23.4%
City of Wisconsin Dells*	39	2.8%
Columbia County	75,408	14.8%

Source: WDNR and Columbia County Planning and Zoning

5.4.10 Woodlands

Woodlands cover over 89,000 acres in Columbia County, or about 17.5 percent of the total area. Table 5-4 lists the acres of woodland by municipality in Columbia County. Various sized woodlands are generally scattered around the County with larger wooded areas located in the northern and western portions of the County. A large portion of the woodlands in the County are contained within area that are heavily sloped, located in floodplain or wetland, or on marginal agricultural lands. Among towns, the Town of Caledonia has the largest number of acres of woodlands at 13,377 acres and the largest percentage of land area in woodlands with 33 percent being classified as woodlands. The Town of Columbus had the fewest acres of woodlands at 791 acres and the smallest percentage at 3.9 percent. Among cities and villages, the City of Wisconsin Dells has the largest number of acres of woodlands, 861 acres, and the largest percentage of land area in woodland, 61.4 percent. The Village of Arlington has the fewest acres of woodlands with one acre consisting of 0.1 percent of the Village area. Woodlands in Columbia County are illustrated on Map 5-12 in Appendix I.

Woodlands can provide economic and ecological value as well as a recreational resource. As with surface water, woodlands attract residential and recreational development. Some timber in the County may have commercial value, but the primary value of the remaining woodlands in the County may be as open space or wildlife habitat with some limited residential development. Recreational areas are also desirable in wooded areas. Woodlands containing desirable species of trees take a very long time to grow. It would be advantageous to preserve as many of the remaining woodlands as possible.

TABLE 5-4
Woodlands by Municipality
Columbia County, 2005

Municipality	Acres of Woodlands	% of Municipality's Land Area
Town of Arlington	1,916	8.5%
Town of Caledonia	13,377	33.0%
Town of Columbus	791	3.9%
Town of Courtland	1,213	5.3%
Town of Dekorra	8,117	28.2%
Town of Fort Winnebago	4,757	22.2%
Town of Fountain Prairie	1,589	7.1%
Town of Hampden	881	3.9%
Town of Leeds	976	4.2%
Town of Lewiston	7,942	22.3%
Town of Lodi	5,347	29.0%
Town of Lowville	4,035	17.6%
Town of Marcellon	6,253	27.3%
Town of Newport	3,388	23.8%
Town of Otsego	2,283	11.5%
Town of Pacific	2,102	15.2%
Town of Randolph	1,113	4.9%
Town of Scott	4,382	19.1%
Town of Springvale	4,485	17.0%
Town of West Point	6,625	31.8%
Town of Wycena	5,066	21.3%
Village of Arlington	1	0.1%
Village of Cambria	40	6.3%
Village of Doylestown	306	11.9%
Village of Fall River	24	2.4%
Village of Friesland	8	1.2%
Village of Pardeeville	85	5.9%
Village of Poynette	244	15.6%
Village of Randolph*	3	1.8%
Village of Rio	90	10.8%
Village of Wycena	106	10.6%
City of Columbus*	31	1.2%
City of Lodi	65	7.2%
City of Portage	649	10.7%
City of Wisconsin Dells*	861	61.4%
Columbia County	89,150	17.5%

Source: USGS and Columbia County Planning and Zoning

5.4.11 Wildlife Habitat and State Natural Areas

Wildlife habitat is made up of various components, many of that have been addressed in other sections of this element. Basically wildlife habitat is an area that has enough food, water, and cover for a species to survive. The woodlands, wetlands, and the shorelines of waterways comprise the largest areas of wildlife habitat in Columbia County and often contain the last remaining stable areas of wildlife cover. Upland species often seen in Columbia County include white tail deer, rabbits, fox, muskrat, wild turkeys, and a variety of song birds. Waterfowl that are commonly spotted in the County include ducks, egrets, sand hill cranes, and herons. The Wisconsin DNR owns and manages several public wildlife areas and hunting grounds that provide wildlife habitat. These areas are discussed in more detail in the Outdoor Recreational Resources section of this Plan element.

5.4.11.1 State Natural Areas

The Wisconsin Department of Natural Resources identifies 10 State Natural Areas within Columbia County. State natural areas were acquired to protect the state's natural diversity, provide sites for research and environmental education, and serve as benchmarks for assessing and guiding use of other lands in the state. Natural areas are defined as tracts of land or water that have native biotic communities, unique natural features, or significant geological or archeological sites. Generally, natural areas are remnant areas which largely have escaped disturbances since settlement or which exhibit little recent disturbance so that recovery has occurred and pre-settlement conditions are approached. Natural areas provide an important reservoir of our state's genetic or biologic diversity. They act as important reserves for native biotic communities and provide habitat for endangered, threatened, or critical species or other species of special concern to scientists. The six State Natural Area located within Columbia County are described below. Map 5-8 illustrates the locations of State Natural Areas in Columbia County.

◆ Gibraltar Rock - Town of West Point, 35 acres

Gibraltar Rock is a sandstone bluff, an outlier of the Black River escarpment. Located near the Wisconsin River the bluff rises 400 feet above Lake Wisconsin to the north and contains cliff and cedar glade communities. On the south is a sheer 200-foot cliff overlooking a large leather-leaf bog and scenic valley. Gibraltar Rock is owned by the DNR and was designated a State Natural Area in 1969.

◆ Audubon Goose Pond - Town of Arlington, 81 acres

Goose Pond is a small, isolated, prairie pothole located within a marshy basin. The area was designated a bird species preserve because of the number of bird species that have been sighted on the property (243 species). Waterfowl and shorebirds are the main interests. Twenty-eight species of waterfowl have been observed and about 23 species visit each spring. Eight species of ducks nest at the pond. Goose Pond is owned by the Madison Audubon Society and was designated a State Natural Area in 1970.

◆ Lost Lake - Town of Caledonia, 169 acres

Lost Lake is a small kettle-type depression in glacial ground moraine deposits overlying the eastern end of the Baraboo Range. This deep, circular hard water lake is perched near the upper end of a ravine about 0.2 mile wide and 0.5 mile long and drains to the northwest. Large quartzite boulders and exposures of quartzite conglomerate and layers of sandstone cover the north-facing slope. This area harbors a shaded cliff community with numerous ferns and mountain maple. The bottom of the hollow supports a well-established lowland forest with yellow birch, black ash, green ash, hackberry, American elm, and poison sumac. On the slopes, the forest grades into red oak, basswood, yellow birch, hackberry, and white ash with white oak predominant further

upslope. Wildlife includes snapping turtles, green and gray tree frogs, green herons, and two rare birds, the yellow-billed cuckoo, and Louisiana waterthrush. Lost Lake is owned by the DNR and was designated a State Natural Area in 1985.

◆ Baraboo River Floodplain Forest - Town of Caledonia, 22 acres

The Baraboo River Floodplain Forest is a relatively undisturbed forest that lies on nearly level terrain. Occasional sloughs are formed by the gradual filling of old stream meanders (oxbows). Large diameter trees dominate the forest. The understory is quite open with only a few shrubs and saplings. The ground layer contains more than fifty species. The Baraboo River Floodplain Forest is owned by The Nature Conservancy and was designated a State Natural Area in 1988.

◆ Rocky Run Oak Savanna - Towns of Wycocena and Lowville, 441 acres

Rocky Run Savanna occupies widely differing topography on a south-facing slope above Rocky Run Creek. The eastern portion is gently rolling, while the west is very steep and dissected containing two sheer-walled box canyons cut through the Cambrian sandstone. As the topography varies so does the bur, white, and black oak savanna canopy structure. The canopy is open on the upper slopes and nearly closed on the relatively flat lower slope. The variation in topography, shading, and soils provides for a mosaic of groundlayer species. More than 100 species with prairie affinities have been recorded. The dry, sandy conditions also support a notable concentration of rare animals. Management activities of brushing and prescribed burns are needed to help maintain and restore the oak opening. Rocky Run Savanna is owned by the DNR and was designated a State Natural Area in 1988.

◆ Dells of the Wisconsin River - Town of Newport, 1,300 acres

The Dells of the Wisconsin River encompasses over five miles of Wisconsin River corridor with a spectacular gorge, cliffs, tributary canyons, and rock formations carved into Cambrian sandstone. Formed between 510 and 520 million years ago, some cliffs rise over one hundred feet above the water and have been shaped by the erosive processes of water and wind. With a variety of exposures and moisture regimes, the cliffs afford many different niches for plants, some of which are very rare in Wisconsin. This area contains a mosaic of plant communities including northern and southern oak/pine forests, oak savanna, and moist and dry cliffs. Rare animals include six dragonfly species, six rare mussels, and numerous birds. While set aside to protect the rare plants and animals, the Dells also has an important cultural history that spans several thousand years. Various Native Americans, ranging from early Paleo-Indian people to the more recent Ho-Chunk, Sac, and Menominee, were attracted to the scenic waterway, and left behind archeological evidence such as effigy and burial mounds, camps and village sites, garden beds and rock art. Dells of the Wisconsin River is owned by the DNR and was designated a State Natural Area in 1994.

◆ French Creek Fen – Town of Fort Winnebago, 196 acres

French Creek Fen, located within the French Creek Wildlife Area, features a semi-open wetland containing three calcareous fens with mound springs, wet prairie, and sedge meadow near the confluence of Spring and French Creeks. One fen is located on gently sloping mound with characteristic species including big bluestem, blue-joint grass, fringed brome, marsh muhly, Kalm's lobelia, shrubby cinquefoil, spotted Joe-pye weed, and shining aster. Of note, is the presence of rare plant species including lesser fringed gentian (*Gentiana procera*), cespitose bulrush (*Scirpus cespitosus*), false asphodel (*Tofieldia glutinosa*), and common bog arrow-grass (*Triglochin maritima*). Bird life is diverse. Birds using the area including the surrounding wetlands include alder flycatcher, common yellow-throat, great blue heron, great-crested flycatcher, marsh wren, sedge wren, sora, and yellow warbler. Rare and uncommon birds include black tern (*Chlidonias niger*), American bittern (*Botaurus lentiginosus*), yellow-billed cuckoo

(*Coccyzus americanus*), and yellow-breasted chat (*Icteria virens*). French Creek is owned by the DNR and was designated a State Natural Area in 2007.

◆ Springvale Wet Prairie – Town of Springvale, 271 acres

Situated along both banks of Duck Creek within the Peter Helland Wildlife Area, Springvale Wet Prairie is an open wetland complex of wet prairie grading into sedge meadow and calcareous fen. The prairie contains a significant grass component including cordgrass, big bluestem, and bluejoint grass. A diversity of forbs is also present and includes species such as black-eyed susan, mountain mint, sawtooth sunflower, rosinweed, marsh pea, turtlehead, and cowbane. Tussock sedge dominates the sedge meadow with swamp milkweed, marsh, spotted Joe-pye weed, Michigan lily, and boneset. A mound located on the south creek bank supports many calcium-loving plants that are fen indicator species. They include grass-of-parnassus, marsh bellflower, northern bedstraw, valerian, tall meadow-rue, swamp lousewort, golden alexanders, swamp thistle, and shrubby cinquefoil. Also present are two undisturbed springs and spring runs. Preliminary field surveys indicate a diverse lepidopteran fauna is present, which includes the Dion skipper, and mulberry wing. Springvale Wet Meadow is owned by the DNR and was designated a State Natural Area in 2007.

◆ Grassy Lake – Village of Doylestown, 277 acres

Situated within rolling morainal topography of the Grassy Lake State Wildlife Area, Grassy Lake is a shallow, hard-water seepage lake that supports dense stands of emergent aquatic vegetation throughout its basin. Soft-stem bulrush is the dominant species with wool-grass, common bur-reed, narrow-leaved bur-reed, water horsetail, and water dock. Submerged aquatics include coon's-tail, common waterweed, whorled water milfoil, white water crowfoot, common arrowhead, and northern bladderwort. The wetlands and surrounding uplands provide good habitat for a number of birds including sandhill crane, wood duck, blue-winged teal, mallard, coot, pied-billed grebe, marsh wren, and black tern. Grassy Lake is owned by the DNR and was designated a State Natural Area in 2007.

◆ Pine Island Savanna – Towns of Caledonia & Lewiston, 798 acres

Situated along the Wisconsin River within the Pine Island Wildlife Area, Pine Island Savanna features one of the largest floodplain savanna remnants along with several patches of sand prairie. An interior river island supports a floodplain savanna of scattered swamp white oak and an understory comprised of prairie grasses and forbs. Sandy ridges contain black oak and wet swales are vegetated with bottomland species such as silver maple, river birch, and green ash. Both red pine and white pine occur naturally on the island. Common savanna understory species include prairie milkweed, New England aster, white false indigo, prairie coreopsis, wild bergamot, black-eyed susan, Missouri goldenrod, and culver's-root. The site also contains small areas of sand prairie. Pine Island Savanna is owned by the DNR and was designated a State Natural Area in 2007.

5.4.11.2 Wisconsin's Land Legacy Report

The WDNR has prepared the Wisconsin Land Legacy Report to identify places in the State believed to be most important in meeting Wisconsin's conservation and recreation needs over the next 50 years. The report identifies 228 Legacy Places in the State that consist of places that are the most important for conserving critical natural resources and providing outdoor recreation opportunities. The following seven Legacy Places have been identified in Columbia County:

- Arlington Prairie
- Baraboo Hills

- Baraboo River
- Glacial Habitat Restoration Area
- Lewiston Marsh
- Middle Wisconsin River
- Portage to Buffalo Lake Corridor

No specific boundaries or levels of protection have been proposed for these Legacy Places due mainly to a lack of information as to what land or water features are the most appropriate to protect. The determination of where protection efforts should be focused, which protection strategies would be most effective, and who should be involved will require a more detailed, locally-led evaluation involving local landowners, citizens, organizations, businesses, and government.

5.4.12 Metallic and Nonmetallic Mineral Resources

Metallic minerals are important sources for metals such as zinc, lead, copper, iron, and gold. Limited metallic mineral deposits in the form of iron ore exist in the Town of Caledonia in Columbia County. No metals are currently being mined in the State of Wisconsin.

Nonmetallic minerals are important sources of building stone, lime, industrial sand, and construction aggregates. Like ground water, forests, and agricultural land, non-metallic minerals resources exist where nature put them, not always where they are needed. Planning for these resources is needed in order to ensure abundant supplies of inexpensive aggregate in the future. Reclamation of nonmetallic mines are regulated by the Columbia County Nonmetallic Mining Reclamation Ordinance within the Columbia County Code of Ordinances. The ordinance requires all operating nonmetallic mines to obtain an annual reclamation permit and to prepare a reclamation plan for the mine site. The reclamation plan is to describe how the mine site will be restored once mining is complete and what the post-mining land use will be for the property. The annual permit provides a means to track progress on the reclamation of the mine site. There are currently 40 active and permitted nonmetallic mining operations in Columbia County as well as another 16 inactive mines. Map 5-4 illustrates the locations of nonmetallic mining sites in the County.

5.4.13 Parks, Open Spaces, and Outdoor Recreational Resources

In Columbia County, parks, open spaces, and outdoor recreational resources are provided by a variety of governmental entities and organizations. Parks and developed recreational areas in Columbia County are addressed in detail in the Utilities and Community Facilities Element of this Plan and therefore will not be addressed here. This section will focus mainly on open space areas and outdoor recreational resources such as hunting grounds, wildlife areas, waterfowl production areas. Over 28,000 acres of land in Columbia County are in public ownership and available for open space and outdoor recreational uses. These outdoor recreation areas include land owned by the Wisconsin Department of Natural Resources for hunting grounds and wildlife areas, lands owned by the US Fish and Wildlife Service and the Madison Audubon Society for waterfowl production areas, and lands along the Wisconsin River owned by Wisconsin Power and Light that are open to public hunting. Table 5-5 below lists many of the outdoor recreational lands available for public use in Columbia County. The table provides information on the owner, acreage, and general uses of these lands. Map 5-13 illustrates the locations of public outdoor recreational land and open spaces. Open spaces and outdoor recreational areas are important resources for providing recreational opportunities for County residents and should be supported whenever possible.

TABLE 5-5
Outdoor Recreational Lands
Columbia County, 2005

Owner	Site Name	Acres	Purpose / Uses
Wisconsin DNR	Columbus Wetland	240	Hunting/Canoeing/Bird Watching/Fishing
	Dekorra Public Hunting Grounds	242	Hunting/Bird Watching/Berry Picking
	Duck Creek Public Hunting Grounds	159	Hunting/Bird Watching/Hiking
	French Creek Wildlife Area	3,176	Hunting/Fishing/ Bird Watching/Berry Picking
	Grassy Lake Wildlife Area	695	Hunting/Bird Watching/Berry Picking
	Hampden Wetland Public Hunting Grounds	227	Hunting/Bird Watching
	Hinkson Creek Fishery Area	160	Hunting/Trout Fishing
	Jennings Creek Wildlife Area	530	Hunting/Trout Fishing
	Lodi Marsh Wildlife Area	1,207	Hunting/Hiking/ Berry Picking/Bird Watching/
	Mackenzie Environmental Center	267	Live Animal Exhibits/Nature Center Education/Hiking/ Bird Watching/ Cross-Country Skiing
	Mud Lake Wildlife Area	2,139	Hunting/Canoeing/Bird Watching
	Paradise Marsh Wildlife Area	1,496	Hunting/Bird Watching/Hiking
	Peter Helland Wildlife Area	2,997	Hunting/Bird Watching/Berry Picking/Canoeing
	Pine Island Wildlife Area	5,043	Hunting/Canoeing/Dog Training/Hiking/Fishing
	Rocky Run Creek Fishery Area	710	Hunting/Trout Fishing/Bird Watching
Rowan Creek Fishery Area	629	Hunting/ Bird Watching/Hiking/Cross-Country Skiing/Trout Fishing	
Swan Lake Wildlife Area	1,799	Hunting/Bird Watching	
US Fish and Wildlife Service	Anderson Waterfowl Production Area	20	Waterfowl Production Area
	Baraboo River Waterfowl Production Area	846	Waterfowl Production Area
	Becker Waterfowl Production Area	279	Waterfowl Production Area
	Doylestown Waterfowl Production Area	52	Waterfowl Production Area
	Ludwig Waterfowl Production Area	35	Waterfowl Production Area
	Manthey Waterfowl Production Area	422	Waterfowl Production Area
	Rowe Waterfowl Production Area	336	Waterfowl Production Area
	Schoenberg Marsh Waterfowl Production Area (part)	605	Waterfowl Production Area
	Severson Waterfowl Production Area	250	Waterfowl Production Area
	Vangen Waterfowl Production Area	81	Waterfowl Production Area
Madison Audubon Society	Goose Pond	569	Waterfowl Production Area/Bird Watching
	Schoenberg Marsh Waterfowl Production Area (part)	60	Waterfowl Production Area
Wisconsin Power and Light	Wisconsin River Area	3,100+	Hunting

Source: WDNR, US Fish and Wildlife Service, & Columbia County

5.4.14 Historic and Cultural Resources

Columbia County has a vibrant history consisting of both Native American and European settlement periods. Historic Native American sites such as mounds, campsites, or villages are located throughout the County. Likewise, many of the County's communities date back to the mid-1800's and contain historic homes and buildings from the early European settlement of the County. In an effort to retain the historic character of the communities in the County and encourage tourism in the area, the integrity of historic structures and cultural sites should be preserved and enhanced whenever possible. The preservation of historic and cultural resources is an important tool to allow people to experience and learn from the past. Historic places, objects, and documents provide important evidence about historical trends and events, provide insight into how people lived, provide examples of distinctive architectural and engineering designs, and help to tell the story of the history of Columbia County. Information about the historic and cultural resources in Columbia County is describe below.

5.4.14.1 National and State Register of Historic Places

Identifying and preserving historical structures and cultural areas within Columbia County are important considerations in developing a Comprehensive Plan for the County. These features help to define the County's historic character and cultural heritage. The National Register of Historic Places recognizes properties of local, state, and national significance. The Wisconsin State Register of Historic Places also recognizes significant historic sites and most properties on the National Register are also included on the State Register. However, the State register allows for state-level preservation efforts outside of the National Register. Properties are listed in the National and State Register because of their associations with significant persons or events, because they contain important information about our history or prehistory, or because of their architectural or engineering significance. The National and State Registers also list important groupings of properties as historic districts. Details about the National and State Register of Historic Places program are provided in section 5.3.6 of this element. A total of 36 sites in Columbia County have been placed on the National and State Registers of Historic Places. Table 5-6 lists the properties listed on the National and State Registers of Historic Places in Columbia County by the community in which they are located. Map 5-14 in Appendix I illustrates the locations of properties listed on the National and State Registers of Historic Places in Columbia County. The impacts on the sites listed in the National and State Registers of Historic Places should be considered when evaluating development proposals in the County.

TABLE 5-6
Sites Listed on the National and State Registers of Historic Places,
Columbia County, 2005

Town/Village/City	Historic Site Name	Address
Town of Caledonia	Durward's Glen	NE of Merrimac off STH 78
Town of Columbus	Holsten Family Farmstead	W1391 Weiner Rd.
Town of Fort Winnebago	Fort Winnebago Site	Address Restricted
Town of Fountain Prairie	Nashold 20-sided Barn	CTH Z, 0.4 mi. E of STH 146
Town of Newport	Kingsley Bend Mound Group	Hwy 16 wayside, 3 miles south of Dells
	Upham, Horace A.J., (Camp Wabeek) House	N9888 STH 13
Town of Pacific	Fort Winnebago Surgeon's Quarters	0.1 mi. E of Portage city limits on STH 33
Village of Pardeeville	Bellmont Hotel	120 N. Main St.
	Cox, Angie Williams, Library	129 N. Main St.
	Pardeeville Presbyterian Church	105 S. Main St.
City of Columbus	Chadborn, F. A., House	314 S. Charles St.
	Columbus City Hall	105 N. Dickason St.
	Columbus Downtown Historic District	Roughly bounded by Mill, Water and Harrison Sts. and Dickason Blvd.
	Columbus Fireman's Park Complex	1049 Park Avenue
	Columbus Post Office	211 South Dickason Blvd.
	Columbus Public Library	112 S. Dickason Blvd.
	Farmers and Merchants Union Bank	159 W. James St.
	Kurth, John H., and Company Office Building	729--733 Park Ave.
	Lewis, Gov. James T., House	711 W. James St.
	Prairie Street Historic District	Roughly along W. Prairie St., including parts of S. Lewis St. and S. Charles St.
	South Dickason Boulevard Residential Historic District	Roughly along S. Dickason Blvd., from W. School St. to W. Harrison, also along S. Ludington St.
City of Lodi	Lodi Street - Prairie Street Historic District	Roughly Prairie St. from Second St. to Mill St. Also part of Lock Street.
	Portage Street Historic District	Roughly along Portage St. from Spring to Parr Sts.
City of Portage	Church Hill Historic District	Roughly bounded by Adams, Pleasant, Lock, and Franklin Sts.
	Fox-Wisconsin Portage Site	Address Restricted
	Gale, Zona, House	506 W. Edgewater St.
	Merrell, Henry, House	505 E. Cook St.
	Old Indian Agency House	NE end of old Agency House Rd.
	Portage Canal	Between Fox and Wisconsin Rivers
	Portage Industrial Waterfront Historic District	Jct. of E. Mullet and Dodge Sts.
	Portage Retail Historic District	Roughly, Cook from Wisconsin to Main, Wisconsin from Cook to Edgewater and DeWitt from Conant to Edgewater
Society Hill Historic District	Roughly bounded by W. Wisconsin, Cass and W. Emmett Sts. and MacFarlane Rd.	
City of Wisconsin Dells	Bennett, H. H., Studio	215 Broadway
	Bowman House	714 Broadway St.
	Kilbourn Public Library	631 Cedar Street
	Weber, Jacob, House	825 Oak St.

Source: Wisconsin Historical Society

5.4.14.2 The Architecture and History Inventory (AHI)

In addition to the National and State Registers of Historic Places, the Wisconsin Historical Society maintains a collection of information on historic buildings, structures, sites, objects, and historic districts throughout the Wisconsin called the Architecture and History Inventory (AHI). The AHI is housed at the Wisconsin Historical Society in Madison and is a permanent record maintained by the Society's Division of Historic Preservation. The AHI contains data on buildings, structures and objects that illustrate Wisconsin's unique history. The AHI documents a wide range of historic properties such as the round barns, log houses, metal truss bridges, small town commercial buildings, and Queen Anne houses that create Wisconsin's distinct cultural landscape. The AHI is comprised of written text and photographs of each property, which document the property's architecture and history.

Most properties become part of the AHI as a result of a systematic architectural and historical survey. The inventory is not a comprehensive list of all old Wisconsin buildings and structures. The inventory has been assembled over a period of more than 25 years from a wide variety of sources. From its beginning in the mid-1970s until 1980, reconnaissance surveys were conducted by summer students. Starting in 1980, intensive surveys were funded by sub-grants and conducted by professional historic preservation consultants. In many cases, the information is dated. Some properties may be altered or no longer exist. The majority of properties included in this inventory are privately owned and not open to the public. Inclusion in this inventory conveys no special status, rights or benefits to owners of these properties. In Columbia County, 2,255 properties are listed in the inventory.

5.4.14.3 Archaeological Sites Inventory (ASI)

Archaeological sites are places that provide archeologists with clues about past human behavior. These sites are often located where people lived, worked, or worshipped. Examples of archaeological sites include the remains of Indian campsites, areas where lead was mined by either Native Americans or early European settlers, the remains of a farmstead, a limestone quarry, a pottery factory, a shipwreck, or a railroad depot. Archaeological sites also include burial sites such as Native American burial mounds and historic European-American cemeteries.

The Office of the State Archaeologist, Historic Preservation Division of the Wisconsin Historical Society maintains a list of archaeological sites, mounds, unmarked cemeteries, marked cemeteries, and cultural sites known as the Archaeological Site Inventory (ASI). The ASI does not include all of the archaeological sites, mounds, unmarked cemeteries, marked cemeteries, and cultural sites that are present in the state. It includes only those sites that have been reported to the Wisconsin Historical Society. It is estimated that less than one percent of the archaeological sites in the state have been identified. The ASI is a compilation of information derived from a variety of sources over the last 150 years. The information available for each entry varies widely and not all of the information has been verified. Few of the sites have been evaluated for their importance and additional archaeological fieldwork may need to be completed. Sites listed on the State and National Register of Historic Places are also identified in the ASI. Under Wisconsin law, Native American burial mounds, unmarked burials, and all marked and unmarked cemeteries are protected from intentional disturbance. The discovery of any suspected Native American burial mounds or an unmarked or marked burials are required to be reported to the Burial Sites Preservation Office at the Wisconsin Historical Society.

In Columbia County, approximately 442 archaeological sites are included in the Wisconsin State Historical Society's ASI. Of these 442 sites, 198 are cemeteries or burials and 79 are Native American mounds. It is important to consider the impacts of development proposals on

archaeological sites. It is estimated that nearly 80 percent of the archaeological sites that once existed in the state have been destroyed or severely damaged, primarily by modern land practices such as development and farming. Many sites have also been damaged by looting. These archaeological sites represent some of the last remaining links to local history. Archaeological sites are non-renewable resources. If an archaeological site is destroyed, it is lost forever. Map 5-15 in Appendix I illustrates the generalized locations of archeological sites in Columbia County.

5.4.14.4 Museums, Historical Markers, and Historical Societies

Columbia County has a number of museums, historical markers, and historical societies that provide insight into the historical and cultural resources of the County. Table 5-7 lists the museums, historical markers, and historical societies located within Columbia County by community. The museums included on the list consist mainly of non-profit organizations that focus on a particular aspect of the County's history. The historical markers listed in the table document an important event in history and include markers installed by the State as well as those installed by local historical societies. The County's historical societies often maintain important historical records and objects and are often involved with local museums. Many of these facilities and organizations are open year round, however some require appointments. The locations of many of these museums and historical markers, in Columbia County are illustrated on Map 5-14 in Appendix I.

TABLE 5-7
Museums, Historical Markers, and Historical Societies by Community
Columbia County, 2005

Location	Resource	Description
Town of Arlington	John Muir View	Historical Marker
Town of Fort Winnebago	Potters' Emigration Society	Historical Marker
Town of Dekorra	Aliens and Oddities of Nature	Museum
	The Circus	Historical Marker
	Logging History Museum	Museum
	Rest Areas on the I-Roads	Historical Marker
	Wisconsin Conservation Wardens Museum	Museum
Town of Leeds	Leeds Center Cemetery Civil War Memorial	Historical Marker
	Empire Prairie Historical Marker	Historical Marker
Town of Pacific	Fort Winnebago	Historical Marker
	Marquette	Historical Marker
	Surgeon's Quarters of Fort Winnebago	Museum
Town of Newport	Kingsley Bend Indian Mounds	Historical Marker
Town of West Point	Merrimac Ferry	Historical Marker
Town of Wyocena	Wyona Park	Historical Marker
Village of Cambria	Cambria-Friesland Historical Society	Historical Society
Village of Pardeeville	Columbia County Historical Society	Historical Society
	Belmont Hotel	Historical Marker
	Columbia County Museum	Museum
	Historic Pardeeville	Historical Marker
Village of Poynette	Poynette Area Historical Society	Historical Society
	Poynette Museum	Museum
Village of Wyocena	Major Elbert Dickason	Historical Marker
	Dickason's "Hotel"	Historical Marker
City of Columbus	Christopher Columbus Museum	Museum
	Governor James Taylor Lewis	Historical Marker
City of Lodi	Lodi Valley Historical Society	Historical Society
City of Portage	Frederick Jackson Turner	Historical Marker
	Ketchum's Point	Historical Marker
	Indian Agency House	Museum
	Museum at the Portage	Museum
	Portage Historical Society	Historical Society
	Society Hill Historic District	Historical Marker
	Zona Gale Center for the Arts	Museum
City of Wisconsin Dells	Dells Country Historical Society	Historical Society
	HH Bennett Studio and History Center	Museum
	Stroud Bank	Historical Marker

Source: Wisconsin Historical Society and Columbia County Planning and Zoning

5.4.14.5 Cultural Events

A number of cultural events are held annually in communities throughout Columbia County. These events encourage residential development, attract local tourism, and boost local economies. Many of these events have a component that celebrates local history and helps to increase the sense of community in the area. These events are often sponsored by local chambers of commerce or other community groups. July and August are the most active months for community events in Columbia County. Table 5-8 lists the major cultural events by community in Columbia County.

TABLE 5-8
Cultural Events in Columbia County

Location	Event	Month of Event
Town of Dekorra	Mid-Summer Night Festival	July
Village of Cambria	Park Days	August
Village of Fall River	Fall River Chamber - Musical Extravaganza	October
Village of Friesland	Band Concerts and Pie Social	June thru August
Village of Pardeeville	Band Concerts and Pie Social	June thru August
	Pardeeville's 4th of July Celebration	July
	Pardeeville Watermelon Festival	September
Village of Randolph	Randolph Alumni FFA Toy Show and Sale	April
	Randolph Kiwanis Korn Karnival	September
	Randolph Christian Holiday Craft Sale	November
	Randolph Craft Show and Sale	November
Village of Rio	Rio Street Dance	August
City of Columbus	Redbud Festival	May
	Columbus Carriage Classic	June
	Classic Night	June
	4th of July Celebration	July
	Columbus Chamber Harvest Days	October
	Columbus Christmas Parade	November
	Holiday Home Tour	December
City of Lodi	Lodi Art Club's Annual Art in the Park	July
	Lodi Agricultural Fair	July
	Susie the Duck Day Celebration	August
	Rotary Summer Parade	August
	Holiday Open House Weekend	November
City of Portage	Portage's Festival of Flowers	April
	Portage Canal Days	June
	Downtown Art Walk	July
	Concert in the Park	July
	YesterFest	August
	Friendship Village Celebrates Zona Gale	August
	Taste of Portage Market Fair	August
	Pumpkinfest	October
	Holiday Parade and Tree Lighting	November
	Citywide Cookie Walk	December
	Living Windows	December
	Historic Home Tour	December
City of Wisconsin Dells	Flake Out Festival	January
	Automotion	May
	Wo-Zha-Wa Days Fall Festival	September
	Autumn Harvest Fest	October
Columbia County	Columbia County Fair	July

Source: Columbia County Tourism Committee

5.4.15 Community Design

Columbia County is located in the south-central portion of the State of Wisconsin. The County is approximately 796 square miles in area. Surrounding counties include Adams, Marquette, Green Lake, Dodge, Dane, and Sauk. The County is comprised of 21 town, 10 villages, and four cities. The County can be characterized as rural in nature having large tracts of agricultural land and open space interspersed with small cities and villages. Residential development outside of cities and villages consists generally of scattered low density residential development, however residential subdivisions are also present. The Wisconsin, Fox, and Crawfish Rivers are the major streams within the County.

6.0 ECONOMIC DEVELOPMENT

This element identifies the economic characteristics and trends in Columbia County. The intent of this element is to identify opportunities as well as deficiencies in Columbia County's economic base in an effort to promote the stabilization, retention, and expansion of the County's economy. The County's economy, the manner in which residents support themselves and the services provided to residents, are critical to future development. Without a viable and competitive economy, residents will relocate to better circumstances in other locations. Assessing the current economy and setting direction for change are an important part of the planning process.

6.1 ECONOMIC DEVELOPMENT VISION

- ◆ Economic prosperity through properly located commerce, industry, agriculture, and tourism economic activity areas while mitigating the impacts of incompatible land uses and the degradation of residential areas and the natural environment.

6.2 ECONOMIC DEVELOPMENT GOALS AND OBJECTIVES

Goal 1: An improved and diversified economy.

- Objective 1:* Assist existing businesses and industry to improve their efficiency and ability to stay competitive.
- Objective 2:* Increase efforts to retain existing manufacturers and to attract new ones.
- Objective 3:* Encourage new business formation.
- Objective 4:* Expand and encourage participation in all Revolving Loan Fund programs.
- Objective 5:* Encourage the development of a broader range of commercial and service businesses in communities throughout the County.
- Objective 6:* Encourage the development of support industries for existing businesses and industries in the County.
- Objective 7:* Develop an opportunity network to assist in transferring of existing businesses to successors.
- Objective 8:* Encourage downtown revitalization and support the Main Street Program to help enhance community character and business opportunities.
- Objective 9:* Promote ongoing dialog between County staff and the Columbia County Economic Development Corporation to ensure that economic development projects are consistent with the goals and objectives of the County's Comprehensive Plan.
- Objective 10:* Work with public and private entities to provide high quality telecommunication facilities.
- Objective 11:* Develop basic design standards for all non-residential uses to assure a high value, lasting development pattern.
- Objective 12:* Encourage intergovernmental cooperation in the siting of new business opportunities and retaining existing businesses.

Goal 2: Improved employment opportunities.

- Objective 1:* Assist in educational opportunities to develop a high quality County workforce.
- Objective 2:* Attract new employers to increase employment opportunities and broaden the tax base.

Objective 3: Support and allow home-based businesses where compatible with surrounding properties.

Objective 4: Seek and implement new incentive programs that encourage industrial and commercial expansion and create opportunities for new employment.

Goal 3: Recognize agriculture and tourism as important economic resources and support the preservation and enhancement of these resources.

Objective 1: Assist in the promotion and attraction of agricultural related services and industries to maintain agriculture as a viable business.

Objective 2: Where consistent with local plans, allow small, low-impact non-farm businesses on farm properties where there will be no negative impacts on surrounding properties.

Objective 3: Foster tourism that promotes the natural resource base and the unique historical heritage of Columbia County.

Objective 4: Support Communities involved in the Main Street Program and the redevelopment of downtown districts as a means to attract tourism.

Objective 5: Capitalize on the County’s recreational resources (lakes, rivers, trails, etc.) for siting of appropriate retail and service businesses that do not conflict with resource protection.

6.3 ECONOMIC DEVELOPMENT PROGRAMS

6.3.1 Columbia County Economic Development Corporation

The Columbia County Economic Development Corporation (CCEDC) is a non-profit corporation established to coordinate economic development throughout Columbia County. The Corporation is staffed by a full-time economic development professional and an administrative assistant and governed by a Board of Directors. The Corporation is funded by participating municipalities on a per capita basis and by Columbia County. Each participating community has one representative and one alternate on the board of directors and communities with over 4,000 people have two representatives. Columbia County also has two representatives on the Board. The Corporation is funded through contributions from participating communities on a per capita basis. The Columbia County Board of Supervisors then matches the funds received from the participating communities.

6.3.2 Revolving Loan Fund (RLF)

Three types of revolving loan funds are available within Columbia County as described below.

6.3.2.1 Columbia County Revolving Loan Fund

The Columbia County Revolving Loan Fund program provides loans to businesses in Columbia County for proposed projects that create jobs, help businesses maintain or expand existing operations, and advance the County’s economic development goals. The revolving loan fund encourages businesses and industries to invest in their own growth by providing direct business loans on a companion basis with other financing sources, thereby allowing businesses to “leverage” funds for a large economic impact. The revolving loan fund is meant as an important secondary role to private financing options.

Revolving Loan Funds are available to any business or industry located in Columbia County, including start-up businesses, and to any business moving to Columbia County. The funds can be used for any of the following purposes:

- Acquisition of land, buildings, and equipment
- Building renovation, rehabilitation, or equipment installation
- Payment of assessments for public utilities
- Working capital for inventory and direct labor

In Columbia County, the Revolving Loan Fund is administered in the County's Accounting Office.

6.3.2.2 Columbia County Economic Development Corporation Revolving Loan Fund

The Columbia County Economic Development Corporation acquired a \$99,150 grant from the United States Department of Agriculture (USDA) for use as a revolving loan fund. The goals of the fund are similar to the Columbia County RLF. This RLF provides funds for the gap that is unfulfilled by the Columbia County program. The minimum an applicant can apply for under the County's RLF is \$25,000. The Columbia County Economic Development Corporation's RLF provides loans below the \$25,000 limit in the County fund.

6.3.2.3 Municipal Revolving Loan Funds

Several municipalities in Columbia County also administer revolving loan funds. The purpose and goals of these funds are similar to the previously mentioned funds, however these funds are available only to businesses and industries located within the particular municipality. In Columbia County, the Cities of Columbus, Portage, and Wisconsin Dells along with the Villages of Cambria, Fall River, and Randolph administer revolving loan funds for their communities.

6.3.3 Community Profiles

The Columbia County Economic Development Corporation maintains community profiles for each participating municipality in the County. These profiles detail a community's demographics, government style, business climate, etc. for use by businesses and industries that are considering relocating to or expanding in Columbia County. Community profiles are available from the Columbia County Economic Development Corporation for three cities: Columbus, Lodi, and Portage; nine villages: Arlington, Cambria, Fall River, Friesland, Pardeeville, Poynette, Randolph, Rio, and Wyocena; and four towns: Courtland, Dekorra, Lowville, and Randolph.

6.3.4 Land and Building Inventory

The Columbia County Economic Development Corporation maintains a land and building inventory for each participating municipality in the County. The inventory lists the available buildings and building sites for business and industry. The inventory is available through the Columbia County Economic Development Corporation.

6.3.5 Technical College Programs

Madison Area Technical Collage (MATC) has a campus located in the City of Portage and provides a number of employment training opportunities for County residents. MATC's activities are closely related to economic development because the school trains technicians needed by employers to maintain and

grow their businesses. MATC works closely with the K-12 school systems to provide career planning to students. MATC is also an intake center for the WEN network to assist entrepreneurs and inventors.

6.3.6 Wisconsin Department of Tourism Programs

The Wisconsin Department of Tourism administers numerous grants, programs, and marketing campaigns to promote tourism in the State which benefit tourism in Columbia County.

6.3.7 Columbia County Tourism Committee

The Columbia County Tourism Committee (CCTC) was formed in 1999. Members of the committee represent area tourism-related organizations and are appointed by the Columbia County Board. Each member has responsibility for certain areas of the county. With assistance of the Wisconsin Department of Tourism, the committee has participated in a Tourism Assessment process. The assessment process analyzed current marketing and promotional programs and suggested opportunities to develop a stronger tourism marketing campaign for Columbia County.

The CCTC was also awarded a \$20,000 Tourism Diversification Planning Grant to develop a Tourism Plan for the county. Columbia County and the Columbia County Economic Development Corporation jointly provided the 25 percent match for the grant. As a result of the plan, the CCTC has decided to pursue the development of a Columbia County Visitors Bureau.

6.3.8 Wisconsin Agricultural Development Zone Program

An agricultural development zone has been established in south-central Wisconsin encompassing five counties including Columbia County. Agricultural related businesses are eligible for tax credits that can be applied against their state income tax liability. The credits are based upon the number of new jobs created, the wage level, and the benefit package that you offer. Businesses may also be eligible for a 3% capital investment credit for real and personal property and a credit equal to 50% of your eligible environmental remediation costs.

6.3.9 Wisconsin Department of Commerce Programs

The Wisconsin Department of Commerce (WDOC) has several grant programs and services available to communities or businesses within communities. The federally funded Community Development Block Grant (CDBG) program can be used for housing, economic development, and public facility improvements. WDOC also offers many more business assistance and financing programs as well as economic development news and statistics.

6.3.10 Community Development Block Grant for Economic Development (CDBG-ED)

The CDBG-ED program was designed to assist businesses that will invest private funds and create jobs as they expand or relocate to Wisconsin. The Wisconsin Department of Commerce awards the funds to a general-purpose unit of government (community) which then loans the funds to a business. When the business repays the loan, the community may retain the funds to capitalize a local revolving loan fund. This fund can then be utilized to finance additional economic development projects within the community. For more information contact the Wisconsin Department of Commerce.

6.3.11 Wisconsin's Main Street Program

The Main Street Program is a comprehensive revitalization program designed to promote the historical and economic redevelopment of traditional business districts in Wisconsin. The program was established in 1987 to encourage and support the revitalization of downtowns. Each year, the Wisconsin Department of Commerce selects communities to join the program. These communities receive technical support and training needed to restore their Main Streets to centers of community activity and commerce. Currently the Cities of Columbus and Portage participate in the program.

6.3.12 USDA, Wisconsin Rural Development Programs

The Wisconsin Rural Development Program has many services that are available to rural communities and their residents. Some programs and services available include: community development programs, business and community programs, rural housing and utilities services, and community facility programs.

6.3.13 WDNR – Brownfields Grant Program

Brownfields are abandoned, idle or underused commercial or industrial properties, where the expansion or redevelopment is hindered by real or perceived contamination. Brownfields vary in size, location, age, and past use -- they can be anything from a five-hundred acre automobile assembly plant to a small, abandoned corner gas station. In Wisconsin, there are an estimated 10,000 brownfields, of which 1,500 are believed to be tax delinquent. These properties present public health, economic, environmental and social challenges to the rural and urban communities in which they are located.

Since June of 1998, the Brownfields Grant Program has awarded a total of \$36.9 million that resulted in grants being awarded to 89 projects across Wisconsin. These projects will have a significant impact for communities, both economically and environmentally including:

- The return of 1,090 acres of abandoned or under-used environmentally contaminated sites into clean, viable properties.
- An increase of over \$607 million in taxable property values.
- The creation of over 4,000 new jobs.

6.3.14 Tax Incremental Financing (TIF) and the Tax Incremental District (TID)

Tax Incremental Financing (TIF) is an economic development tool that helps promote economic development by using property tax revenue to fund site improvements to attract new business or eliminate blight. TIF allows a municipality to invest in infrastructure and other improvements and pay for these investments by capturing property tax revenue from newly developed property. An area is identified (the tax incremental district, or TID) as appropriate for a certain type of development, and projects are identified to encourage and facilitate the desired development. As property values in the TID rise, the portion of the property tax paid on the new private development is used by the municipality to pay for the projects. After the costs of the project are paid off, the TID is closed and the value of all new development is distributed among all taxing entities.

In Wisconsin, cities, villages, and towns can utilize TIF and create TIDs. In Columbia County, the Cities of Columbus, Lodi, and Portage as well as the Villages of Arlington, Fall River, Friesland, Pardeeville, Poynette, Randolph, and Rio are among the communities that currently utilize TIF or have utilized TIF in the past. No towns have utilized TIF at this time.

6.4 ECONOMY

6.4.1 Personal Income

Personal Income can be measured in two ways, per capita income and household income. The trends in these forms of personal income are discussed below.

6.4.1.1 *Per Capita Income*

The Wisconsin Department of Revenue shows Columbia County's per capita income overall is just slightly below that of the State. The per capita income in Columbia County was below the average for the State during each of the 11 years between 1990 and 2001. However, during that same period, Columbia County's per capita income increased \$7,784 or 67.64 percent compared to Wisconsin's increase of \$7,405 or 58.37 percent during the same time period. Over the 11-year period the County's per capita income has grown more rapidly than the State exceeding the State by 5.12 percent. Table 6-1 compares the per capita adjusted gross income of Columbia County with the State of Wisconsin.

TABLE 6-1
Per Capita Adjusted Gross Income
Columbia County and Wisconsin, 1990-2001

Year	Columbia County		Wisconsin
	Income	% of State	
1990	\$11,508	90.71%	\$12,686
1991	\$11,918	93.47%	\$12,750
1992	\$12,376	93.14%	\$13,287
1993	\$13,093	94.60%	\$13,840
1994	\$14,138	97.28%	\$14,534
1995	\$14,868	97.02%	\$15,324
1996	\$15,193	95.80%	\$15,859
1997	\$16,347	95.93%	\$17,040
1998	\$17,394	95.18%	\$18,275
1999	\$19,195	97.65%	\$19,657
2000	\$20,072	97.90%	\$20,503
2001	\$19,292	96.02%	\$20,091
Change 1990 to 2001:	\$7,784	105.12%	\$7,405

Source: Wisconsin Department of Revenue

The per capita income in Columbia County is shown to have increased in real numbers every year since 1990. This increase in income is the result of either smaller numbers of children in the County in relation to the number of working adults or from actual increases in income earned by the working portion of the population. Population information discussed in the Issues and Opportunities Element of this Plan indicated that the number of children in the County was increasing. Therefore, it is more likely that the increases in per capita adjusted gross income are the result of actual increases in the income of working adults in the County. Rising income levels can increase housing values, encourage business expansion and new businesses, and encourage the more affluent to move to Columbia County.

6.4.1.2 Household Income

Median household income in Columbia County exceeded the State in 1999. Over 52 percent of the households in the County had incomes of \$30,000 to \$74,999, compared to just over 47 percent for the State. However, Columbia County lagged slightly behind the State in households with incomes over \$75,000. Table 6-2 compares household income in Columbia County with the State.

TABLE 6-2
Household Income, Columbia County and Wisconsin, 1999

Household Income	Columbia County		Wisconsin	
	Number	Percent	Number	Percent
Less than \$10,000	1,189	5.82%	148,964	7.14%
\$10,000 to \$29,999	4,847	23.74%	522,765	25.06%
\$30,000 to \$49,999	5,347	26.19%	517,280	24.79%
\$50,000 to \$74,999	5,327	26.09%	474,299	22.73%
\$75,000 to \$124,999	2,976	14.58%	321,002	15.39%
\$125,000 to \$199,999	475	2.33%	69,689	3.34%
\$200,000 or more	253	1.24%	32,305	1.55%
Total Households:	20,414	100.00%	2,086,304	100.00%
1999 Median Household Income:	\$45,064		\$43,791	

Source: U.S. Census

6.4.2 Labor Force and Employment Status

An examination of the labor force and employment status of a community can provide insight into the economy of a community as well as provide guidance on the types of economic development strategies that might work within that community. The sections below examine the civilian labor force, unemployment rates, travel time to work, place of employment, and commuting patterns.

6.4.2.1 Civilian Labor Force

The Wisconsin Department of Workforce Development defines the labor force as those individuals who are either working or looking for work. This definition does not include individuals who have made a choice not to work such as retirees, homemakers, and students. Furthermore, the definition of labor force does not include military personnel, institutional residents, or discouraged job seekers. In Columbia County, the labor force has increased by 1,709 persons, or 5.7 percent over the period between 2000 and 2004. In comparison, the State of Wisconsin's labor force increased by 78,929 persons, or 2.6 percent during the same period, indicating that the County's labor force is growing at a faster rate than the State. However, the number of unemployed persons in the labor force has also increased during the five-year period. In Columbia County, the number of unemployed has increased by 378 persons, a 35.2 percent increase. For the State of Wisconsin, the number of unemployed has increased by 50,966 persons, a 50.5 percent increase. Table 6-3 compares the civilian labor force statistics for Columbia County and the State of Wisconsin.

TABLE 6-3
Civilian Labor Force Annual Averages
Columbia County and Wisconsin, 2000 - 2004

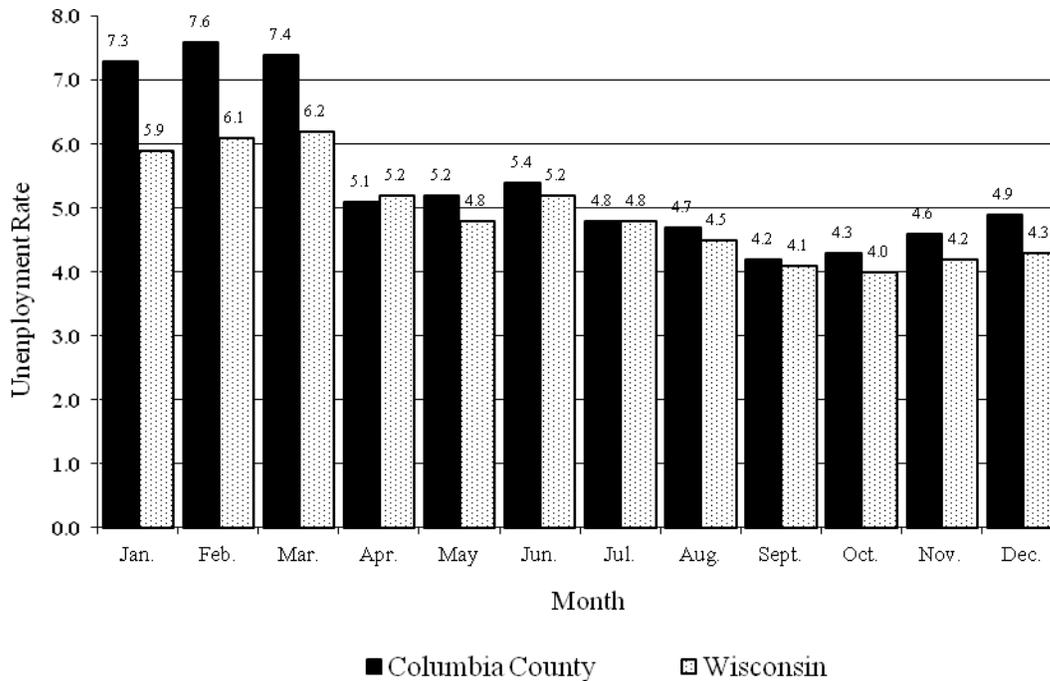
	2000	2001	2002	2003	2004	# Change 2000-04	% Change 2000- 04
Columbia County							
Labor Force	29,900	30,740	30,900	31,275	31,609	1,709	5.7%
Employment	28,827	29,410	29,316	29,543	30,158	1,331	4.6%
Unemployment	1,073	1,330	1,584	1,732	1,451	378	35.2%
Unemployment Rate	3.6	4.3	5.1	5.5	4.6	1.0	27.8%
Wisconsin							
Labor Force	2,992,250	3,032,130	3,037,928	3,068,739	3,071,179	78,929	2.6%
Employment	2,891,238	2,898,949	2,877,047	2,896,670	2,919,201	27,963	1.0%
Unemployment	101,012	133,181	160,881	172,069	151,978	50,966	50.5%
Unemployment Rate	3.4	4.4	5.3	5.6	4.9	1.5	44.1%

Source: Wisconsin Department of Workforce Development, Bureau of Workforce Information, Local Area Unemployment Statistics, 2000-2004

6.4.2.2 *Unemployment Rates*

Monthly unemployment rates for 2004 in Columbia County closely mirror those of the State of Wisconsin. However, unemployment in the County is somewhat higher in the winter months due to a number of seasonal jobs in tourism, agriculture, and construction. Figure 6-1 illustrates the monthly unemployment rates for Columbia County and the State of Wisconsin for 2004. The number of unemployed includes those receiving unemployment benefits as well as those who actively looked for a job and did not find one.

FIGURE 6-1
Monthly Unemployment Rates
Columbia County and Wisconsin, 2004



Source: Wisconsin Department of Workforce Development, Bureau of Workforce Information, Local Area Unemployment Statistics, 2004

6.4.2.3 Travel Time to Work

The location of person’s job is often a major determining factor in the location of that person’s home. Understanding the amount of time people are willing to travel to work can provide insight into the suitable locations for future housing and employment centers. However, some people are willing to travel greater distances to live in a particular location. Therefore, travel time to work is also an indication of what residents are willing to sacrifice for location.

Table 6-4 illustrates the travel time to work for residents of Columbia County and the State of Wisconsin. In Columbia County, the largest percentage of residents, 15.4 percent, travel 5 to 9 minutes to work. This is a slightly shorter time than the State as a whole, where the largest percentage of residents, 17.7 percent, traveled 10 to 14 minutes to work. A total of 1,543 County residents, 5.7 percent, reported traveling over an hour to work while 1,469 County residents, 5.4 percent, worked from home.

TABLE 6-4
Travel Time To Work, Columbia County and Wisconsin, 2000

Travel Time	Columbia County		Wisconsin	
	Number	% of Total	Number	% of Total
Less than 5 minutes	1,799	6.7%	135,194	5.0%
5 to 9 minutes	4,162	15.4%	398,697	14.8%
10 to 14 minutes	3,178	11.8%	476,569	17.7%
15 to 19 minutes	2,633	9.8%	440,637	16.4%
20 to 24 minutes	2,590	9.6%	372,180	13.8%
25 to 29 minutes	1,524	5.6%	159,448	5.9%
30 to 34 minutes	3,018	11.2%	248,714	9.2%
35 to 39 minutes	1,193	4.4%	59,121	2.2%
40 to 44 minutes	1,259	4.7%	61,540	2.3%
45 to 59 minutes	2,623	9.7%	120,028	4.5%
60 to 89 minutes	1,063	3.9%	68,071	2.5%
90 or more minutes	480	1.8%	45,110	1.7%
Worked at home	1,469	5.4%	105,395	3.9%
Total:	26,991	100.0%	2,690,704	100.0%

Source: US Census

6.4.2.4 Place of Employment

Examining the place of employment for Columbia County residents provides insight into the employment opportunities available within the County. Due to the County's location and easy access to major population and economic centers many residents are leaving the County for work. In Columbia County, 47 percent of the workers over age 16 worked outside the County. In comparison, 22 percent of workers in the State as a whole work outside the County where they live. This trend reflects the fact that better paying job opportunities exist outside the County and that the County's employment base does not provide enough jobs with adequate salaries for all residents who choose to live in the County. The trend of having a large percentage of residents working outside the County is expected to continue.

TABLE 6-5
Place of Employment for Workers Age 16 and Over
Columbia County and Wisconsin, 2000

Place of Work	Columbia County		Wisconsin	
	Number	% of Total	Number	% of Total
Worked in state of residence:	26,862	99.5%	2,589,341	96.2%
Worked in county of residence	14,163	52.5%	1,988,905	73.9%
Worked outside county of residence	12,699	47.0%	600,436	22.3%
Worked outside state of residence	129	0.5%	101,363	3.8%
Total:	26,991	100.0%	2,690,704	100.0%

Source: US Census

6.4.2.5 Commuting Patterns

Table 6-6 illustrates the commuting patterns for Columbia County as reported by the 2000 US Census. Approximately 5,750 more workers travel out of the County for work than those that commute into the County for work. The largest number of commuters travel to Dane County (8,929), followed by Sauk County (1,692), and Dodge County (1,001). For those commuters that come to Columbia County for work, the majority commute from Dane County (1,581), followed by Marquette County (1,398), and Dodge County (1,115).

TABLE 6-6
Commuting Patterns, Columbia County, 2000

County	Live in Columbia County, Work In:	Travel to Columbia County from:	Net Commute
Dane Co. WI	8,929	1,581	(7,348)
Sauk Co. WI	1,692	1,013	(679)
Dodge Co. WI	1,001	1,115	114
Marquette Co. WI	243	1,398	1,155
Jefferson Co. WI	211	53	(158)
Green Lake Co. WI	79	198	119
Waukesha Co. WI	70	38	(32)
Juneau Co. WI	66	255	189
Adams Co. WI	60	748	688
Fond du Lac Co. WI	53	65	12
Milwaukee Co. WI	46	19	(27)
Rock Co. WI	35	72	37
Columbia Co. WI	14,163	14,163	0
Elsewhere	343	523	180
Total:	26,991	21,241	(5,750)

Source: US Census, 2000

6.4.3 Analysis of Economic Base

An examination of the economic base of a community also can provide insight into the economy of a community. The sections below examine employment by industry group, employment by occupation, wages by industry division, principal employers, Agricultural Industry Analysis, Recreation and Tourism Industry Analysis, Economic Base and Location Quotient Analysis, and Industrial Parks.

6.4.3.1 Employment by Industry Group

Employment by industry group provides insight into the structure of the County's economy. Table 6-7 illustrates the number and percent of employed persons by industry group. Historically, the State of Wisconsin has had high concentrations of employment in manufacturing and agriculture. Recent trends have shown a decrease in these areas with increases in employment in service industries. In Columbia County, the largest percentage of employment is in manufacturing, 21.4 percent, followed by education and health, 17.3 percent. Employment by industry group in Columbia County is very similar to the State of Wisconsin as a whole. However, Columbia County does have a somewhat stronger concentration of employment in agriculture and mining as well as construction.

TABLE 6-7
Columbia County and Wisconsin, Employment of Industry Group, 2000

Industry Group	Columbia County		Wisconsin	
	Number Employed	Percent of Total	Number Employed	Percent of Total
Agriculture & Mining	1,282	4.69%	75,418	2.76%
Construction	2,268	8.30%	161,625	5.91%
Manufacturing	5,834	21.35%	606,845	22.19%
Wholesale Trade	985	3.60%	87,979	3.22%
Retail Trade	3,083	11.28%	317,881	11.62%
Transportation, Warehousing, & Utilities	1,350	4.94%	123,657	4.52%
Information	553	2.02%	60,142	2.20%
Insurance, Real Estate, Finance, Rental & Leasing	1,469	5.38%	168,060	6.14%
Professional, Management, Administrative, & Scientific	1,510	5.53%	179,503	6.56%
Education & Health	4,730	17.31%	548,111	20.04%
Arts, Entertainment, Recreation	1,866	6.83%	198,528	7.26%
Other Services	911	3.33%	111,028	4.06%
Public Administration	1,483	5.43%	96,148	3.52%
Totals:	27,324	100.00%	2,734,925	100.00%

Source: U.S. Census

6.4.3.2 *Employment by Occupation*

Employment by Occupation provides insight into the types of occupations that are held by County residents. Examining what County residents do for a living can help reveal some of the factors that influence income and overall employment in the County. Table 6-8 illustrates the number and percent of employed persons by occupation in Columbia County and the State of Wisconsin for the year 2000. In Columbia County, the occupation category with the largest number and percentage of employment was executives, professionals, and managers accounting for 7,698 persons, or 28.2 percent of total employment. The occupation with the second largest number and percentage of employment in the County was sales and office occupations accounting for 6,802 persons, or 24.9 percent of total employment. The percent of employment in each occupation category in Columbia County was very similar to those of the State of Wisconsin as a whole with the State's two largest categories also being executives, professionals, and managers and sales and office occupations with percentages of 31.3 and 25.2 respectively.

TABLE 6-8
Columbia County, Employment by Occupation, 2000

Occupation	Columbia County		Wisconsin	
	Number Employed	Percent of Total	Number Employed	Percent of Total
Executives, Professionals, & Managers	7,698	28.17%	857,205	31.34%
Service Occupations	3,647	13.35%	383,619	14.03%
Sales & Office Occupations	6,802	24.89%	690,360	25.24%
Farming, Fishing, & Forestry	314	1.15%	25,725	0.94%
Construction, Extraction, & Maintenance	3,177	11.63%	237,086	8.67%
Production & Transportation	5,686	20.81%	540,930	19.78%
Totals:	27,324	100.00%	2,734,925	100.00%

Source: U.S. Census

6.4.3.3 *Wages by Industry Division*

The wages paid by a particular industry in a particular area offers insight into the economy of that area. For example, an area with higher wages in a particular industry, when compared to neighboring communities, can be an indication of strength in that particular economic sector. Higher wages also act to attract commuters and new residents to an area. However, higher than average wages coupled with a dependency on a particular industry can lead to a local recession if there is a downturn in that industry. Lower than average wages can indicate a lower quality of life in the area or a lack of highly qualified labor. Table 6-9 illustrates the annual average wage by industry division for Columbia County and the State of Wisconsin.

TABLE 6-9
Annual Average Wage By Industry Division
Columbia County and Wisconsin 2004

Industry Division	Columbia County Annual Average Wage	Wisconsin Annual Average Wage	Percent of State Average	1-year Change in Percent of State Average	5-year Change in Percent of State Average
All Industries	\$28,409	\$34,749	81.8%	0.90%	2.20%
Ag, Natural Resources, & Mining	\$26,169	\$27,399	95.5%	(7.70%)	(4.00%)
Construction	\$35,664	\$41,258	86.4%	0.70%	5.10%
Manufacturing	\$39,002	\$44,145	88.3%	1.60%	3.70%
Trade, Transportation, Utilities	\$25,828	\$30,088	85.8%	1.70%	6.50%
Information	\$23,552	\$41,759	56.4%	(3.20%)	6.90%
Financial Activities	\$26,744	\$45,103	59.3%	2.50%	(2.10%)
Professional & Business Services	\$27,029	\$39,580	68.3%	1.60%	0.90%
Education & Health Services	\$28,883	\$36,408	79.3%	1.50%	0.90%
Leisure & Hospitality	\$9,639	\$12,295	78.4%	1.00%	0.00%
Services	\$19,636	\$20,207	97.2%	0.90%	1.70%
Public Administration	\$30,619	\$36,347	84.2%	(2.30%)	(7.10%)
Total Government	\$29,835	\$36,933	80.8%	0.20%	(3.60%)

Source: Wisconsin Department of Workforce Development, Bureau of Workforce Information - Labor Market Information

The manufacturing and construction industries had the highest annual average wages in Columbia County in 2004. Services and Agriculture, Natural Resources, and Mining had average annual wages closest to the State of Wisconsin with these two industries being 97.2 and 95.5 percent of the State average respectively. None of the industry groups exceeded the State's annual average wage. The greatest disparity in wages between Columbia County and the State was in the information industry division where the County average annual wage was only 56.4 percent of the State.

6.4.3.4 Principal Employers

Columbia County has a variety of major employers. Table 6-10 illustrates the major employers in the County with at least 100 employees in 2004. Also included in the table are the number of employees working for County government and the school districts serving the County.

**TABLE 6-10
Principal Employers, Columbia County, 2004**

Type	Employer Name	Nature of Business	# of Employees
PRIVATE SECTOR	Divine Savior Healthcare	Hospital	610
	Associated Milk Producers, Inc.	Dairy Products	425
	Penda Corporation	Auto Parts Manufacturing	400
	TriEnda, A Wilbert Company	Plastic Components	340
	Wal-Mart	Discount & Variety Retail	300
	Cascade Mountain	Ski & Snowboard – Recreation	300
	Columbia Correctional Institution	Prison	329
	Capital Newspapers	Newspaper Publishing	274
	Cardinal FG	Glass Products	250
	CESA 5	Educational Service Agency	250
	Saint Gobain	Plastic & Fiber Manufacturing	225
	Columbus Community Hospital, Inc.	Hospital	220
	Alkar Rapidpak, Inc.	Food Processing Equipment	200
	American Packaging Corporation	Commercial Printing	200
	Busse/Arrowhead/SJI	Packaging Machinery	200
	Rayovac Corporation	Primary Batteries	200
	J.W. Jung Seed Company	Retail Nursery	180
	Fall River Foundry Group	Copper Foundry	175
	Seneca Foods Corporation	Canned Fruits & Vegetables	160
	Columbia Health Care Center	Skilled Nursing Care Facility	155
	Goetz Companies, Inc.	Service Station	152
	Enerpac-An Actuant Co.	Industrial Machinery and Equipment Manufacturing	150
	Spartech Plastics	Plastic & Fiber Manufacturing	142
	Continental Manor of Randolph	Skilled Nursing Care Facility	140
	Alliant Energy – Columbia Generating	Electric Power Generation	138
	Robbins Manufacturing, Inc.	Fabricated Metal Products	130
	Columbus Nursing & Rehab. Center	Skilled Nursing Facility	125
	Alsum Produce, Inc.	Fruit & Vegetable Distribution	110
	Northwoods Inc. of Wisconsin	Administration of Social & Manpower Program	105
	Sta-Care, Inc.	Wood Partitions	102
	Adesa Corporation	Auction	100
Maysteel LLC	Sheet Metal Work	100	
Pick'n Save	Grocery Store	100	
Private Sector Total:			7,637

Type	Employer Name	Nature of Business	# of Employees	
PUBLIC SECTOR	Columbia County - Highway Department	Public Works	89	
	Sheriff Department	General Services and Public Safety	94	
	Health and Human Services	Social Services, Mental and Public Health, Aging	84	
	Courthouse and Solid Waste	General Services	136	
	Health Care Center	Skilled Nursing Home	157	
	Subtotal:			560
	Columbus School District	Education	160	
	Cambria-Friesland School District	Education	72	
	Fall River School District	Education	78	
	Lodi School District	Education	237	
	Pardeeville Area School District	Education	120	
	Portage Community School District	Education	385	
	Poynette School District	Education	148	
	Randolph School District	Education	76	
	Rio Community School District	Education	68	
	Wisconsin Dells School District	Education	80	
	Subtotal:			1,424
Public Sector Total:			1,984	

Source: Columbia County Economic Development Corporation & Columbia County Planning and Zoning

6.4.3.5 *Agricultural Industry Analysis*

As part of the 2007 Comprehensive Plan process, the Columbia County UW Extension Office has provided the following information regarding the agricultural industry in the County. Additional and updated data on the agricultural industry in Columbia County is included within Appendix B of the Columbia County Farmland Preservation Plan.

Agriculture is an important economic force in Columbia County. It includes hundreds of family owned farms, related businesses and industries that provide equipment, services and other products farmers need to process, market and deliver food and fiber to consumers. The production, sales and processing of Columbia County's farm products generates employment, economic activity, income, and tax revenue. Columbia County agriculture is diverse. Its 1,526 farms include 211 dairy farms, over 400 beef, sheep and hog farms, plus everything from large cash grain operations of 500 to 1,000 acres to small, 5 to 10 acre fresh market vegetable producers. Columbia County farmers produce a variety of products. Grains, dairy, cattle and calves, poultry, eggs, and vegetables are the main commodities. Sand and muck soils associated with the Wisconsin and Fox Rivers support commercial vegetable and mint production. High quality prairie soils in the southern and northeastern parts of the county put it in the top 10 for corn and soybean production. Local farmers organized the United Wisconsin Grain Producers, Inc. to help build Wisconsin's fourth ethanol plant near Cambria.

Columbia County agriculture provides 5,312 jobs, 18 percent of Columbia County's total workforce of more than 28,850 people. The jobs provided by agriculture are diverse and include farm owners, on-farm employees, veterinarians, crop and livestock consultants, feed and fuel suppliers, food processors, farm machinery manufacturers and dealers, barn builders and agricultural lenders. Every new job in agriculture generates an additional 0.7 jobs in Columbia County. In addition, agriculture pays over \$17.0 million in taxes not including property taxes paid to local schools.

Columbia County agriculture generates more than \$666.4 million in economic activity, accounting for over 27 percent of Columbia County's total economic activity. Every dollar of sales from agricultural products generates an additional \$0.45 of economic activity in other parts of the Columbia County economy. Agriculture accounts for \$166.1 million, or 14.5 percent, of Columbia County's total income. This includes wages, salaries, benefits and profits of farmers and workers in agriculture-related businesses. Every dollar of agricultural income generates an additional \$1.07 of the county's total income.

Columbia County farmers own and manage the resources on 348,369 acres of land amounting to 70 percent of all land in the county. This includes pastures, cropland and tree farms. Farmers implement various conservation practices to protect environmental resources and provide habitat for wildlife. Farms in Columbia County are predominantly owned by individuals or families, with 88.3 percent of the farms owned by this group. Ownership of remaining farms consists of family partnerships owning 8.3 percent of the farms, family-owned corporations owning 2.6 percent of the farms, and non-family corporations owning 0.9% of the farms.

Dairy is the largest part of Columbia County's agriculture in terms of combined on-farm value and processing value. In 2000, Columbia County milk producers and the dairy industry contributed \$393.9 million to the county's economy. The on-farm production and sale of milk accounted for \$41.1 million in economic activity. The processing of milk into dairy products accounted for another \$352.8 million. Grain production is also important. In 2002, the market value of corn, soybeans and other grain crops was about \$40 million, roughly 38 percent of the total market value of all agricultural products sold in the county. There are over 106,000 acres of corn grown for grain and almost 48,000 acres of soybeans raised in Columbia County. About 25 percent of the corn is fed on

farm to dairy cattle and livestock. Each dairy cow generates more than \$15,000 to \$17,000 of economic activity. Columbia County's on-farm milk production and dairy processing account for 1,956 jobs.

The production of landscape trees and plants as well as landscape and grounds maintenance are rapidly growing segments of Columbia County's agricultural industry. Greenhouses, tree farms, nurseries and other horticultural businesses add to the diversity of agriculture in the county. Horticulture generates \$5.4 million in county economic activity, providing 148 full-time jobs and many seasonal jobs.

6.4.3.6 *Tourism Industry Analysis*

Tourism is an important component of the economy of Columbia County. Area attractions, recreational areas, restaurants, retail stores, and traveler accommodations play a vital role in strengthen the local economy and improving the quality of life for area residents as well as visitors to the area. The Wisconsin Department of Tourism has provided the following information regarding the tourism industry and traveler expenditures in Columbia County in 2004. Travelers are defined as Wisconsin residents and out-of-state visitors traveling for pleasure, business, or a combination of reasons.

- Columbia County ranks 19th in the state for traveler spending.
- Travelers spent an estimated \$151 million in Columbia County in 2004.
- Summer is the biggest season tourism in the County and generated traveler expenditures of almost \$66 million. Fall travelers spent \$32 million; Spring travelers spent \$30 million; Winter travelers spent \$23 million.
- Estimates indicate that employees in Columbia County earned over \$93 million in wages in 2004 generated from tourist spending, an increase of 4.7 percent from 2003.
- Travelers spending in 2004 supported 3,984 full-time equivalent jobs, compared to 3,904 in 2003.
- Local revenues (property taxes, sales taxes, lodging taxes, etc.) collected as a result of travelers amounted to over \$6 million, an increase of 11.2 percent from 2003.
- Travelers in Columbia County generated over \$19 million in state revenues (lodging, sales and meal taxes, etc.), an increase of 3.3 percent from 2003.

6.4.3.7 *Economic Base and Location Quotient Analysis*

In order to fully comprehend the economic future of Columbia County, it is necessary to understand how the County's economy relates not only to the State of Wisconsin's economy but to the United States economy as well. The Economic Base Analysis is a technique used to divide Columbia County's economy into basic and non-basic sectors. The basic sector is made up of local businesses that are dependent on external factors outside of the local economy for their success. For example, manufacturing and resource extracting firms (logging, mining) are often considered to be basic sector because the firm's success depends largely on non-local factors and they usually export their goods. In comparison, the non-basic sector is made up of firms that depend on local business conditions for their success such as firms in the service sector. Economic Base Theory states that the way to strengthen and grow the local economy is to develop and enhance of the basic sector portion of the local economy.

There are nine industry sectors used for Economic Base Analysis, four goods producing sectors and five service producing sectors. The four goods producing sectors are: agriculture, forestry, and

fishing; mining; construction; and manufacturing. The five service producing sectors are: transportation and public utilities; wholesale trade; finance, insurance, and real estate; and services.

The Location Quotient Analysis is a technique for comparing non-farm employment in the Columbia County economy to non-farm employment in the United States economy using the nine sectors listed in the Economic Base Analysis. Non-farm employment consists of all workers not engaged in the direct production of agricultural commodities, either livestock or crops, including sole proprietors, partners, or hired laborer. It should also be noted that government employment is not included in the analysis despite it being a major employer in Columbia County. Government is a non-profit entity that should not be expanded for economic purposes. Table 6-11 illustrates the Location Quotient Analysis for Non-Farm Employment in Columbia County in the years 1990 and 2000.

The Location Quotient Analysis technique identifies areas of specialization in the Columbia County economy. The Location Quotient is calculated in the following manner. Columbia County employment within a certain industry sector in a given year is divided by the Columbia County total employment in a given year. The total is then divided by the result of taking the United States employment in the same industry sector in a given year and dividing by the total United States employment for the given year. The results will be one of the following:

- **A Location Quotient (LQ) of less than 1.0** – local employment in the industry group is not meeting local demand for a given good or service and is considered non-basic.
- **A LQ equal to 1.0** – local employment in the industry group is exactly sufficient to meet the local demand for a given good or service. This employment is also considered non-basic because none of the goods or services are exported to non-local areas.
- **A LQ greater than 1.0** – local employment produces more goods and services than the local economy can use, therefore these goods and services are exported to non-local areas. This employment is considered a basic sector employment.

TABLE 6-11
Location Quotient Analysis for Non-Farm Employment
Columbia County, 1990 and 2000

Industry Sector	1990 Employment	% of Total	2000 Employment	% of Total	% Change 1990 - 2000	LQ 1990	LQ 2000
Ag, Forestry, Fishing**	212	0.9%	197*	0.7%	(7.1%)	0.8	0.5
Mining	58	0.2%	62*	0.2%	6.9%	0.3	0.5
Construction	1,300	5.4%	1,796	6.2%	38.2%	1.0	1.1
Manufacturing	4,442	18.3%	5,235	18.1%	17.9%	1.3	1.6
Transportation, Public Utilities	1,134	4.7%	1,187	4.1%	4.7%	1.0	0.8
Wholesale Trade	966	4.0%	980	3.4%	1.4%	0.8	0.7
Retail Trade	4,640	19.1%	5,388	18.6%	16.1%	1.2	1.1
Finance, Insurance, Real Estate	1,061	4.4%	1,359	4.7%	28.1%	0.6	0.6
Services	5,081	21.0%	6,896	23.8%	35.7%	0.8	0.7
Total Employment	24,231	100.0%	28,954	100.0%	19.5%	1.0	1.0

Source: U.S. Department of Commerce, Bureau of Economic Analysis, Regional Accounts Data, 1990 and 2000 & Columbia County Planning and Zoning.

* 2002 Data – 2000 Data suppressed to avoid disclosure of confidential information.

** Non-farm employment in the agriculture, forestry, and fishing industry sector includes workers employed in areas such as soil preparation services, crop services, veterinary and other animal services, landscape and horticultural services, the operation of tree farms and forest nurseries, the operation of fish hatcheries and fish and game preserves, commercial hunting and trapping, and game propagation.

Three sectors within the 2000 Columbia County economy have Location Quotients greater than 1.0 and can therefore be considered basic sector employment: construction, manufacturing, and retail trade. These areas of the County's economy produce more goods and services than the County's economy can consume. Basic sector employment is important because it suggests that if a downturn in the local economy occurs, these sectors of the economy will not be strongly affected because they are dependent on non-local economies. Having strong basic sector employment and industry within the County strengthens the County's economy as well as the economies of the municipalities within the County.

The remaining six sectors of the County's economy have Location Quotients equal to or less than 1.0 and are therefore considered non-basic employment sectors. These areas of the County's economy do not meet local demand for goods and services and could be expanded. The sectors with Location Quotients close to 1.0 indicate that local demand for goods and services from that industry is close to being met and may be met in the future.

6.4.3.8 Industrial Parks

New industrial development generally occurs in urban areas to utilize the available utilities and transportation infrastructure available in these areas. As a result, industrial parks are found in all of the cities and villages in Columbia County with the exceptions of the Villages of Doylestown and Wyocena. In addition, many communities have other available industrial sites outside of industrial parks. The Columbia County Economic Development Corporation maintains a listing of available industrial sites in the County. This list is described in more detail in the Economic Development Programs section of this element. Table 6-12 below contains a list of the industrial parks in Columbia County.

TABLE 6-12
Industrial Parks, Columbia County, 2005

Industrial Park	Municipality	Total Acres	Available Acres
Arlington Prairie Industrial Park	Village of Arlington	210	165
Highland Industrial Subdivision	Village of Cambria	15.5	14
Columbus Industrial Park	City of Columbus	N/A	N/A
Fall River Industrial Park	Village of Fall River	95	20
Friesland Industrial Park	Village of Friesland	N/A	N/A
Lodi Industrial Park	City of Lodi	N/A	N/A
Pardeeville Industrial Park	Village of Pardeeville	163.5	0
Portage Industrial Park	City of Portage	650	66
Poynette Industrial Park	Village of Poynette	128	1.8
Randolph Industrial Park	Village of Randolph	43	23
Rio Industrial Park	Village of Rio	13.3	0
Wisconsin Dells Industrial Park	City of Wisconsin Dells	N/A	N/A

Source: Columbia County Economic Development Corp.

6.5 ATTRACTION OF NEW BUSINESS AND INDUSTRY

6.5.1 Desired Types of Businesses and Industries

An important consideration in economic development for Columbia County is the attraction of the right types of businesses and industries. The current economy of Columbia County is dependent on manufacturing and agriculture. The community opinion survey conducted as part of this planning process indicated that a large majority of County residents would like to see the attraction of more manufacturing along with continued support for agriculture. While it is important to continue to support and develop these sectors of the economy, providing balance to the local economy by expanding other sectors of the economy is also important. The community opinion survey also indicated that a large majority of County residents would like to see new commercial service and retail businesses locate in the County including support for agricultural related retail businesses. The survey further indicated support for tourism as an economic development strategy. In summary, the desired types of business and industry for Columbia County include continued expansion of manufacturing, support for agriculture, growth and expansion in the commercial and retail sectors and continued emphasis on tourism.

6.5.2 Strengths and Weaknesses for Attracting Desired Businesses and Industries

An evaluation of the strengths and weaknesses of Columbia County's ability to attract business and industry provides basic information to help plan for future economic development in the County. Identified strengths should continue to be promoted to attract business and industry that can utilize these strengths. Identified weaknesses should be further analyzed to determine if improvements can be made. Business and industry displaying aspects similar to identified weaknesses should be discouraged.

6.5.2.1 Columbia County's Strengths In Attracting Desired New Business And Industry

Below are Columbia County's strengths in attracting desired new business and industry as identified during the 2007 planning process and revisited in 2013.

- Available land in industrial parks.
- Excellent access to major highway, rail, and utility networks.
- Proximity to major economic and urban centers.
-
- High quality of life.
Abundant natural, cultural, and environmental features and abundant recreational opportunities.
- Affordable housing opportunities.
- Economic development agency and tourism groups available in the County.
- Access to a technical college and a general proximity to major universities.
- Quality schools and health care

6.5.2.2 Columbia County's Weaknesses In Attracting Desired New Business And Industry

Below are Columbia County's weaknesses in attracting desired new business and industry as identified during this planning process and revisited in 2013.

- Over dependence on manufacturing and agricultural sectors of the economy.
- Loss of labor force to other counties.
- High seasonal employment.

- Limited revenue and financing options for infrastructure development to support economic development.
- Lack of public/private financing and support for entrepreneurs and inventors.
- Lack of venture capital.
- Loss of young people to other areas.

6.5.3 Designated Business and Industrial Sites

Columbia County has a number of sites designated and available for business and industrial development. Every city and village in the County has a downtown business district suitable for commercial and retail business. Many cities and villages also have newer automobile orientated commercial and retail areas on the edge of the community. Some towns also have commercial and retail development located in unincorporated hamlet areas. The community opinion survey conducted as part of this planning process indicated a desire by county residents to have new commercial and retail development located in cities and villages or in areas served by sewer. New commercial and retail businesses should be located in these established commercial and retail areas and these areas should be expanded as needed to accommodate growth in this economic sector.

Every city and village in the County, as well as some towns, has sites for industrial development. Many of these sites are located in industrial parks established for the sole purpose of providing a place for industrial development. New industrial development should be located, whenever feasible and practical, in these established industrial areas. The community opinion survey conducted as part of this planning process strongly indicated that attracting new manufacturing firms was an important economic development priority. Therefore, efforts should be made to ensure the future viability and expansion potential of the County's industrial areas by preventing incompatible land uses on adjacent properties.

6.5.4 Use of Environmentally Contaminated Sites

Environmentally contaminated sites are tracked and regulated by the US Environmental Protection Agency (EPA) and the Wisconsin Department of Natural Resources (WDNR). These agencies monitor and encourage the cleanup and reuse of environmentally contaminated sites. The WDNR maintains a tracking system for contaminated sites called the Bureau for Remediation and Redevelopment Tracking System (BRRTS). The BRRTS database contains 665 environmentally contaminated sites in Columbia County. The majority of these sites are located within cities and villages throughout the County, however several contaminated sites are located in unincorporated towns. Of the 665 contaminated sites in the County, 331 have been cleaned up and are considered closed. The remaining 334 sites are classified as open sites. A closed site has completed all requirements for cleanup and has received a letter from the WDNR indicating the case has been closed. An open site is one in need of a cleanup or one in which a cleanup is underway.

The system tracks several types of contaminated sites, the most common of which are listed below.

- **Spills** – a Spill is a discharge of a hazardous substance that may adversely impact, or threaten to adversely impact public health, welfare, or the environment. There are 347 listed spills in Columbia County 229 are historic releases that require no further action, 120 of the sites have been cleaned up and closed, and one site remains open pending clean up.
- **Leaking Underground Storage Tank (LUST)** – a LUST is an underground tank that has contaminated soil and/or groundwater with petroleum. Some LUST sites are reviewed by the WDNR and others by the WI Department of Commerce. There are 243 LUST sites in Columbia

County, 188 are closed and have been cleaned up and 55 sites remain open or are conditionally closed.

- **Environmental Repair Program (ERP)** – ERP sites are sites other than LUST sites that have contaminated soil and/or groundwater. Often, these are old historic releases to the environment. There are 74 ERP sites in Columbia County, 27 are closed sites that have been cleaned up and 47 are open sites.
- **Voluntary Property Liability Exemptions (VPLE)** – a VPLE site is a site where the property owner conducts an environmental investigation and cleanup of an entire property and then receives limits on future liability of the contaminated site. There are two VPLE sites in Columbia County, one is an open site and one is conditionally closed.
- **Super Fund** – Superfund is a federal program created by Congress in 1980 to finance cleanup of the nation’s worst contaminated hazardous waste sites. As of September 2004, 38 sites were located in Wisconsin. No Super Fund sites exist in Columbia County.

Most of the 656 identified contaminated sites in the County have been cleaned up or require no further action. In fact, only 105 sites remain in need of clean up with most of these sites being leaking underground storage tanks. Some of these sites contain existing businesses and industries that will continue operations on the sites through the cleanup process. Other sites where no business or industrial operation currently exist offer possible opportunities for future business and industry upon cleanup of the site. Timely clean up and reuse of contaminated sites throughout the County should be strongly encouraged.

7.0 INTERGOVERNMENTAL COOPERATION

This element identifies activities in Columbia County associated with intergovernmental cooperation. Intergovernmental cooperation is generally considered to be any arrangement through which any two governmental jurisdictions coordinate plans, policies, and programs to address and resolve a mutual issue of interest. Intergovernmental cooperation is a necessity for all levels of government to operate in a cost effective and efficient manner while providing required services to citizens. The County's relationship with neighboring and overlapping governmental units such as the state, counties, cities and villages, towns, school districts, technical colleges, and other governmental districts can directly impact planning, the provision of services, and the siting of public facilities. This element examines these relationships, identifies real or potential conflicts, and provides suggestions for addressing issues in a productive manner.

7.1 INTERGOVERNMENTAL COOPERATION VISION

- ◆ Intergovernmental cooperation opportunities between Columbia County, local municipalities, the region, the state, tribal governments, and other adjacent governmental units utilized to the fullest extent possible.

7.2 INTERGOVERNMENTAL COOPERATION GOALS AND OBJECTIVES

Goal 1: Establish mutually beneficial intergovernmental relations with other units of government.

- Objective 1:* Encourage communities to create intergovernmental cooperative agreements for governmental services, activities, and programs wherever appropriate and assist these communities whenever possible.
- Objective 2:* Encourage incorporated municipalities and towns to enter into boundary agreements to address annexation and development issues and assist these communities whenever possible.
- Objective 3:* Promote cooperative projects with area school districts to educate and encourage participation in government among youth, specifically targeting participation in planning and land use issues.
- Objective 4:* Work to achieve cooperation and coordination between incorporated municipalities and adjoining towns on issues related to long-range planning and land use regulations.
- Objective 5:* Work to raise local government awareness of Wisconsin Statutes regarding intergovernmental cooperation and encourage their use.
- Objective 6:* Work with local governments, state agencies, other planning agencies, and school districts on land use and community development issues of mutual concern. (i.e. siting of public facilities)

Goal 2: Seek coordination and communication on planning activities between Columbia County, local municipalities, regional, state, and federal agencies.

- Objective 1:* Foster cooperation by providing opportunities for cities, villages, and towns to comment on specific development proposals, land use plans, and zoning changes.
- Objective 2:* Create and sponsor an ongoing forum in which the county, cities, villages, and towns can discuss land use and zoning issues on a regular basis.

- Objective 3:* Develop and support a process to resolve conflicts between plans for areas with overlapping government jurisdictions.
- Objective 4:* Work with towns, villages and cities to match land use plans and policies along municipal borders to promote consistency and minimize potential conflicts.
- Objective 5:* Utilize County planning staff to act as facilitators and educators to assist local municipalities with plan and ordinance administration.
- Objective 6:* Create a more consistent, integrated, and efficient code administration process for the County that provides all affected political jurisdictions an opportunity to influence the outcome.
- Objective 7:* Continue to promote future cooperative planning efforts and continue to offer planning services to Columbia County communities.
- Objective 8:* Encourage and support cooperative efforts between Columbia County and surrounding counties to address basin-wide water resource management planning, regional transportation planning, and other regional planning issues that cross county boundaries.
- Objective 9:* Work with the towns and Department of Agriculture, Trade and Consumer Protection on updates and amendments to the Columbia County Farmland Preservation Plan.

Goal 3: Seek opportunities to improve the provision of shared public services and facilities such as police, fire, emergency rescue, parks, solid waste management, and transportation among units of government.

- Objective 1:* Whenever possible, encourage increased sharing of police, fire, and emergency rescue facilities and services to improve efficiency and coordination.
- Objective 2:* Encourage municipalities within the County to utilize the County composting and recycling center.
- Objective 3:* Encourage municipalities to continue to utilize the services of the County Highway Department for local road maintenance.
- Objective 4:* Prior to purchasing new facilities or equipment, examine the possibilities of trading, renting, sharing, or contracting such items with neighboring jurisdictions.
- Objective 5:* Work with private, municipal, county, and state agencies to coordinate the provision of park and recreation facilities and activities within the County.
- Objective 6:* Work with the Wisconsin Department of Transportation and other agencies to assure that transportation improvements are consistent with the goals and objectives of this Plan.
- Objective 7:* Encourage cooperative agreements with the Wisconsin Department of Natural Resources (WDNR) that are mutually beneficial to the County and the WDNR.
- Objective 8:* Encourage the development of Emergency Management Plans by local municipalities.

7.3 INTERGOVERNMENTAL COOPERATION PROGRAMS AND RESOURCES

7.3.1 UW-Extension Local Government Center

The Local Government Center's mission is to provide focus, coordination, and leadership to UW System educational programs for local government and to expand the research and knowledge base for local

government education. The Local Government Center maintains a collection of information on intergovernmental cooperation.

7.3.2 Wisconsin Partnership

The State of Wisconsin offer's local government's contract purchasing, technical advice, data, and financial assistance to more efficiently provide government services. Through its website, www.wisconsinpartnership.wi.gov the State of Wisconsin allows local governments to access these resources. The website also offers significant information related to intergovernmental cooperation in Wisconsin.

7.3.3 Wisconsin Counties Association (WCA)

The Wisconsin Counties Association (WCA) is an association of county governments assembled for the purpose of serving or representing counties. The direction of this organization is determined by the membership and the WCA Board of Directors consistent with the WCA Constitution. The organization provides up to date information on issues affecting counties in Wisconsin and offers opportunities for counties to share information.

7.3.4 Wisconsin Towns Association (WTA)

Wisconsin Towns Association (WTA) is a non-profit, non-partisan statewide organization created to protect the interests of the 1,264 towns in the State of Wisconsin and to improve town government. The association is organized into six districts and is headquartered in Shawano. WTA activities include regular district meetings, an annual statewide convention, publications, participation in cooperative training programs, and other efforts.

7.3.5 League of WI Municipalities

The League of Wisconsin Municipalities is a voluntary non-profit association of Wisconsin cities and villages working to advance local government. The League was first established in 1898 and provides a variety of services and resources to members including legal resources, the league conference, training opportunities, sample ordinances, legislation review, a variety of publications and handbooks, and others.

7.3.6 State of Wisconsin Statues and Programs

The State of Wisconsin has a number of statues and related programs that deal with intergovernmental cooperation. For more information see section 7.5 of this element.

7.4 INTERGOVERNMENTAL COOPERATION

7.4.1 Columbia County and Adjacent Governmental Units

Columbia County shares borders with several other governmental units. The County's involvement with these other units of government is described below.

7.4.1.1 Adjacent Local Governmental Units

Columbia County shares a border with Juneau, Adams, Marquette, Green Lake, Dodge, Dane, and Sauk Counties. In addition, Columbia County has 35 municipalities located entirely or partially within the County. The 35 municipalities consist of 21 towns, 10 villages, and four cities. Three of the municipalities (two cities and a village) are divided between Columbia County and an adjacent county. Columbia County also shares a border with 23 towns in adjacent counties.

7.4.1.2 Relationship

Columbia County's relationship with adjacent counties can be described as one of mutual respect. Columbia County and adjacent counties periodically interact on issues such as highway improvements and the administration of county programs such as planning, zoning, and land information.

Columbia County's relationship with the local governmental units can also be characterized as one of mutual respect. The County is often a neutral party in disputes or issues between municipalities. The county also serves as a source of information that is available to local governmental units.

7.4.1.3 Siting Public Facilities

Columbia County has no formal process established for siting and building public facilities with local units of government or adjacent counties.

7.4.1.4 Sharing Public Services

Several County departments offer services to municipalities who seek additional assistance beyond the required level of service. These departments including Planning and Zoning Department, Highway Department, Land Information Department, Land Conservation, Solid Waste, and the Sheriff's Department.

The Planning and Zoning Department administers the land use related ordinances including zoning and subdivision regulations. The department administers zoning within the 19 towns in the County that have adopted County zoning. The department also administers subdivision regulation throughout all the unincorporated areas of the County. In addition, several other land use related ordinances and programs are administered by the department. The Planning and Zoning Department also provides planning services to municipalities within the County on a fee basis.

The Highway Department installs road name signs and driveway culverts for towns choosing to pay for these services. The Highway Department is in charge of all maintenance on county roads and also maintains town and state roads on a contract basis. The park system is also jointly administered by the Transportation and Highway Department and the Land and Water Conservation Department.

The Land Information Department administers and coordinates all land records activities in Columbia County. The department performs the County's Real Property Listing functions, is responsible for all Geographic Information System and mapping initiatives, serves as the office of the County Surveyor, and is responsible for the coordination and implementation of the Land Records Modernization Plan. In addition, the Land Information Department offers data sharing to all municipalities in the County and provides mapping services, including customized mapping, to municipalities on fee basis.

The Land Conservation Department administers and coordinates conservation programs, ordinances, regulations, information, and educational and technical assistance programs for land use management and to preserve natural resources.

The Solid Waste Department provides solid waste disposal and recycling services to municipalities within the County on a contract basis. The Department also operates a composting facility disposing of solid waste.

The Columbia County Sheriff's Department provides police protection and services throughout the County. Police services are provided to all municipalities not served by a local municipal police force. Police services are provided to all 21 towns and the Villages of Arlington, Doylestown, Friesland, and Pardeeville on a contract basis. In addition, the Sheriff's Department provides boat and snowmobile patrols, K-9 unit services, and maintains the County Jail, which is utilized by all municipalities. Emergency Government Services are also administered through the Sheriff's Department.

7.4.2 Columbia County and Local School Districts

Columbia County is served by all or part of 15 school districts. The County's involvement with these school districts is described below. More details about school districts are located in the Utilities and Community Facilities Element of this Plan.

7.4.2.1 *Relationship*

Columbia County's relationship with the school districts serving the County can be characterized as limited. The school districts tend to operate rather independently and interaction with the County tends to be minimal.

7.4.2.2 *Siting School Facilities*

The siting of new school facilities is mainly conducted by the school districts. The County has historically had little input into the location of new schools.

7.4.2.3 *Sharing School Facilities*

No formal agreement between the school districts and Columbia County exist for the shared use of school facilities. However, school facilities have, on occasion, been used by the County to hold meetings. School recreational facilities are also often used by residents living in close proximity to the schools.

7.4.3 Region

Columbia County is located in the south-central region of the State of Wisconsin. The County is not part of a regional planning commission. As a result, the County's interactions and contacts within the region are mainly limited to neighboring counties.

Columbia County does participate in the Intercounty Coordinating Committee (ICC). The ICC is an intergovernmental body created by the counties of Columbia, Dodge, Green Lake, Jefferson, and Sauk to share information and coordinate programs. All of these counties, except Green Lake, were never part of a regional planning commission. They formed the ICC as a substitute for some of the functions that would have been performed by a regional planning commission. Representatives, usually county board

chairs and vice-chairs, from each of the member counties meet monthly to share information and to coordinate programs. The UW-Extension Community Development Agents from the member counties jointly plan and coordinate educational and informational presentation at each monthly meeting.

7.4.4 State

Columbia County maintains relationships with a variety of state agencies and departments. The majority of these relationships can be characterized as regulatory in nature. Columbia County, acting as an arm of the state, must ensure enforcement of many state regulations and rules and therefore work with a variety of state agencies and departments on rule enforcement, compliance monitoring, and reporting. These types of relationships are most common with departments such as the Department of Natural Resources, Department of Revenue, Department of Health and Family Services, and the Department of Justice.

Columbia County also maintains relationships with state agencies that are more related to program implementation. These programs can include goals to improve economic development, housing, natural resources, education, and cultural resources. These relationships are most common with departments such as the Department of Agriculture, Trade, and Consumer Protection, the Department of Commerce, the State Historical Society, the Department of Transportation, the Department of Tourism, the Department of Public Instruction, and the Department of Natural Resources.

Overall, the majority of state agencies and departments have both a regulatory function and a program implementation function. Columbia County has a good working relationship with a number of state agencies that help to ensure the County's compliance with state regulations as well as assist the county in implementing programs that provide services to citizens. In addition, coordination with several state agencies occurred as part of the Columbia County Comprehensive Plan development process. The relationship with these state agencies and their assistance with the County Comprehensive Plan development process includes, but is not limited to the following:

- ◆ Wisconsin Department of Administration (WDOA)

The WDOA awards and administers comprehensive planning grants. While Columbia County did not utilize these grants as part of the County's planning effort these grants remain an important resource for future planning efforts.

In addition to grant awards and administration, the WDOA also provides population and demographic estimates and projections for planning purposes. The WDOA is also responsible for the administration of various programs often utilized for Plan implementation. The WDOA is also the state contact for land information modernization activities.

- ◆ Wisconsin Department of Transportation (WDOT)

The WDOT maintains several plans with statewide policies and recommendations regarding various aspects of transportation. Plan recommendations were consulted and incorporated into the Columbia County Comprehensive Plan where applicable. These plans are covered in more detail in the Transportation Element of this Plan.

- ◆ Wisconsin Department of Natural Resources (WDNR)

The Wisconsin Department of Natural Resources is responsible for implementing the laws of the state and, where applicable, the laws of the federal government that protect and enhance the natural resources of the state. It is the one agency charged with full responsibility for coordinating the many disciplines and programs necessary to provide a clean environment and a full range of outdoor recreation opportunities for Wisconsin citizens and visitors.

The WDNR has provided a number of resources to the Columbia County comprehensive planning process. These resources include information on natural resources such as wetlands, surface waters, groundwater, air quality, threatened and endangered species, wildlife habitat, and recreational uses and activities including hunting and fishing. In addition, the WDNR provided information through programs the department maintains regarding shoreland management, nonmetallic mining reclamation, stormwater, public sewer and water systems, solid waste management, and dam permitting. As a result, opportunities to work collaboratively with the WDNR are numerous.

◆ Wisconsin Historical Society

The Wisconsin Historical Society provided data for the Columbia County planning effort through its Wisconsin Architecture and History Inventory (AHI) and Archaeological Sites Inventory (ASI).

◆ Other State Agencies

In addition to the above, the following state agencies also contributed data and other trend information towards the Columbia County comprehensive planning process:

- Wisconsin Department of Public Instruction (school enrollments and district information)
- Wisconsin Department of Commerce (economic information)
- Wisconsin Public Service Commission (information on public utilities)

7.4.5 Other Governmental Units

Several other governmental units, such as lake districts, sanitary districts, utility districts, etc., exist within Columbia County. These governmental units tend to operate rather independently and interaction with the County tends to be minimal. The County Land Conservation Department does work on plan development with some of these governmental units, such as lake districts.

7.5 WISCONSIN INTERGOVERNMENTAL COOPERATION STATUTES

7.5.1 Intergovernmental Agreements

Wisconsin Statute, 66.0301 permits local agreements between the state, cities, villages, towns, counties, regional planning commissions, and certain special districts, including school districts, public library systems, public inland lake protection and rehabilitation districts, sanitary districts, farm drainage districts, metropolitan sewerage districts, sewer utility districts, Indian tribes or bands, and others.

Intergovernmental agreements prepared in accordance with s. 66.0301, formerly s. 66.30, are the most common form of agreement and have been used by communities for years, often in the contest of sharing public services such as police, fire, or rescue. This type of agreement can also be used to provide for revenue sharing, determine future land use within a subject area, and to set temporary municipal boundaries. However, the statute does not require planning as a component of any agreement and boundary changes have to be accomplished through the normal annexation process.

7.5.2 Boundary Agreements Pursuant to Approved Cooperative Plan

Under 66.0307, Wisconsin Statutes, combinations of municipalities may prepare cooperative boundary plans or agreements. Each city, village, or town that intends to participate in the preparation of a cooperative plan must adopt a resolution authorizing its participation in the planning process.

Cooperative boundary plans or agreements involve decisions regarding the maintenance or change of municipal boundaries for a period of 10 years or more. The cooperative plan must include a plan for the

physical development of the territory covered by the plan, a schedule for changes to the boundary, plans for the delivery of services, an evaluation of environmental features and a description of any adverse environmental consequences that may result from the implementation of the plan, and it must address the need for safe and affordable housing. The participating communities must hold a public hearing prior to its adoption. Once adopted, the plan must be submitted to the Wisconsin Department of Administration for State approval. Upon approval, the cooperative plan has the force and effect of a contract

7.5.3 Creation, Organization, Powers and Duties of a Regional Planning Commission

Wisconsin Statute 66.0309 permits local governments to petition the governor to create a regional planning commission (RPC). If local support for a commission is unanimous, the governor may create it by executive order. The governor may also create a commission if local governments representing over 50% of the population or assessed valuation of the proposed region consent to the creation. Commission members are appointed by either local governments or the governor.

State Statutes require the RPC to perform three major functions:

- Make and adopt a Comprehensive Plan for the physical development of the region.
- If requested by a local unit, report recommendations to that local unit on the location of or acquisition of land for any of the items or facilities, which are included in the adopted regional Comprehensive Plan.
- Make an annual report of its activities to the legislative bodies of the local governmental units within the region.

RPC's are also authorized to perform several other functions; however, by law they serve a strictly advisory role.

Columbia, Dane, Dodge, Jefferson, Rock, and Sauk Counties are the only counties in the state that are not part of a Regional Planning Commission.

7.5.4 Municipal Revenue Sharing

Wisconsin Statute, 66.0305, Municipal Revenue Sharing, gives authority to cities, villages and towns to enter into agreements to share revenue from taxes and special charges with each other. The agreements may also address other matters, including agreements regarding services to be provided or the location of municipal boundaries.

Boundaries of the shared revenue area must be specified in the agreement and the term of the agreement must be for at least 10 years. The formula or other means for sharing revenue, the date of payment of revenues, and the means by which the agreement was made may be invalidated after the minimum 10-year period.

7.5.5 Annexation

Wisconsin Statute, 66.021, Annexation of Territory, provides three petition methods by which annexation may occur. Annexation involves the transfer of one or more tax parcels from a town to a city or village. Cities and villages cannot annex property without the consent of landowners as required by the following petition procedures:

- Unanimous approval - A petition is signed by all of the electors residing in the territory and the owners of all of the real property included within the petition.
- Notice of intent to circulate petition (direct petition for annexation) - The petition must be signed by a majority of electors in the territory and the owners of one-half of the real property either in

value or in land area. If no electors reside in the territory, then only the landowners need sign the petition.

- Annexation by referendum - A petition requesting a referendum election on the question of annexation may be filed with the city or village when signed by at least 20 percent of the electors in the territory.

7.5.6 Incorporation

Wisconsin Statutes, 66.0201 - Incorporation of Villages and Cities; Purpose and Definitions, and 66.0211 - Incorporation Referendum Procedure, regulate the process of creating new villages and cities from town territory. Wisconsin Statute, 66.0207 - Standards to be applied by the department, identifies the criteria that have to be met prior to approval of incorporation.

The incorporation process requires filing an incorporation petition with circuit court. Then, the incorporation must meet certain statutory criteria reviewed by the Municipal Boundary Review Section of the Wisconsin Department of Administration. These criteria include:

- Minimum standards of homogeneity and compactness, and the presence of a "well developed community center".
- Minimum density and assessed valuation standards for territory beyond the core.
- A review of the budget and tax base in order to determine whether or not the area proposed for incorporation could support itself financially.
- An analysis of the adequacy of government services compared to those available from neighboring jurisdictions.
- An analysis of the impact incorporation of a portion of the town would have on the remainder, financially or otherwise.
- An analysis of the impact the incorporation would have on the metropolitan region.

7.5.7 Extraterritorial Zoning

Wisconsin Statute, 62.23(7a), Extraterritorial Zoning, allows a city with a population of 10,000 or more to adopt zoning in town territory, three miles beyond a city's corporate limits. A city or village with a population less than 10,000 may adopt zoning 1.5 miles beyond its corporate limits. In Columbia County, all cities and villages had populations less than 10,000 during the 2000 US Census and therefore have the potential to exercise extra-territorial zoning authority up to one and one-half miles. If the extraterritorial area of two municipalities overlaps, jurisdiction is divided between them as provided under s. 66.0105.

Under extraterritorial zoning authority, a city or village may enact an interim zoning ordinance that freezes existing zoning, or, if there is no zoning, existing uses while a plan and regulations are developed. The statute provides that the interim ordinance may be for two years.

A joint extraterritorial zoning committee must be established consisting of three city or village plan commission members and three town members. The city or village plan commission works with the joint committee in preparing the plan and regulations. The joint committee must approve the plan and regulations by a majority vote before they take effect.

The exercising of extra-territorial zoning has been attempted within four areas of Columbia County.

In 2003, the Village of Cambria exercised its extraterritorial zoning authority in the Town of Courtland on unincorporated lands within 1.5 miles of the Village. This effort ended in 2005 when the Village and Town were unable to develop a plan and zoning ordinance within the required two year timeframe.

In 2002, the City of Wisconsin Dells exercised its extraterritorial zoning authority on unincorporated lands within 1.5 miles of the City including portions of the Town of Newport. This effort ended in 2005 when the City and Town were unable to develop a plan and zoning ordinance within the required two year timeframe plus a one year extension.

In 1998, the Village of Wyocena exercised its extraterritorial zoning authority in the Town of Wyocena on unincorporated lands within 1.5 miles of the Village. This effort ended in 1999 when the Village passed a resolution discontinuing the effort to exercise its extraterritorial zoning authority.

In 1994, the City of Portage exercised its extraterritorial zoning authority on unincorporated lands within 1.5 miles of the City including portions of the Towns of Fort Winnebago, Pacific, Caledonia and Lewiston. This effort ended in 1996 when the City and affected Towns were unable to develop a plan and zoning ordinance within the required two year timeframe.

7.5.8 Extraterritorial Subdivision Review

Wisconsin Statute, 236.10, Approvals Necessary, allows a city with a population of 10,000 or more to adopt zoning in town territory, three miles beyond a city's corporate limits. A city or village with a population less than 10,000 may adopt zoning 1.5 miles beyond its corporate limits. However, unlike extraterritorial zoning that requires town approval of the zoning ordinance, extraterritorial plat approval applies automatically if the city or village adopts a subdivision ordinance or official map. The town does not approve the subdivision ordinance for the city or village. All cities and villages in Columbia County had populations less than 10,000 during the 2000 US Census and therefore have the potential to exercise extra-territorial plat review authority up to one and one-half miles. A city or village may waive its extraterritorial plat approval authority if it does not wish to use it.

The purpose of extraterritorial plat approval jurisdiction is to help cities and villages influence the development pattern of areas outside their boundaries that will likely be annexed to the city or village. Overlapping authority by incorporated municipalities is handled by drawing a line of equal distance from the boundaries of the city and/or village so that not more than one ordinance will apply. Map 7-1 illustrates the potential extent of city and village extra-territorial subdivision regulation within Columbia County.

7.6 PLANNING IN COLUMBIA COUNTY

Nearly all of the towns, cities, and villages in Columbia County have prepared their own comprehensive plans, and several have been updated or amended in recent years. Particularly as they relate to future land use desires, these local plans have been important inputs into this County Comprehensive Plan.

A number of other plans also exist that apply to Columbia County. These planning documents include the Farmland Preservation Plan (1977, updated 1988 and 2013), the Erosion Control Plan (1987), the Land and Water Resource Management Plan (2006), the Columbia County Comprehensive Development Plan (1970), the Solid Waste Management Plan (1980, updated 1990), the Outdoor Recreation Plan (1968), the Park, Open Space, and Outdoor Recreation Plan (1975), the Outdoor Recreation Plan (1981), and the Comprehensive Outdoor Recreation Plan (1997). These documents and others from adjacent counties and state agencies were consulted and reviewed as appropriate during the development of this Plan.

7.7 INTERGOVERNMENTAL CONFLICTS AND OPPORTUNITIES

7.7.1 Existing or Potential Conflicts with other Governmental Units

Several existing and potential conflicts between units of government will likely need to be addressed during the course of the planning period. Existing and potential conflicts are summarized in Table 7-1.

7.7.2 Opportunities for the Resolution of Conflicts with other Governmental Units

Conflicts are most effectively addressed in a proactive manner by pursuing opportunities that will reduce or altogether prevent future conflicts. Table 7-1 also summarizes potential opportunities that can be explored to address the identified existing or potential conflicts.

TABLE 7-1
Intergovernmental Conflicts and Opportunities for Resolution
Columbia County

Existing or Potential Conflict	Opportunities for Resolution
<p>Concerns over incompatible land uses in one municipality negatively impacting landowners and residents in adjacent municipalities.</p>	<p>Columbia County Planning and Zoning Department should work with local municipalities to modify or add land use regulations that address local concerns.</p> <p>Columbia County Planning and Zoning Department should encourage municipalities to develop, update, and properly administer local land use ordinances and programs.</p>
<p>Conflicts and inconsistencies between town, village, city, and county plans and ordinances.</p>	<p>Columbia County Planning and Zoning Department should work with municipalities on procedures for the review of development proposals.</p> <p>Columbia County Planning and Zoning Department should provide assistance to municipalities in the development of plans and ordinances.</p> <p>Columbia County Planning and Zoning Department should review and provide comments on drafts of local comprehensive plans and ordinances.</p>
<p>Conflicts over land use and development issues in the extraterritorial jurisdictions of cities and villages.</p>	<p>Columbia County Planning and Zoning Department should provide assistance with extraterritorial and boundary agreement issues.</p>
<p>Concern that local control in land use issues is subject to too much intervention by Columbia County and the State.</p>	<p>Ensure ample opportunity for public involvement during land use planning and ordinance development.</p> <p>Maintain and encourage communication between the Columbia County Planning and Zoning Department and local municipalities on land use issues.</p>
<p>Concern that County’s land use regulations are not adequate to address today’s land use issues.</p>	<p>Review and revise land use ordinances as necessary to address current land use issues.</p>

Source: Columbia County Planning and Zoning

8.0 LAND USE

The land use element examines existing and future land uses within Columbia County. The examination and analysis of existing land use trends within the County provides a means to forecast how land will likely be used in the future. The main function of the land use element is to guide future land uses in a manner that is compatible with the goals and objectives expressed within this Plan.

8.1 LAND USE VISION

- ◆ Well-balanced and orderly development in both urban and rural areas of the County that minimizes potential conflicts between residential, commercial, industrial, and agricultural land uses and finds balance among economic development, the preservation of agriculture, the protection of natural and cultural resources, and the recognition of private property rights.

8.2 LAND USE GOALS AND OBJECTIVES

Goal 1: New development occurring in a well-planned, sustainable, aesthetically and architecturally pleasing manner compatible with the local character.

- Objective 1:* Designate large areas in the rural portions of Columbia County for continued agricultural use, allowing limited and controlled residential development according to a density policy to minimize adverse impacts on agriculture and maintain rural character.
- Objective 2:* Designate areas within Columbia County that are suitable for more dense residential development (e.g. subdivisions) and ensure quality development there which complements the surrounding area.
- Objective 3:* Encourage conservation subdivision design principles for new subdivisions where appropriate, per adopted County zoning ordinance standards.
- Objective 4:* Designate areas within Columbia County that are suitable for commercial and industrial uses and encourage the separation and screening of these uses from other incompatible land uses.
- Objective 5:* Encourage natural buffers between incompatible land uses where such uses adjoin one another.
- Objective 6:* Evaluate and recommend areas of the County where animal confinement areas can be operated without conflicting with other forms of development.
- Objective 7:* Assist local communities with the development of a local review process for planning and zoning related issues including the establishment of local plan commissions.

Goal 2: Provide tools for managing and coordinating development consistent with the goals and objectives of the Comprehensive Plan while ensuring a balance between private property rights and the best interests of the community as a whole.

- Objective 1:* Update and integrate remaining land use related sections of the Columbia County Code of Ordinances to reflect the goals and polices of the Comprehensive Plan.
- Objective 2:* Implement a development review process that objectively examines the quality of a proposed development and the long-term positive and negative impacts on the community and the County.

- Objective 4:* Promote clustered residential development as the preferred type of new rural residential growth in areas suitable for such development.
- Objective 5:* Implement a minimum density standard for limited residential development in areas planned for long-term agricultural use.
- Objective 6:* Encourage new residential lots and building sites to be located and designed in a manner that protects environmental corridors, wetlands, floodplains, and productive farmland.
- Objective 7:* New development should be consistent with town, village, and city plans, where applicable.

Goal 3: Balanced and appropriate land uses within all communities of Columbia County that enhance and sustain the economic stability of the County.

- Objective 1:* Direct more intense, urban forms of development into areas that can provide adequate municipal services to support the development.
- Objective 2:* Assist in the development of urban growth areas around all existing incorporated municipalities to allow for reasonable municipal growth.
- Objective 3:* Encourage and assist all local municipalities in the development of detailed comprehensive plans that promote the concepts of balanced community development, agricultural preservation, and clustered residential development.
- Objective 4:* Encourage each community in the County to have an appropriate variety of land use categories.
- Objective 5:* Encourage the redevelopment and adaptive reuse of underutilized agricultural, commercial, and industrial structures, where consistent with designated future land uses.
- Objective 6:* Explore the use of impact fees and other capital cost recovery mechanisms to assure that the costs of new development are not borne by existing taxpayers.

8.3 LAND USE PROGRAMS

8.3.1 Columbia County Code of Ordinances

Most land development and building activity in the unincorporated areas of Columbia County is subject to Columbia County regulations. Land use within the County is regulated by the Columbia County Code of Ordinances. The primary section of the Code of Ordinance that regulates land use within the County is Title 16. Title 16 includes six chapters providing regulation regarding Zoning, Land Division and Subdivision, Private Sewage Systems, Floodplain Zoning, Shoreland Wetland Protection, and Nonmetallic Mining Reclamation. Other sections of the Columbia County Code of Ordinances that regulate land use include Title 12, Chapter 4 - Highway Access Control, which regulates property access from County highways and Title 15, Animal Waste Management, that regulates the placement and use of animal waste and manure storage facilities. The County's land use regulations are discussed in more detail in the sections below.

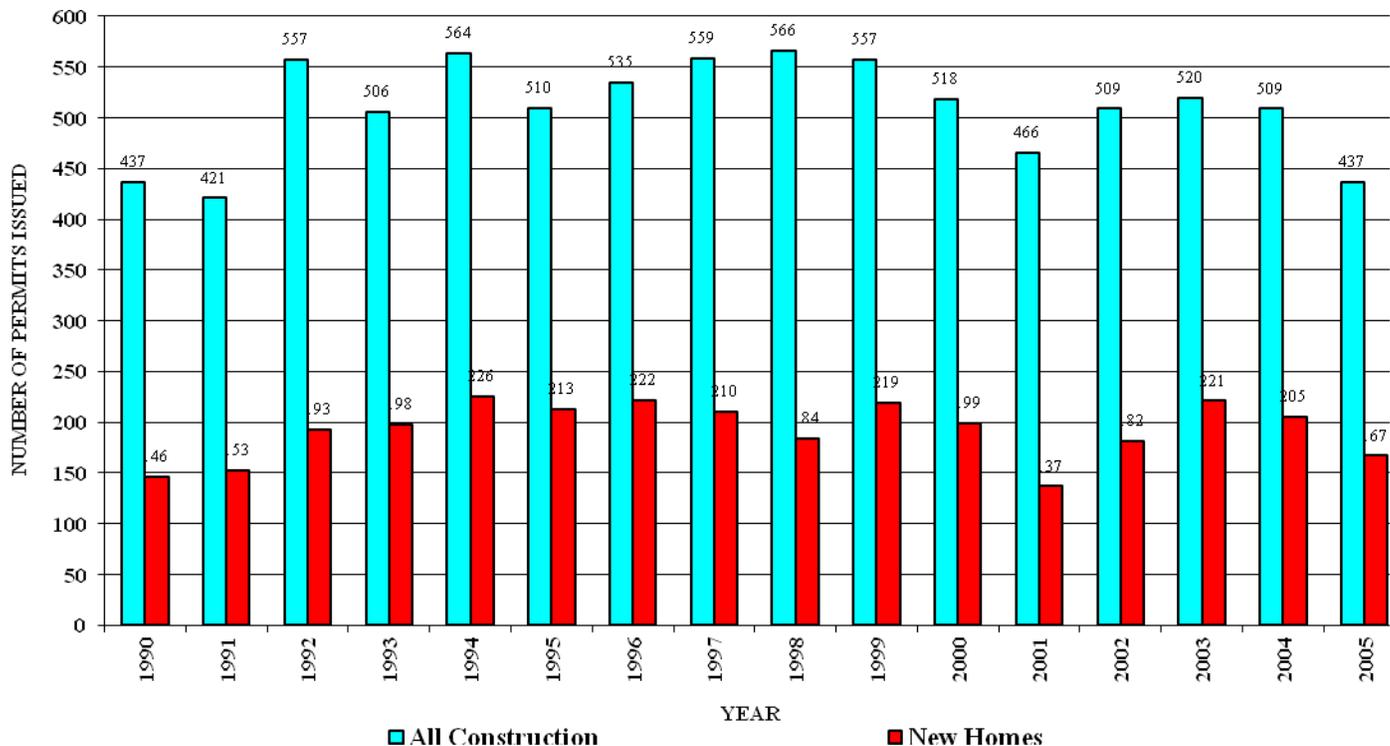
8.3.1.1 *Zoning Ordinance*

The Columbia County Zoning Ordinance, originally adopted in 1961, regulates the use of land and is in effect in all unincorporated areas of the County with the exceptions of the Towns of Scott and Randolph.

The County Zoning Ordinance has been most recently updated in 2012 and 2013, adding some new zoning districts (including a newly certified farmland preservation zoning district) and performance standards. The intent of the ordinance is to promote public health, safety, and general welfare through regulating the location of land uses and structures within the County. The ordinance is administered by the Columbia County Planning and Zoning Department.

Under the Columbia County Zoning Ordinance, all land development and building activity requires the issuance of a Zoning Permit. The issuing of a Zoning Permit indicates that the proposed development is an approved use under the current zoning of the subject property. Applications for a Zoning Permit are filed with the Zoning Administrator in the Planning and Zoning Department. Figure 8-1 illustrates the Zoning Permit activity for all zoned areas of Columbia County from 1990 to 2005. Over the 16 year period, an average of 510 Zoning Permits were issued for all types of construction, with an average of 192 Zoning Permits issued for new home construction. Over the last five years (2001-2005) of that period, Zoning Permits for all construction averaged 488, a 4.4 percent decrease over the 16 year average. Likewise, over the same five year period, permits for new homes in Columbia County averaged 182 per year, a 5.1 percent decrease from the 16 year average. Given the decline in the real estate market between 2006 and the early 2010s, this trend towards decreasing Zoning Permits has continued.

FIGURE 8-1
Zoning Permit Trends, All Construction and New Homes
Unincorporated Areas, Columbia County 1990-2005



Source: Columbia County Planning and Zoning Department

8.3.1.2 Land Division and Subdivision Ordinance

The Columbia County Land Division and Subdivision Ordinance, originally adopted in 1966, regulates the division of land within the County and is in effect in all unincorporated areas of the County. The intent of the ordinance is to regulate and control the division of land in the unincorporated areas of the County in order to promote orderly layout and use of land; protect the health and safety of county residents; ensure the adequate provision of public infrastructure; and to provide adequate legal descriptions and monumentation of subdivided land. The ordinance is administered by the Columbia County Planning and Zoning Department. The Land Division and Subdivision Ordinance requires an approved certified survey map (CSM) be recorded in the Register of Deeds Office for any minor land division that is less than 35 acres in size and is comprised of fewer than five lots. Major subdivisions comprised of five or more lots are subject to state platting requirements in addition to requirements in the Columbia County Land Division and Subdivision Ordinance. Lands in Columbia County are also divided through several other legal means outside the review of the Land Division and Subdivision Ordinance, however these divisions are required to meet the requirements of the ordinance prior to the issuance of any permits for construction. Table 8-1 illustrates the number of approved certified survey maps and major subdivision plats along with the total number of lots created by these divisions within Columbia County during the 10 year period between 1996-2005. During that period, a total of 1,349 approved CSMs with a total of 2,118 lots were recorded, an annual average of 135 CSMs with an average of 212 lots. During the same ten-year period, a total of 39 approved subdivision plats with a total of 739 lots

were recorded, an annual average of 3.9 subdivision plats with an average of 73.9 lots. Over the ten year period, 74 percent of all new lots were created through CSM while 26 percent of all new lots were created through subdivision plat.

TABLE 8-1
Land Divisions, Unincorporated Areas
Columbia County, 1996-2005

Year	Number of CSMs	Total Number of Lots	Number of Subdivision Plats	Total Number of Lots
1996	118	169	6	151
1997	142	199	2	34
1998	147	221	4	39
1999	103	208	2	95
2000	151	238	1	10
2001	140	198	4	55
2002	133	222	4	104
2003	158	252	4	59
2004	146	231	7	72
2005	111	180	7	120
Totals:	1,349	2,118	39	739

Source: Columbia County Planning and Zoning Department

8.3.1.3 Private Sewage Systems Ordinance

The Columbia County Private Sewage Systems Ordinance, originally adopted in 1967, regulates the construction of private sewage systems within the county and is in effect in all areas of the County including incorporated cities and villages. The intent of the ordinance is to promote and protect public health and safety by assuring the proper siting, design, installation, inspection, and management of private sewage systems and non-plumbing sanitation systems (e.g. a privy). The ordinance is mandated by the State of Wisconsin and administered by the Columbia County Planning and Zoning Department. Table 8-2 illustrates the number of sanitary permits issued for new and replacement systems within the County during the ten-year period between 1996 and 2005. During the ten year period between 1996 and 2005, conventional septic systems accounted for 2,094, or 70.4 percent, of the permits for new or replacement systems within the County followed by mound type sanitary systems that accounted for 645, or 21.7 percent, of the permits for new or replacement systems. A total of 166 holding tanks were permitted during the 10 year period accounting for 5.6 percent of all new or replacement systems. Other sanitary permits issued for items such as reconnection to an existing sanitary system or for the use of a privy accounted for 69 permits or 2.3 percent of the total permits issued.

TABLE 8-2
Sanitary Permits, Columbia County, 1996-2005

Year	Holding Tanks	Mound	Conventional	Other	Total of All System Types
1996	22	52	248	8	330
1997	19	77	229	4	329
1998	23	78	219	1	321
1999	11	74	227	11	323
2000	23	66	191	8	288
2001	11	53	172	13	249
2002	9	57	229	0	295
2003	13	50	221	12	296
2004	20	63	194	6	283
2005	15	75	164	6	260
Totals:	166	645	2,094	69	2,974

Source: Columbia County Planning and Zoning Department

8.3.1.4 Floodplain Zoning Ordinance

The Columbia County Floodplain Zoning Ordinance, originally adopted in 1983 and last amended in 2012, regulates development and uses within the 100 year floodplain areas of the county as identified on the Flood Insurance Rate Maps (FIRM) developed by the Federal Emergency Management Agency (FEMA). The ordinance is in effect in all FEMA designated 100 year floodplain areas in the unincorporated portions of the County. The intent of the ordinance is to protect life, health, and property; minimize public expenses related to flood control projects, rescue and relief efforts, and the damage of public infrastructure; prevent future blight areas; and protect business and homeowners. The ordinance is mandated by the State of Wisconsin and administered by the Columbia County Planning and Zoning Department.

8.3.1.5 Shoreland Wetland Protection Ordinance

The Columbia County Shoreland Wetland Protection Ordinance, originally adopted in 1985, regulates the use and development of shoreland areas within the county and is in effect in all areas of the County. The ordinance is in effect within 1,000 feet of a navigable lake, pond, or flowage; within 300 feet of a navigable river or stream; or within floodplain areas. The intent of the ordinance is to maintain safe and healthful conditions; prevent and control water pollution; protect spawning grounds, fish and aquatic life; control building sites, place of structures, and land uses; and to preserve shore cover and natural beauty. The ordinance is mandated by the State of Wisconsin and administered by the Columbia County Planning and Zoning Department.

8.3.1.6 Nonmetallic Mining Reclamation Ordinance

The Columbia County Nonmetallic Mining Reclamation Ordinance, originally adopted in 2001, regulates the reclamation of nonmetallic mining sites within the County and is in effect in all areas of the County not covered by a local nonmetallic mining ordinance. The intent of the ordinance is to ensure that nonmetallic mining sites are effectively reclaimed after the nonmetallic mining of the site ends. The

ordinance is mandated by the State of Wisconsin and administered by the Columbia County Planning and Zoning Department.

8.3.1.7 Highway Access Control Ordinance

The Columbia County Highway Access Control Ordinance, originally adopted in 1995, regulates access onto county highways within the County and is in effect in all areas of the County. The intent of the ordinance is to restrict and regulate access onto county highways in order to promote public safety, convenience, general welfare, economic viability, and to protect the public investment in existing and proposed highways by preventing costly road improvements, premature obsolescence, and to provide for safe and efficient ingress and egress to Columbia County Highways. The ordinance is administered by the Columbia County Highway Department.

8.3.1.8 Animal Waste Management Ordinance

The Columbia Animal Waste Management Ordinance, originally adopted in 1998, regulates the placement and construction of animal waste and manure storage facilities within the County and is in effect in all areas of the County. The intent of the ordinance is to regulate the location, design, construction, installation, alteration, operation, maintenance, abandonment, and use of animal waste and manure storage facilities and the application of waste and manure from these facilities. The ordinance aims to prevent water pollution, protect public health, prevent the spread of disease, ensure the appropriate use and conservation of land and water resources, and promote prosperity, aesthetics, and the general welfare of County citizens. The ordinance is administered by the Columbia County Land and Water Conservation Department.

8.4 EXISTING LAND USE

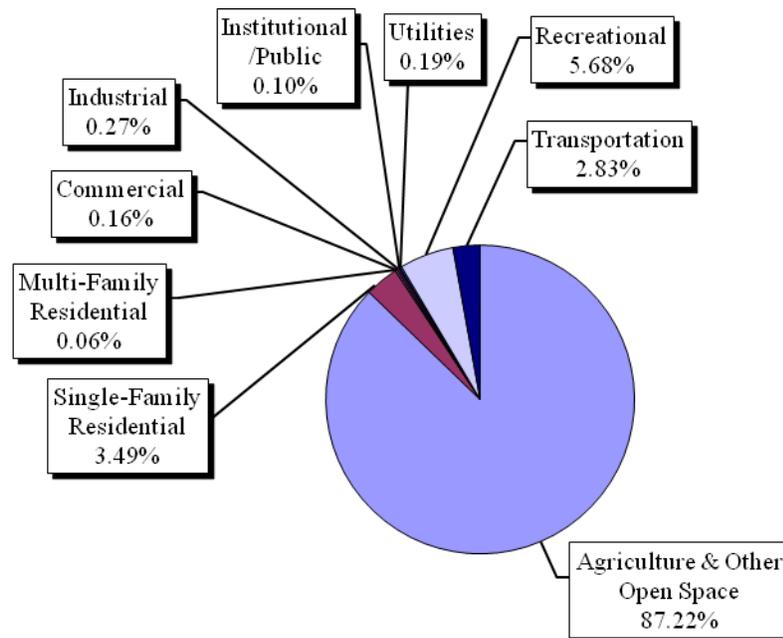
The Existing Land Use section of this Plan examines how land is currently being used within the County. Land uses within the unincorporated areas of Columbia County were inventoried and recorded in 2005 with verifications of the land uses made by many of the towns within the County. Existing land uses were assigned to one of nine primary categories: Agricultural or Other Open Space, Single-Family Residential, Multi-Family Residential, Commercial, Industrial, Institutional/Public, Utilities, Recreational, and Transportation. In addition, the Single-Family Residential land use category is further divided into two subcategories: Non-Farm Single-Family Residential and Farm Residential. Table 8-3 shows the acreage and the percentage of area used by each land use category in Columbia County in 2005. Figure 8-2 graphically illustrates the percentage of area used by each land use category in 2005. The locations of the different land uses within Columbia County are illustrated on Map 8-1 in Appendix I. The following sections describe in more detail the characteristics of the existing land uses within Columbia County.

TABLE 8-3
Existing Land Use, Unincorporated Areas, Columbia County, 2005

Land Use	Acreage	Percent of Total
Agricultural or Other Open Space	425,940.96	87.22%
Single-Family Residential	17,055.06	3.49%
<i>Non-farm Single-Family Residential</i>	<i>15,604.45</i>	<i>3.20%</i>
<i>Farm Residential</i>	<i>1,450.62</i>	<i>0.30%</i>
Multi-Family Residential	293.7	0.06%
Commercial	789.0	0.16%
Industrial	1,308.4	0.27%
Institutional/Public	478.3	0.10%
Utilities	947.1	0.19%
Recreational	27,756.7	5.68%
Transportation	13,810.8	2.83%
Total Unincorporated Area:	488,380.0	100.00%
Total Incorporated Area:	21,291.0	
Total Area of Columbia County:	509,671.0	

Source: Columbia County Planning and Zoning

FIGURE 8-2
Existing Land Use, Unincorporated Areas, Columbia County, 2005



Source: Columbia County Planning and Zoning

8.4.1 Agriculture or Other Open Space

The Agriculture or Other Open Space land use category accounts for the majority of land area in the County encompassing approximately 425,901 acres or 87.21 percent of the total unincorporated land area of the County in 2005. The majority of the lands in the Agriculture or Other Open Space existing land use category are productive farmlands, pastures, and woodlands that provide Columbia County with its rural character and agricultural heritage. These lands are also the most susceptible to development pressures. Many of these lands also contain physical features such as floodplains, wetlands, and water bodies that place limits on the amount of development that is possible. The amount of land in the Agriculture or Other Open Space land use category being converted for development purposes and the locations where this conversion is taking place are the key planning issues within this land use category. Overall, the amount of land devoted to agriculture or other open space use is high within the unincorporated areas of the County. One acre out of every 1.2 total acres in the unincorporated areas of the County were devoted to Agriculture or Other Open Space Use in 2005.

During the land use inventory conducted as part of this planning process, lands assigned to the Agriculture or Other Open Space category were identified as having the following characteristics:

- The Agricultural or Other Open Space existing land use category includes lands used predominantly for agricultural purposes or other undeveloped open space purposes such as pastures or the raising and storage of crops and livestock. All lands not designated under the definitions of the other land uses categories were classified as Agricultural or Other Open Space.

8.4.2 Single-Family Residential

Single-Family Residential land uses in Columbia County accounted for approximately 17,095 acres or 3.5 percent of the unincorporated land area of the County in 2005. Single-Family Residential land uses are comprised of two subcategories: Non-Farm Single-Family Residential and Farm Residential. The Non-Farm Single-Family Residential land use category accounted for the majority of Single-Family Residential land use with approximately 15,644 acres, or 91.5 percent of the Single-Family Residential land uses. The Farm Residential land use category accounted for approximately 1,450 acres, or 8.5 percent of the single-family residential land uses in 2005. Single-Family Residential land uses are the one of the more common land uses in the unincorporated areas of the County. Only the Agriculture or Other Open Space and the Recreational Areas existing land use categories contain more area than the Single-Family Residential land use category. Overall, the amount of residential land use is relatively high within the unincorporated areas of the County. One acre out of every 29 total acres in the unincorporated areas of the County were devoted to Single-Family Residential use in 2005.

During the land use inventory conducted as part of this planning process, lands assigned to the two subcategories of existing Single-Family Residential land use were identified as having the following characteristics:

- The Non-Farm Single-Family Residential land use subcategory includes lands that contain a one-family residence not associated with an “active farm”. In occurrences where a non-farm single-family residence was located on a parcel of land 10 acres or less in size, the entire parcel was assigned to the Non-Farm Single-Family Residential land use subcategory for area determination purposes. In occurrences where a non-farm single-family residence was located on a parcel greater than 10 acres in size, a one acre area was assigned to the Non-Farm Single-Family Residential land use category for area determination purposes.
- The Farm Residential land use category includes lands that contain a single-family residence that is associated with an “active farm”. In occurrences where an “active farm” residence was located on a parcel of land 10 acres or less, the entire parcel was included in the Farm Residential Land Use Category for area determination purposes. In occurrences where an “active farm” residence was located on a parcel of land greater than 10 acres in size, a one acre area was assigned to the Farm Residential Land Use Category for area determination purposes.

In order to distinguish and further clarify whether a single-family residence with a set of farm outbuildings was an “active farm” (e.g. a farm residence) or a “non-active hobby farm” (e.g. a non-farm single-family residence) the following criteria were used during the land use inventory:

Characteristics of an “Active Farm” (Classified as Farm Residential)

- Large agricultural buildings visibly being used to house farm related animals.
- Large numbers of agricultural related animals (e.g. cows, steer, pigs, chickens, etc.)
- Dairy facilities (e.g. active milk house or collection tanks, presence of milk collection trucks, dairy producer signs).
- Numerous pieces of large scale farm equipment and implements visible.
- Presence of actively used silos, grain storage facilities, or corn dryers.
- Other obvious large-scale farming related activities.

Characteristics of a “Non-Active Hobby Farm”(Classified as Non-Farm Single-Family Residential)

- Smaller agricultural buildings visibly being used to house a limited number of hobby farm related animals.
- A limited number of hobby farm related animals (e.g. cows, chickens, goats, horses, sheep, etc.)
- Few if any large pieces of farm equipment, equipment usually smaller in scale.
- Absence of large active grain storage facilities or silos.

8.4.3 Multi-Family Residential

Multi-Family Residential land uses in Columbia County accounted for approximately 294 acres or 0.06 percent of the unincorporated land area of the County in 2005. The multi-family residential land uses that exist in the unincorporated area of the County mainly consist of planned condominium developments and mobile home parks. Many, but not all, multi-family residential land uses in the unincorporated areas of the County are located within areas where sewer service is available. Overall, the amount of multi-family residential land use in the unincorporated areas of the County is relatively low. One acre out of every 1,661 total acres in the unincorporated areas of the County were devoted to Multi-Family Residential use in 2005.

During the land use inventory conducted as part of this planning process, lands assigned to the Multi-Family Residential land use category were identified as having the following characteristics:

- o The Multi-Family Residential land use category includes lands that contain two or more residences. This category includes duplexes, condominiums, mobile home parks, group homes, assisted living facilities and apartment complexes. In most cases the entire parcel that contained the multi-family land use was included in Multi-Family land use category for area determination purposes.

8.4.4 Commercial

Commercial land uses in Columbia County accounted for approximately 789 acres or 0.16 percent of the unincorporated land area of the County in 2005. The commercial uses that exist in the unincorporated area of the County generally consist of service based retail trade establishments such as gas stations, convenience stores, restaurants, and taverns. Most commercial development in the unincorporated areas of Columbia County is located along major highways or adjacent to cities or villages. Overall, the amount of commercial land use in the unincorporated areas of the County is relatively low. One acre out of every 619 total acres in the unincorporated areas of the County was devoted to commercial use in 2005.

During the land use inventory conducted as part of this planning process, lands assigned to the Commercial land use category were identified as having the following characteristics:

- o The Commercial land use category includes lands used primarily for retail/wholesale trade or service activities that sell goods and services directly to the public. In most cases, the portion of the lot or parcel that contains the commercial building and the associated parking lots and storage areas were included in the commercial land use classification for area determination purposes.

8.4.5 Industrial

Industrial land uses in Columbia County account for approximately 1,308 acres or 0.27 percent of the unincorporated land area of the County. Industrial land uses in the County generally consist of extractive types of uses (e.g. gravel pits) with some limited manufacturing uses. Overall, the amount of industrial land use in the unincorporated areas of the County is relatively low. One acre out of every 373 total acres in the unincorporated areas of the County were devoted to Industrial use in 2005.

During the land use inventory conducted as part of this planning process, lands assigned to the Industrial land use category were identified as having the following characteristics:

- The Industrial land use category includes lands used for producing an industrial or manufacturing product or for providing an industrial or manufacturing service. In most cases, the portion of the lot or parcel that contains the industrial building and any associated parking lots, storage areas, or raw material extraction sites was included in the industrial land use classification for area determination purposes. Many of the Industrial land uses within the County consist of sand and gravel extraction sites. In these cases, the current boundary of the extraction site was used in defining the extent of the industrial use.

8.4.6 Institutional/Public

Institutional/Public land uses in Columbia County account for approximately 478 acres or 0.10 percent of the unincorporated land area of the County. Institutional/Public land uses in the County generally consist of government facilities and other institutions that are open to the general public in some capacity. Overall, the amount of Institutional/Public land use in the unincorporated areas of the County is relatively low. One acre out of every 1,022 total acres in the unincorporated areas of the County were devoted to Institutional/Public use in 2005.

During the land use inventory conducted as part of this planning process, lands assigned to the Institutional/Public land use category were identified as having the following characteristics:

- The Institutional/Public land use category includes lands that have facilities or institutions that are open to the public in some capacity and provide a public or semi-public service. These include churches, fire stations, libraries, town halls, hospitals, cemeteries and schools. In most cases, the portion of the parcel that contains the public or semi-public facility and the associated parking lots and storage areas were included in the Institutional/Public land use classification for area determination purposes.

8.4.7 Utilities

Utility land uses in Columbia County account for approximately 947 acres or 0.19 percent of the unincorporated land area of the County. Utility land uses in the County generally consist of lands and facilities used to provide public utilities. Overall, the amount of Utility land use in the unincorporated areas of the County is relatively low. One acre out of every 516 total acres were devoted to Utility use in 2005.

During the land use inventory conducted as part of this planning process, lands assigned to the Utilities land use category were identified as having the following characteristics:

- The Utilities land use category includes lands that contain a public utility facility or are used to provide service from a public utility. These include water towers, wastewater treatment facilities, electric substations, gas and electric generating or processing plants, and radio or cellular towers. In most cases, only the portion of the parcel being actively used for utility purposes was included in the Utilities land use classification for area determination purposes.

8.4.8 Recreational Areas

Recreational Area land uses in Columbia County accounted for approximately 27,756 acres or 5.68 percent of the unincorporated land area of the County in 2005. Recreational Area land uses in the County generally consist of parks and other public recreation areas. Recreational Area land uses are the second most common land uses in the unincorporated areas of the County. Only the Agriculture or Other Open Space land use category contains more area than the Recreational Area land use category. As a result of being a common land use type, the amount of Recreational Area land use in the unincorporated areas of the County is relatively high. One acre out of every 18 total acres in the unincorporated areas of the County were devoted to Recreational Area use in 2005.

During the land use inventory conducted as part of this planning process, lands assigned to the Recreational Area land use category were identified as having the following characteristics:

- The Recreational Areas lands use category contains lands open to the public in some capacity for use in recreational activities. These areas include parks, boat landings, public hunting grounds, animal refuges, sportsman clubs, golf courses. In most cases, the entire parcel containing the recreational land use was included in the Recreational Areas land use classification for area determination purposes.

8.4.9 Transportation

Transportation land uses in Columbia County accounted for approximately 13,810 acres or 2.83 percent of the unincorporated land area of the County in 2005. Transportation land uses in the County generally consist of road and railroad right-of-ways and airports. Transportation land uses are the one of the more common land uses in the unincorporated areas of the County. Only the Agriculture or Other Open Space, the Recreational Areas, and the Residential land use categories contain more area than the Transportation land use category. As a result of being a common land use type, the amount of Transportation land use is somewhat high. One acre out of every 35 total acres within the unincorporated areas of the County were devoted to Transportation use in 2005.

During the land use inventory conducted as part of this planning process, lands assigned to the Transportation land use category were identified as having the following characteristics:

- The Transportation land use category contains lands used for right-of-ways purposes for roads and railroads as well as lands used in commercial airports and private landing strips. Where a public right-of-way exists and is mapped, the area of the right-of-way was used for area determination purposes. In other areas where the right-of-way does not exist or is not mapped, a width of 66 feet was assigned to the right-of-way for area determination purposes. For commercial airports, the entire airport parcel was classified as a Transportation use for area determination purposes. For private landing strips, only the portion of the parcel used for private landing strip purposes was classified as a Transportation use for area determination purposes.

8.5 TRENDS

The Trends section of this Plan element examines the characteristics and changes that are taking place in regards to the supply, demand, and price of land in Columbia County. This section also examines the opportunities for the redevelopment of underutilized land, discusses existing and potential land use conflicts, and examines land use trends and projected acreage needed.

8.5.1 Supply, Demand, and Price of Land

An examination of the supply, demand, and price of land in Columbia County can provide insight into the trends in land use that are taking place within the County. A number of sources of information are available that help to measure the trends supply, demand, and price of land within the County. The following section uses this information to provide more detail about the supply, demand, and price of land within the County. For additional and updated data, the reader is encouraged to see Appendix B of the Columbia County Farmland Preservation Plan.

8.5.1.1 Agricultural Land Sales

Table 8-4 illustrates information on agricultural land sales in Columbia County from the Wisconsin Agricultural Statistics Service over the five year period between 2000 and 2004. During this period, the total acres of agricultural land sold annually decreased over 19 percent, while the value of the agricultural land sold increased over 64 percent. The amount of land sold for continued agricultural use declined over the five year period by more than 35 percent, while the amount of agricultural land sold for other uses increased by over 70 percent. During three years out of the five year period, the price received for agricultural land being diverted to other uses was higher than the price received for agricultural land continuing in agricultural use.

TABLE 8-4
Agricultural Land Sales, Columbia County, 2000-2004

	2000	2001	2002	2003	2004	# Change 2000- 2004	% Change 2000- 2004
Ag Land Continuing in AG Use							
Number of Transactions	26	36	33	38	22	(4)	(15.4)%
Acres Sold	2,121	2,249	1,872	2,830	1,374	(747)	(35.2)%
Dollars per Acre	\$2,083	\$2,328	\$2,730	\$3,149	\$3,755	\$1,672	80.3%
Ag Land Being Diverted to Other Uses							
Number of Transactions	9	10	28	26	20	11	122.2%
Acres Sold	381	521	1,256	980	649	268	70.3%
Dollars per Acre	\$2,832	\$1,874	\$3,560	\$4,310	\$3,330	\$498	17.6%
Total of All AG Land							
Number of Transactions	35	46	61	64	42	7	20%
Acres Sold	2,502	2,770	3,128	3,810	2,023	(479)	(19.2)%
Dollars per Acre	\$2,197	\$2,242	\$3,063	\$3,447	\$3,619	\$1,422	64.7%

Source: Wisconsin Agricultural Statistics Service, Agricultural Land Sales, 2000-2004.

8.5.1.2 Forest Land Sales

Table 8-5 illustrates information on forest land sales in Columbia County from the Wisconsin Agricultural Statistics Service over the four year period between 1998 and 2001. (This information is the most current available.) During this period, the total acres of forest land sold annually decreased over 49 percent, while the value of the forest land sold has increased over 80 percent. The amount of land sold for continued forest use declined slightly over the four year period, just over nine percent, while the amount of forest land sold for other uses decreased significantly, over 85 percent, during the same period. Both the price paid for forest land continuing in forest use and for forest land being diverted to other uses increased during the four year period. However the price paid for forest land continuing in forest use increased considerably more than the price paid for forest land being diverted to other uses, 192.2 percent and 1.4 percent respectively.

TABLE 8-5
Forest Land Sales, Columbia County, 1998-2001

	1998	1999	2000	2001	# Change 1998- 2001	% Change 1998- 2001
Forest Land Continuing in Forest Use						
Number of Transactions	19	28	17	24	5	26.3%
Acres Sold	316	560	389	312	(4)	(9.6)%
Dollars per Acre	\$802	\$1,409	\$1,470	\$2,343	\$1,541	192.2%
Forest Land Being Diverted to Other Uses						
Number of Transactions	23	16	6	5	(18)	(78.3)%
Acres Sold	420	285	89	61	(359)	(85.5)%
Dollars per Acre	\$1,551	\$2,323	\$2,232	\$1,572	\$21	1.4%
Total of All Forest Land						
Number of Transactions	42	44	23	29	(13)	(31.0)%
Acres Sold	736	845	478	373	(363)	(49.3)%
Dollars per Acre	\$1,229	\$1,717	\$1,612	\$2,217	\$988	80.4%

Source: Wisconsin Agricultural Statistics Service, Forest Land Sales, 1998-2001.

8.5.1.3 Average Selling Price of Vacant Land

Table 8-6 illustrates information on the average price per acre and the average selling price for residential and agricultural land in Columbia County based upon information from the South-Central Wisconsin Multiple Listing Service. During the 16 year period from 1990 thru 2005, the average selling price for vacant residential land, 10 acres or less in size, increased \$31,791 or 109.1 percent, while the average price per acre for vacant residential land increased \$14,135 or 130.1 percent. Likewise, the average selling price for vacant agricultural land, 35 acres or larger in size, increased \$203,592 or 506.6 percent during the 16 year period while the average price per acre for a vacant agricultural land increased \$2,966 or 348.5 percent.

TABLE 8-6
Average Selling Price and Price Per Acre
Vacant Residential and Agricultural Land
Columbia County, 1990-2005

Year	Average Selling Price		Average Price per Acre	
	Vacant Residential Land <i>10 Acres or Less</i>	Vacant Agricultural Land <i>35 Acres or More</i>	Vacant Residential Land <i>10 Acres or Less</i>	Vacant Agricultural Land <i>35 Acres or More</i>
1990	\$29,148	\$40,187	\$10,865	\$851
1995	\$32,684	\$78,435	\$17,883	\$1,399
2000	\$45,055	\$88,696	\$25,946	\$2,154
2001	\$45,418	\$117,791	\$21,492	\$2,311
2002	\$53,679	\$131,650	\$29,702	\$3,041
2003	\$52,608	\$125,285	\$21,825	\$2,746
2004	\$54,705	\$175,637	\$19,724	\$4,066
2005	\$60,939	\$243,779	\$24,999	\$3,817
# Change 1990-2005	\$31,791	\$203,592	\$14,135	\$2,966
% Change 1990-2005	109.1%	506.6%	130.1%	348.5%

Source: South Central Wisconsin Multiple Listing Service

8.5.1.4 Equalized Values

Table 8-7 illustrates the equalized values of different property types in Columbia County based upon information from the Wisconsin Department of Revenue over the five year period from 2001 thru 2005. Equalized values are based upon the full market value of all taxable property, with the exception of agricultural land. Agricultural land values are based upon the State's policy of use value assessment that values agricultural land based upon its agricultural productivity rather than development potential. The concept behind this policy is to protect the farm economy and discourage the conversion of agricultural land to other uses.

Increases in the equalized value of taxable property in Columbia County provide additional tax revenues to fund public facilities and services and, therefore, are critical in the ability of the County to provide these amenities. The total equalized value of real estate in the County increased by \$1,162,118,200 or approximately 34 percent between 2001 and 2005. In 2005, residential

development represented the largest portion of the County's total equalized value at 73 percent, up from 70 percent in 2001. Equalized values on agricultural land decreased by 61 percent over the five year period due mainly to the implementation of the State's policy of use value assessment. In 2001, equalized values for agricultural lands in Columbia County were \$153,022,900 or 4.9 percent of the total equalized value. In 2005, the equalized value of agricultural lands in Columbia County had dropped to \$59,747,800 or 1.4 percent of the total equalized value.

TABLE 8-7
Equalized Values in Dollars, Columbia County, 2001-2005

2001	Residential	Commercial	Manufacturing	Agricultural	Forest	Other	Total
Total in Towns	1,279,157,800	64,145,100	11,158,100	150,510,500	71,388,300	229,245,100	1,805,604,900
Total in Villages	328,194,700	61,201,800	35,183,000	1,542,300	294,000	3,546,100	429,961,900
Total in Cities	594,827,600	250,178,500	58,735,700	970,100	0	808,000	905,519,900
Columbia County	2,202,180,100	375,525,400	105,076,800	153,022,900	71,682,300	233,599,200	3,141,086,700
2002	Residential	Commercial	Manufacturing	Agricultural	Forest	Other	Total
Total in Towns	1,387,434,300	66,977,100	10,603,100	78,739,700	93,869,200	270,694,200	1,908,317,600
Total in Villages	340,805,800	64,283,800	35,147,700	914,800	345,200	3,811,300	445,308,600
Total in Cities	643,813,900	273,636,600	60,318,700	467,000	0	950,400	979,186,600
Columbia County	2,372,054,000	404,897,500	106,069,500	80,121,500	94,214,400	275,455,900	3,332,812,800
2003	Residential	Commercial	Manufacturing	Agricultural	Forest	Other	Total
Total in Towns	1,470,001,100	69,725,900	11,279,100	59,951,700	102,472,300	292,687,000	2,006,117,100
Total in Villages	364,538,900	69,607,700	36,881,900	687,500	449,000	3,815,300	475,980,300
Total in Cities	686,117,600	295,160,900	63,095,900	384,800	0	942,900	1,045,702,100
Columbia County	2,520,657,600	434,494,500	111,256,900	61,024,000	102,921,300	297,445,200	3,527,799,500
2004	Residential	Commercial	Manufacturing	Agricultural	Forest	Other	Total
Total in Towns	1,652,831,100	82,042,700	11,215,100	57,110,400	133,004,300	294,104,200	2,230,307,800
Total in Villages	406,225,000	78,266,700	38,468,300	811,100	510,400	4,049,100	528,330,600
Total in Cities	750,211,300	305,602,700	64,299,800	356,600	179,200	1,025,700	1,121,675,300
Columbia County	2,809,267,400	465,912,100	113,983,200	58,278,100	133,693,900	299,179,000	3,880,313,700
2005	Residential	Commercial	Manufacturing	Agricultural	Forest	Other	Total
Total in Towns	1,877,527,100	89,364,100	25,415,000	58,573,000	84,060,400	364,280,900	2,499,220,500
Total in Villages	454,345,400	86,325,600	42,290,000	746,200	374,600	4,106,600	588,188,400
Total in Cities	814,699,000	331,421,700	67,809,500	428,600	343,000	1,094,200	1,215,796,000
Columbia County	3,146,571,500	507,111,400	135,514,500	59,747,800	84,778,000	369,481,700	4,303,204,900
# Change 2001-2005	Residential	Commercial	Manufacturing	Agricultural	Forest	Other	Total
Towns	598,369,300	25,219,000	14,256,900	(91,937,500)	12,672,100	135,035,800	693,615,600
Villages	126,150,700	25,123,800	7,107,000	(796,100)	80,600	560,500	158,226,500
Cities	219,871,400	81,243,200	9,073,800	(541,500)	343,000	286,200	310,276,100
Columbia County	944,391,400	131,586,000	30,437,700	(93,275,100)	13,095,700	135,882,500	1,162,118,200
% Change 2001-2005	Residential	Commercial	Manufacturing	Agricultural	Forest	Other	Total
Towns	46.8%	39.3%	127.8%	(61.1)%	17.8%	58.9%	38.4%
Villages	38.4%	41.1%	20.2%	(51.6)%	27.4%	15.8%	36.8%
Cities	37.0%	32.5%	15.4%	(55.8)%	100.0%	35.4%	34.3%
Columbia County	42.9%	35.0%	29.0%	(61.0)%	18.3%	58.2%	37.0%

Source: Wisconsin Department of Revenue, Statement of Equalized Values 2001- 2005.
"Other" includes swamp, waste, and undeveloped lands.

8.5.2 Opportunities for Redevelopment

Opportunities for the redevelopment of underutilized properties exist in many areas of Columbia County. In cities and villages, examples of redevelopment opportunities most often include former commercial and industrial sites that are no longer used for their original purpose, such as former factory or filling station site. Some of these sites may contain environmental contamination that makes the redevelopment of these sites undesirable due to the high cost of cleaning up the site. Efforts should be made to utilize funding from state programs to aid in the cleanup and redevelopment of these sites. The location of potentially contaminated sites within the County is discussed in more detail in the Economic Development element of this Plan.

In the unincorporated areas of the County, opportunities for redevelopment also exist. A limited number of underutilized commercial and industrial sites also exist in the unincorporated areas of the County, mainly in small hamlet areas or at the intersection of major roads. Reuse and redevelopment of these sites should be encouraged where appropriate, however some of these sites may contain environmental contamination issues to address before redevelopment can occur. Underutilized agricultural structures also provide opportunities for reuse and redevelopment. New uses for underutilized agricultural structures that are no longer part of an active farm operation should be explored. Furthermore, former sand and gravel operations also offer an opportunity for redevelopment in the unincorporated areas of the County. Many of these former sand and gravel operations are no longer suitable for use in agriculture but offer some potential for conversion to other uses. Where appropriate opportunities exist, efforts should be made to steer development towards the areas in need of redevelopment before approving new sites for development.

It is the intent of this Plan to recognize that opportunities for redevelopment of existing properties exist within the County, both in cities and villages as well as the unincorporated areas of the County. Rather than make specific recommendations as to the types of redevelopment that should occur at a specific site, it is the intent of this Plan to allow individual municipalities to determine the types of redevelopment that best suits a particular site.

8.5.3 Existing and Potential Land Use Conflicts

A number existing or potential land use conflicts will need to be considered by Columbia County and other local municipalities when planning future uses of land. The following list contains many of the existing or potential land use conflicts that will need to be considered:

- Annexation conflicts between incorporated cities and villages and the unincorporated towns. These disputes can negatively impact development patterns and the quality of new development. The disputes can also generate significant legal expenses for the municipalities involved.
- Increasing pressure to convert agricultural land to other uses, mainly residential. The increasing number of residential uses within agricultural areas leads to conflicts between farmers and non-farm residents. New non-farm residents may complain about farm odors, slow machinery on roads, and late hours of operation in fields. Such conflicts can lead to the end of farming in that area.
- Increased pressure to allow traditional (coal power plant expansion) and alternative energy systems (wind, solar, ethanol production, manure digesters, etc.) to be located within the County. These facilities will have an impact on existing and future residential developments.

- Increased pressure to locate or expand large animal confinement facilities within the County. These facilities may negatively impact nearby residential areas.
- Incompatible land uses along the border of unincorporated towns. Development in one town can spill over into an adjacent town and create undesirable land uses.

8.5.4 Development Potential and Trends

An understanding of development potential and trends in the unincorporated areas of Columbia County can be developed by looking at areas where development has taken place and area with development potential. Map 8-2 in Appendix I illustrates the location of tax parcels that contain a residence built before 1980 and the location of tax parcels with residences built between 1980 and 2005. The locations of existing tax parcels that do not contain a residence are also illustrated. The map shows that residential development within the unincorporated areas has mainly occurred on tax parcels along or very close to existing roads. Also indicated by the map is the large number of 35 acre or larger tax parcels that have the potential for residential development. In 2005, there were 5,990 existing tax parcels 35 acres or larger.

8.5.5 Projected Future Acreage Needs

An examination of the current trends among the land uses in Columbia County can provide some insight into the amount of land that will be needed for future land uses. Information from the Columbia County Existing Land Use Map, Map 8-1 in Appendix I, indicates that the average home in the unincorporated areas of Columbia County utilizes approximately 1.5 acres of land for residential purposes. The Issues and Opportunities Element of this Plan provided four housing projections for the unincorporated areas of Columbia County, one based upon zoning permits and three based upon population projections. Using these housing projections and the average amount of land per home, the projected acreage of land needed for residential purposes in the unincorporated areas of Columbia County can be determined. Table 8-8 compares the estimated acreage needed for new residential development in the unincorporated areas of the County based upon the four housing projections from the Issues and Opportunities Element.

TABLE 8-8
Estimated Acreage Needed for Residential Development by 2030
Unincorporated Areas, Columbia County

	2000-2030			2005-2030
	WI DOA	Current Population Trends	Historic Population Trends	Zoning Permit Trends
Estimated New Homes Needed by 2030 Unincorporated Areas	1,999	2,730	2,595	4,800
Average Acreage Used by a Home	1.5	1.5	1.5	1.5
Estimated Acreage Needed for Residential Development by 2030 Unincorporated Areas	2,999	4,095	3,893	7,200

Source: Columbia County Planning and Zoning

Upon examination of the information presented in Table 8-8, a decision was made to use the housing projection based upon zoning permit trends in the development of the Future Land Use Map for Columbia County. This decision was made because it is believed that permit trends are a more accurate reflection of the building activity that is currently taking place and is likely to take place in the future.

The amount of land utilized by other land use categories such as agricultural, commercial and industrial will also change over the planning period. For example, agricultural land will continue to be converted to other uses thereby reducing the overall amount of agricultural lands. Commercial and industrial lands will likely continue to be developed at current rates, however these uses will most likely take place in cities and villages as has been the case in the past. As a result, the unincorporated portions of Columbia County will not require large amounts of commercial and industrial future land uses. Table 8-9 illustrates the projected demand for residential, commercial, industrial, and agricultural land uses in the unincorporated areas of Columbia County.

TABLE 8-9
Projected Future Land Use Demand in Five Year Increments
Unincorporated Areas, Columbia County, 2005-2030

Year	Residential*	Commercial	Industrial	Agriculture
2005	17,348	789	1,308	425,941
2010	18,788	824	1,367	424,407
2015	20,228	860	1,425	422,873
2020	21,668	895	1,484	421,339
2025	23,108	930	1,542	419,805
2030	24,548	966	1,601	418,271
Projected Change in Acres	7,200	177	293	(7,670)

Source: Columbia County Planning and Zoning

* Includes single-family and multi-family.

8.6 FUTURE LAND USE

The Future Land Use section of this Plan describes how future development is intended to take place as the provisions of this Plan are implemented. Map 8-3 in Appendix I, the Columbia County Future Land Use Map, illustrates the planned future land uses throughout Columbia County.

The Columbia County Future Land Use Map also includes the future land uses from any adopted city or village Comprehensive Plan as required by Wisconsin Statute 59.69(3)(b). The inclusion of these city or village future land uses may result in the County's Future Land Use Map being significantly different from a Town's Future Land Use Map for the same area. The County incorporated those city and village future land use map recommendations on the Future Land Use Map knowing that some city/village planned development areas would not be ripe for development within the ensuing 20+ years. Because only those lands planned for growth in the next 15 years cannot be identified as Farmland Preservation Areas, there are differences in designations of some geographic areas between this Future Land Use Map (Map 8-3) and the Farmland Preservation Maps (Maps 3 through 24 of the Farmland Preservation Plan). This is not an inconsistency, but rather an acknowledgement of different planning timeframes and land demand forecasts.

Below are descriptions of the future land use categories as designated on Map 8-3 in Appendix I, the Columbia County Future Land Use Map. These descriptions provide information on the purpose and intent of each future land use category and provide examples of the uses that can be expected within each category. The future land use categories include: agricultural and other open space, single-family residential, multi-family residential, commercial, industrial, institutional/public, recreational, transportation, and environmental corridors. Additional future land use categories may be added as necessary in the future.

8.6.1 Agricultural and Other Open Space

DESCRIPTION: Asserting the right of Columbia County landowners to continue farming with minimal disturbance and conflict from current and future land uses is critical to the future survival of farms. The purpose of the Agricultural and Other Open Space Area is to:

- Preserve productive agricultural lands in the long-term.
- Preserve the rural character and aesthetic quality of Columbia County.
- Provide equity and fairness to owners of land with comparable resource and location characteristics.
- Minimize nonagricultural development on prime farmland.
- Maintain the integrity of agricultural zoning districts allowing for accepted agricultural practices.
- Protect existing farm operations from encroachment by incompatible uses.
- Allow a maximum residential development density of one residence per 35 acres of land, as described in greater detail in the policies that follow.
- Maintain farmer eligibility for farmland preservation incentive programs, such as tax credits.

The Agricultural and Other Open Space Area is mapped primarily to accommodate agricultural uses or agricultural-related uses (e.g., implement dealerships), and to focus on areas actively used for farming, with productive agricultural soils, with topographic conditions suitable for farming, and with long-term (15+ year) suitability for farming. This category also includes and is intended to accommodate forest management, farmsteads, limited non-farm housing in accordance with the policies described below, associated home occupations and family businesses, and other uses identified as permitted and conditional uses in implementing zoning districts. In order to guide the development of low-density residential

development within the Agricultural and Other Open Space designated areas, the “Residential Development within the Agricultural and Other Open Space Designated Areas” requirements listed below were created within this Comprehensive Plan, and modified as part of the 2013 Farmland Preservation Plan. It is the intent of this Comprehensive Plan that the development requirements described below be followed when reviewing and approving single-family residential development within the Agricultural and Other Open Space designated areas. The rezoning to a residential district of either existing or new development to accommodate the “Residential Development within the Agricultural and Other Open Space Designated Areas” requirements listed below will not require amendments to the future land use map.

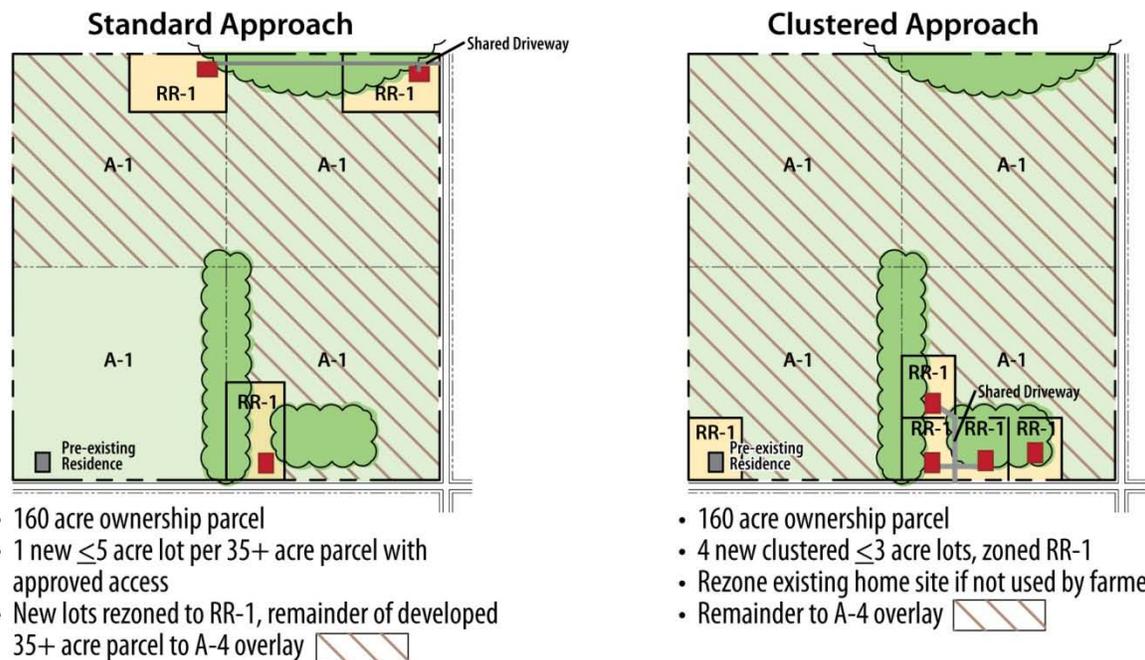
RESIDENTIAL DEVELOPMENT
WITHIN THE AGRICULTURAL AND OTHER OPEN SPACE DESIGNATED AREAS

1. **New Residences Require Rezoning:** Allow no new residences in the A-1 and AO-1 zoning districts, except for replacement of existing residences permitted under the Working Lands law and the County zoning ordinance. Instead, require the rezoning of A-1 and AO-1 zoned lands to another district when new homes are proposed.
2. **RR-1 as Preferred Rezoning District:** Utilize the County's RR-1 Rural Residence zoning district as the preferred zoning district for rezoning for new housing in the Agricultural and Other Open Space Area, in accordance with the maximum residential density policy in this section. Consider a different zoning district, such as the R-1 Single Family Residence district, where the applicant can demonstrate to the satisfaction of the associated town and the County Planning and Zoning Committee that such different zoning district meets the Agricultural and Other Open Space purpose and policies and responds to a unique circumstance not generally applicable to other properties in the area.
3. **Right-to-Farm Notice on Residential CSMs:** Protect the rights of farmers by requiring that the following language be included on all new certified survey maps (CSMs) that enable new residential development in the Agricultural and Other Open Space Area, to notify future residents of the potential effects of nearby farming activities on their property: "Through Section 823.08 of Wisconsin Statutes, the Wisconsin Legislature has adopted a right to farm law. This statute limits the remedies of owners of later established residential property to seek changes to pre-existing agricultural practices in the vicinity of residential property. Active agricultural operations are now taking place and may continue on lands in the vicinity of this plat/CSM. These active agricultural operations may produce noises, odors, dust, machinery traffic, or other conditions during daytime and evening hours."
4. **Definitions:** As used in this Plan, the terms listed below shall have the definitions so indicated:
 - a. **Contiguous:** Lots or parcels shall be considered contiguous if they share a common boundary. Parcels in common ownership which are directly across from a public street, rail right-of-way, easement, or navigable river, stream, or creek, along with parcels that meet only at a corner, shall be considered contiguous.
 - b. **Common Ownership:** Any combination of contiguous parcels singly owned by one uniquely named entity as identified by deed. Such an entity includes, but is not necessarily limited to, an individual person, a married couple or family trust, or a partnership or corporation.
 - c. **Contiguous Common Ownership:** For determining the right to develop lands in the Agricultural and Other Open Space Area, means all contiguous lands zoned A-1, AO-1, and/or A-2 and under common ownership at the time of the development proposal. Contiguous Common Ownership may include one or more tax parcels, "40's", or lots with lots defined as a parcel designated in a recorded plat or certified survey map, or described in a conveyance recorded in the office of the Register of Deeds, except that each residential lot legally created through a "farm consolidation" process and documented with a recorded certified survey map (CSM) shall not be considered part of any Contiguous Common Ownership. Determinations of Contiguous Common Ownership may require research by the Planning and Zoning Department and/or verification as to acreage and ownership from the land owner/applicant.
 - d. **Cluster:** A contiguous grouping of three or four allowable lots for new residential development.

5. **Residential Development Density—35+ acres in Contiguous Common Ownership:** Subject to County and town rezoning approval and compliance with all associated County Comprehensive/Farmland Preservation Plan and ordinance requirements, the owner of each set of lands in Contiguous Common Ownership of 35 acres or greater within the Agricultural and Other Open Space Area may develop single family residences, subject to the following criteria:
- a. The owner is allowed one single family residence per 35 acres of Contiguous Common Ownership, including any existing house(s) within the Contiguous Common Ownership, except where a cluster is approved per policy 5(f) below. Figure 8-3 illustrates this “standard approach” for executing residential density.
 - b. Before or at the time of rezoning, the owner may acquire additional land from adjacent landowners to assemble a larger Contiguous Common Ownership, provided that such land is also in the Agricultural and Other Open Space Area (or Farmland Preservation Area on Maps 3-24 of Farmland Preservation Plan) and is not restricted against additional residential development by policy, zoning rule, deed restriction, conservation easement, or otherwise.
 - c. Each new residence must be on a new lot of one acre or greater created by CSM. Each new lot for a new residence may not exceed five acres in area, except that larger lots may be permitted where other policies in this Plan are met and where an additional ten acres in Contiguous Common Ownership are restricted via A-4 zoning for every one acre greater than the five acre normal maximum. If the affected town has a base density policy that is stricter than policy 5(a) above, the requirement for additional restricted land associated with a lot that is larger than five areas may be waived or modified.
 - d. Each newly created residential lot must abut a public road, or have a suitable access easement approved by the affected town or the Planning and Zoning Committee.
 - e. The balance of the acreage used to enable the approval of a single family residential lot within the Contiguous Common Ownership shall be restricted to agricultural or open space uses via A-4 Agricultural Overlay zoning. Land in the A-4 district cannot be used together with other land not in the A-4 district to achieve the acreage normally necessary to build another single family residence. The location of the restricted A-4 lands will be determined through the review process and under associated zoning requirements.
 - f. Landowners with the ability to build three or more single family residences under this residential density policy may develop one or more clusters of lots for single family residential purposes. Clustered lots need not have frontage on a public road provided that the affected town and County both approve a shared access easement and agreement. Where Contiguous Common Ownership allows, clusters may be located adjacent to other clusters. Where no lot in the cluster exceeds three acres and all lots are restricted against farm animals, any existing residence(s) on the Contiguous Common Ownership at time of development does not count against the number of single family residences permitted under the residential density policy (see “clustered approach” in Figure 8-3).

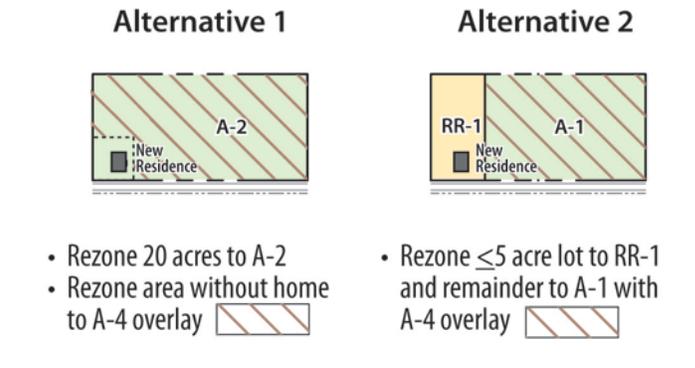
FIGURE 8-3

Residential Development Approaches within Agricultural and Other Open Space Area



6. **Residential Development Density— <35 acres in Contiguous Common Ownership:** Subject to County and town rezoning approval and compliance with all associated County Comprehensive/Farmland Preservation Plan and ordinance requirements, the owner of each set of lands in Contiguous Common Ownership less than 35 acres within the Agricultural and Other Open Space Area may have a total of one single family residence, subject to the following criteria:
- The Contiguous Common Ownership, and all parcels within it, shall be a valid parcel(s) created legally prior to November 1, 1984.
 - The Contiguous Common Ownership and each newly divided lot for a residence must abut a public road.
 - The landowner has the potential to develop a maximum of one single family residence for all parcels that make up the Contiguous Common Ownership combined, including any existing residence.
 - The balance of the Contiguous Common Ownership shall be restricted to agricultural or open space uses via A-4 Agricultural Overlay zoning, and against any further land division. Land in the A-4 district cannot be used together with other land not in the A-4 district to achieve the acreage normally necessary to build another single family residence. The location of the restricted A-4 lands will be determined through the review process and under associated zoning requirements.
 - Consider different zoning options for the future of such lands, including the A-2 General Agriculture district and combinations of the RR-1 Rural Residential and A-1 zoning districts (see Figure 8-4).

FIGURE 8-4
Alternative Rezoning Approaches for Pre-1984 Substandard (<35 acre) A-1 Lots with Non-Farm Residence



SITING STANDARDS FOR RESIDENTIAL DEVELOPMENT
WITHIN THE AGRICULTURAL AND OTHER OPEN SPACE AREAS

Except where a town applies comparable siting policies in its Comprehensive Plan or in an ordinance, the County will apply the following policies for siting new residential development in the Agricultural and Other Open Space Area.

1. **Effect on and of Agricultural Operations:** The proposed residential lot(s) will not adversely affect agricultural operations in surrounding areas or be situated such that future inhabitants of a residence on that lot(s) might be adversely affected by agricultural operations in surrounding areas. In considering whether this policy is achieved, the County Planning and Zoning Committee shall evaluate the following factors:
 - a. The proposed lot(s) are located in a manner as to minimize the amount of agricultural land converted to nonagricultural use, including compliance with statutory requirements related to prime farmland (will be applied by County per statutes even if town policies also used).
 - b. The proposed lot(s) are not located within 100 feet of any operating farm animal facility.
 - c. A new road or driveway needed to serve the site does not divide existing farm fields.

2. **Unsuitability for Agricultural Use:** The proposed residential site(s) is not well suited for agricultural use by virtue of wooded areas, topography, shape of parcel, soil characteristics, or similar factors. In considering whether this policy is achieved, the County Planning and Zoning Committee shall evaluate the following factors:
 - a. Whether the area of the lot(s) is enrolled in a land preservation program (e.g., CRP, CREP, farmland preservation tax credit).
 - b. The site(s) is not of a size or shape to be efficiently worked for farming.

- c. Prime farmland is preserved per statutory requirements and the County Farmland Preservation Plan, and not more than 70 percent of the soils on the proposed site are rated as National Prime Farmland (will be applied by County per statutes even if town policies also used).
 - d. Isolated small pockets of uncultivable land in an area otherwise farmed will not result.
 - e. Slopes in excess of 12 percent but not more than 20 percent may be developed only in accordance with an approved erosion control plan.
3. **Suitability for Residential Use:** The proposed residential lot(s) is particularly well suited for residential use, as indicated by rolling topography, wooded areas, soil types, vistas, proximity to lakes or streams, or similar factors, proximity to school bus routes, traffic access and egress, established transportation routes and adequacy of area schools to accommodate increased enrollment that might result from such development. In considering whether this policy is achieved, the County Planning and Zoning Committee shall evaluate the following additional factors:
- a. The site has soils that are able to support a private on-site waste treatment (septic) system, other than a holding tank.
 - b. Soils on the site afford sound structural support for buildings.
 - c. Proposed development has adequate access to existing town roads or, the developer shall provide such a road built to town road standards or such other suitable access approved by the town and County, at the developer's expense.
 - d. Proposed access points shall meet minimum spacing requirements as established by County and town ordinances, as applicable.
 - e. Proposed driveways will not exceed 1,000 feet in length, except as otherwise may be allowed by County zoning ordinance.
4. **Relationship to Natural Resources and Character:** The residential lot(s) relates positively to the natural resources, beauty, and rural character of the area. In considering whether this policy is achieved, the Planning and Zoning Committee shall evaluate the following specific factors:
- a. The lot(s) is not on land prone to flooding.
 - b. The lot(s) is not detrimental to natural resource components within mapped environmental corridors.
 - c. The lot(s) is not on slopes exceeding 20 percent.
 - d. The lot(s) is not on land considered to be of archaeological, cultural, historical, or religious significance.
 - e. The lot(s) minimizes the visibility of structures by utilizing landforms, existing vegetation, and/or new plantings to provide screening.
-

8.6.2 Single-Family Residential

DESCRIPTION: The Single-Family Residential future land use category represents locations where single-family types of land use and development are encouraged. The Single-Family Residential future land use category includes lands that are intended for the development of single-family residences and duplexes including major subdivisions and/or conservation subdivisions and for the development of

planned residential developments (PRD). The Single-Family Residential future land use category will also serve as the receiving area for any future transfer of development rights program within the County

Except as indicated below, the following standards have been established within this Comprehensive Plan for residential development in Single-Family residential designated areas on the Future Land Use map.

- Both minor (less than five lots) and major (more than five lots) subdivisions are allowed.
- Lots shall have minimum lot sizes as specified in the County zoning ordinance.

During the process to prepare the 2013 County Farmland Preservation Plan, the County's consultant analyzed areas planned for Single-Family Residential, Multi-Family Residential, Commercial, Industrial, Institutional/Public, Recreational, and Transportation development on the Future Land Use map against 15 year land demand forecasts. Many areas where such development was not required within the next 15 years are designated within the Farmland Preservation Area in Maps 3-24 of the Farmland Preservation Plan. The County will use the policies normally applicable to the Agricultural and Open Space Area to evaluate development proposals in such locations, until and unless the designation in the Farmland Preservation Plan maps is amended.

8.6.3 Multi-Family Residential

DESCRIPTION: The Multi-Family Residential future land use category represents locations where dense multi-family types of land use and development are encouraged. The Multi-Family Residential future land use category includes lands that are intended for the development of multi-family apartment type complexes, any developments with multiple dwelling units on a single parcel, and planned residential developments.

8.6.4 Commercial

DESCRIPTION: The Commercial future land use category represents locations where commercial types of land use and development are encouraged. The Commercial future land use category includes lands that will be used for retail/wholesale trade or service activities that sell goods and services directly to the public such as gas stations, restaurants, chain stores, video stores, car washes, marinas, strip malls, etc.

8.6.5 Industrial

DESCRIPTION: The Industrial future land use category represents locations where industrial and manufacturing types of land use and development are encouraged. The Industrial future land use category includes lands that will be used for producing an industrial or manufacturing product or for providing an industrial or manufacturing service.

8.6.6 Institutional/Public

DESCRIPTION: The Institutional/Public future land use category represents locations where institutional and public types of land use and development are encouraged. The Institutional/Public future land use category includes lands that have facilities or institutions that are open to the public in some capacity and/or provide a public or semi-public service. These include uses such as churches, fire stations, police stations, libraries, town halls, hospitals, clinics, cemeteries, public and private schools, colleges and universities, municipal wells, water towers, wastewater treatment facilities, etc.

8.6.7 Recreational

DESCRIPTION: The Recreational future land use category represents locations where recreational types of land use and development are encouraged. The Recreational future land use category contains lands open to the public in some capacity for use in recreational activities. These areas include public and private parks, boat landings, public hunting grounds, wildlife refuges, sportsman clubs, shooting ranges, group camps/retreats, campgrounds and camping resorts, ski hills, golf courses, etc.

8.6.8 Transportation

DESCRIPTION: The Transportation future land use category represents locations where new additions or significant changes to the transportation system are proposed. The Transportation future land use category contains proposed right-of-ways for new roads, railroads and trails as well as areas for new or expanded airports.

8.6.9 Environmental Corridors

DESCRIPTION: The Environmental Corridors are mapped areas that represent locations which contain unique natural resource components. The Environmental Corridors future land use category includes many of the most environmentally sensitive lands and provides a continuous linear system of open space. These land areas are also most susceptible to seriously impact from intense development. The Environmental Corridors include the following areas:

- Floodplains
- Wetlands
- 35 Foot Buffers Along All Lakes, Ponds, Rivers, Streams, and Drainage Ways
- Publicly Owned Lands and Parks
- Steep Slopes Over 12%
- Shallow Soils to Bedrock
- Woodlots 20 Acres or Greater

Environmental corridors overlay portions of all other mapped future land use categories and land uses of many types are contained with these other mapped categories. Development that takes place under one of these other mapped future land use categories can have impacts on the natural resource components within the environmental corridors. As a result, this Comprehensive Plan calls for the implementation of basic protections to the natural resource components of the environmental corridors. The intent of these protections should be to mitigate the impacts development may have on the components of the environmental corridors. These protections should provide specific criteria that indicate the protections necessary for each natural resource component.

8.7 CONSISTENCY BETWEEN FUTURE LAND USE AND ZONING

Future land use and zoning designations are related, but not necessarily identical. Future land use categories tend to be fairly general, whereas zoning districts regulate to specific land uses and development requirements. Because future land use categories are general, it is common for more than one zoning district to correspond to each land use category. It is also possible that some zoning districts might be consistent with more than one future land use designation.

Achieving consistency between the future land use map and zoning is required by State Statutes. This generally occurs when a community is considering a zoning change. The decision to approve a zoning change must be based on the adopted Comprehensive Plan, with a particular focus on the Future Land

Use Map. Generally, if the requested zoning is consistent with the future land use designation on the property and applicable policies it should be approved, unless unique circumstances illustrate the rezoning would negatively impact surrounding properties or the community. If a rezoning is not consistent with the future land use designation, the community should consider denying the rezoning request.

In situations where a rezoning request is not consistent with the future land use designation or other aspects of the comprehensive plan – but the community believes the requested rezoning is appropriate in the specific location and would benefit the community – the zoning change can be approved, however, the Future Land Use Map and/or other Plan policies should be amended accordingly to establish future land use and zoning consistency. The process for amending the Future Land Use Map is discussed in greater detail in the Implementation Element.

9.0 IMPLEMENTATION

The Implementation Element of this Plan outlines the programs, tools, and specific actions that will be used to guide the implementation of the Comprehensive Plan and achieve the desired outcomes. The Implementation Element does not work independently of the other Plan elements, rather the Implementation Element is intended to integrate the other Plan elements and achieve the goals and objectives of the Plan. Any action taken to implement the Plan can have direct and indirect effects on the other elements in the Plan. The manner in which the implementation of this Plan is conducted will directly impact the effectiveness of this Plan and the ability of this Plan to produce the desired results.

9.1 IMPLEMENTATION VISION

- ◆ A compilation of clear and defined actions necessary to implement all Plan elements, summarize progress, and describe the procedures for amendments and revisions.

9.2 IMPLEMENTATION PROGRAMS, TOOLS, AND SPECIFIC ACTIONS

A variety of implementation programs and tools exist and are available for use by Columbia County in implementing this Comprehensive Plan. These programs and tools can be divided into two categories regulatory and non-regulatory. Regulatory programs and tools are mainly in the form of ordinances that the County can choose to adopt and enforce. Non-regulatory programs and tools are mainly acquisitions (e.g. buy land) and fiscal actions (e.g. impact fees) that the County can choose to use in order to achieve a desired outcome. The following section provides a brief description of many of the available implementation programs and tools.

9.2.1 Regulatory Implementation Programs and Tools

- ◆ Conventional Zoning
Under Wisconsin Statutes, counties, cities, villages, and towns with village powers are authorized to adopt zoning ordinances. Zoning is one method of implementing or carrying out the Comprehensive Plan. Zoning regulates the use of land, lot size, density, and the height and size of structures. A conventional zoning ordinance is probably the most commonly used land use implementation tool. Under conventional zoning, base districts (defined areas of consistent use and density) are established which typically follow parcel boundaries and legal descriptions. Each district or zoning category contains a list of permitted and conditional uses which define "rights" within the district.
- ◆ Overlay Zoning
Overlay zoning creates a special zoning district, placed over an existing base zone(s), which identifies special provisions in addition to those in the underlying base zone. The overlay district can share common boundaries with the base zone or cut across base zone boundaries. Regulations or incentives are attached to the overlay district to protect a specific resource or guide development within a special area. This type of zoning can be helpful if there is one particular resource that needs to be protected a consistent way, regardless of what district it is located in.

◆ Planned Developments (PDs)

Planned developments allow developers to vary some of the standards in local zoning ordinances to provide for innovative approaches that may allow for better design and arrangement of open space to protect natural resources. PDs require flexibility from both the developer and local government.

◆ Performance Standards

Performance Standards provide a method that permits controlled development while also being sensitive to the landscape. A performance standard approach focuses on the impacts of land uses, rather than the uses themselves. Landowners are permitted a wide variety of uses, so long as they meet certain numeric standards such as a certain density, a certain amount of open space, or certain noise, smell or lighting level standards.

◆ Design/Site Review

Design/Site review involves the review and regulation of the design of buildings and their sites. Design/Site review standards are often, included as part of zoning and subdivision ordinances. It seeks to protect communities from multi-family, commercial, industrial, and institutional development which would detract from the appearance of the community and reduce property values. Such standards are especially recommended for communities with buildings of historic or architectural importance and where tourism is a major economic activity.

◆ Historic Preservation Ordinance

The objectives of a Comprehensive Plan which note the need to preserve important historic structures and sites can be implemented through the adoption of a historic preservation ordinance. These ordinances are meant to protect historic buildings and districts. Counties, towns, cities and villages have express authority to enact historic preservation ordinances. In addition, the Wisconsin Legislature has determined that historic preservation is such an important objective that all cities and villages that contain any property listed on either the national register of historic places or the state register of historic places must enact an historic preservation ordinance to regulate historic or archeological landmarks and historic districts in an effort to preserve those landmarks.

◆ Uniform Dwelling Code (UDC)

Uniform Dwelling Code is a uniform statewide code that sets minimum standards for safety; structural strength; energy conservation; erosion control; heating; plumbing and electrical systems; and general health and safety in dwellings. UDC covers new one and two family dwellings built since June 1, 1980 and all additions and alterations to these dwellings.

◆ Land Division/Subdivision Ordinance

A land division ordinance is a tool to control how, when, and if land will be divided and developed while protecting the needs and welfare of the community. It also regulates how new lots will be made ready for future development such as provisions for adequate access (required roads, driveways), wastewater treatment and water supply.

The impact of land division regulations is more permanent than zoning (which regulates the type of development that takes place on a parcel) because once land is divided into lots and streets are laid out, development patterns are set. Local review and regulation of future divisions of land can therefore be an effective tool to realize Plan goals to maintain agriculture as a strong part of the local economy, protect natural resources, and retain rural character.

A land division/subdivision ordinance can also incorporate "conservation design guidelines and standards" to help implement the Plan goals, objectives and policies supporting protection of the community's agricultural lands, and open spaces. Conservation subdivisions are intended to be an

alternative approach to the conventional lot-by-lot division of land in rural areas which spreads development evenly throughout a tract of land without regard to the natural features of the area.

◆ Wind Energy Systems Ordinance

Wind Energy Systems Ordinance can be used to direct the placement of Wind Energy Systems (WES) located within wind farms as well as some individual WES. The ordinance seeks to prevent adverse impacts by regulating location, height, aesthetics, lighting, setbacks, noise, signal interference, security fencing, and landscaping.

◆ Nonmetallic Mining Reclamation Ordinance

A Nonmetallic Mining Reclamation Ordinance regulates the reclamation of nonmetallic mining sites to ensure that the sites are effectively reclaimed after the mining of the site ends. Under the ordinance, a nonmetallic mining operation developed after the effective date of the ordinance must have a reclamation plan for the site that includes a post-mining land use for the site and ensures that the final reclamation of the mining site is consistent with uniform reclamation standards. The reclamation standards address environmental protection measures including topsoil salvage and storage, surface and groundwater protection, and contemporaneous reclamation to minimize the acreage exposed to wind and water erosion. Nonmetallic mine operators are also required to submit annual fees for inspection of the site for compliance with the plan and to have an acceptable financing mechanism to ensure completion of the reclamation plan.

◆ Erosion Control Ordinance

Erosion control ordinances are developed to protect the environment from erosion and sedimentation problems that occur during development projects. Often the most environmentally sensitive period of development is the initial construction phase when land is cleared of vegetation and graded to create a proper surface for construction. The removal of natural vegetation and topsoil makes the exposed area particularly susceptible to erosion, causing the transformation of existing drainage areas and the disturbance of sensitive areas. Eroded soil endangers water resources by reducing water quality and causing the siltation of aquatic habitat for fish and other desirable species. Eroded soil also necessitates repair of sewers and ditches and the dredging of lakes. In addition, clearing and grading during construction cause the loss of native vegetation necessary for terrestrial and aquatic habitat.

◆ Storm Water Control Ordinance

Storm Water Runoff Ordinances are developed to protect water quality and minimize the amount of sediment and other pollutants carried by runoff to lakes, streams, and wetlands during a storm event. These ordinances primarily focus on maintaining storm water best management practices including the design, routine maintenance, and inspection of storm water management structures and facilities.

- ◆ Private Sewerage System Ordinance
Private Sewerage System ordinances are developed to promote and protect public health and safety by assuring the proper siting, design, installation, inspection, and management of private sewage systems and non-plumbing sanitation systems (e.g. a privy).
- ◆ Driveway Ordinance
Driveway ordinances are developed to establish standards for driveways that regulate the siting, construction, and maintenance of driveways as well as provide for safe and adequate access from private development to public right-of-ways. The term "driveway" is generally defined to mean private driveway, road, field road, or other means of travel through any part of a private parcel of land or which connects or will connect with any public roadway. The ordinance typically only impacts new driveways which are required as a result of a land use modifications. A driveway ordinance provides an opportunity for review of driveway construction to ensure that the goals and objectives of the Comprehensive Plan are being met.
- ◆ Access Control Ordinance
Access Control Ordinances are developed to establish standards for private access points on public right-of-ways. The ordinance also establishes standards to maintain appropriate access spacing, require appropriate access design, and control the total number of access points to public right-of-way. An access control ordinance provides an opportunity for review of access points on public right-of-ways to ensure that the goals and objectives of the Comprehensive Plan are being met.
- ◆ Sign Ordinances
A sign ordinance restricts the type, size, and location of signs within a community. It also often restricts the types of materials that can be used to construct signs. These ordinances can regulate signage to achieve a number of community values such as improved property values, public safety and glare control. Counties, towns, cities, and villages may all adopt sign ordinances and billboard regulations.
- ◆ Official Maps
Cities, villages, and towns may adopt official maps. These maps, adopted by ordinance or resolution, may show existing and planned streets, highways, historic districts, parkways, parks, playgrounds, railroad rights of way, waterways and public transit facilities. The map also may include a waterway only if it is included in a comprehensive surface water drainage plan. No building permit may be issued to construct or enlarge any building within the limits of these mapped areas except pursuant to conditions identified in the law.

Counties have limited official mapping powers. Counties may adopt highway-width maps showing the location and width of proposed streets or highways and the widths of any existing streets or highways which are planned to be expanded. The municipality affected by the street or highway must approve the map. Counties may also prepare plans for the future platting of lands, or for the future location of streets, highways, or parkways in the unincorporated areas of the county. These plans do not apply to the extraterritorial plat approval jurisdiction of a city or village unless the city or village consents.
- ◆ Cooperative Boundary Agreements
Cooperative boundary agreements can reduce some of the conflict regarding boundary issues, including annexation, that often arise between towns and their incorporated neighbors (cities and villages). The Legislature has provided express enabling authority for these agreements. The communities involved in such agreements undertake cooperative preparation of a plan for the areas

concerned. The plan for changing or maintaining boundaries, and for controlling land use and services is sent to the Department of Administration. If the plan is approved, a contract binding the parties to it is put into effect.

◆ Annexation

Cities and villages have the power to annex given to them by the state. The power to extend municipal boundaries into adjacent unincorporated (town) lands allows a community to control development on its periphery.

Annexation occurs at the request of town residents and/or property owners, not at the request of the incorporated municipality. Petitions for annexation are filed by the town landowners and the village or city acts upon the annexation petition.

Under current annexation statutes, no city or village may annex any territory if none of the city's or village's territory is in the same county as the territory to be annexed. Cities and villages are also required to make payments for five years to towns that lose territory due to annexations. Cities and villages will have to pay to the town from which the land is annexed the amount of the town tax for the annexed property. An exemption from this payment exists for cities and villages that have boundary agreements with the neighboring towns.

◆ Extraterritorial Zoning

Any city or village that has a plan commission may exercise extraterritorial zoning power in the unincorporated areas surrounding the city or village. The extraterritorial zoning power may be exercised in the unincorporated areas located within three miles of the corporate limits of a first, second or third class city, or within one and one-half miles of a fourth class city or village. Extraterritorial zoning may be initiated by a city or village adopting a resolution and providing notice of the extraterritorial area to be zoned. The city or village may unilaterally adopt an interim zoning ordinance to preserve existing zones or uses for up to two years while a comprehensive zoning plan is being prepared. A joint committee, consisting of three city or village plan commission members and three town members must approve of the plan and regulations by majority vote.

◆ Extraterritorial Plat Review

Cities and villages that have adopted a subdivision ordinance or official map can exercise extraterritorial plat approval jurisdiction for three miles beyond the corporate limits of a first, second or third class city and one and one-half miles beyond the limits of a fourth class city or village.

◆ Transfer of Development Rights (TDR)

Transfer of Development Rights (TDR) is a voluntary, incentive based program that allows landowners to sell development rights from their land to a developer or other interested party who then can use these rights to increase the density of development at another designated location. While the seller of the development rights continues to own and use the land, an easement is placed on the property that prevents further development. The purpose of a TDR program is to protect land resources at the same time providing additional income to both the landowner and the holder of the development rights.

◆ Right-To-Farm Ordinance

Right-to-farm laws are designed to accomplish one or both of the following objectives: 1) to strengthen the legal position of farmers when neighbors sue them for a private nuisance; and 2) to protect farmers from anti-nuisance ordinances and unreasonable controls on farming operations. Most laws include a number of additional protections. Right-to-farm provisions may also be included in zoning or subdivision ordinances, and farmers with land enrolled in an agricultural district may have

stronger right-to-farm protection than other farmers. A growing number of counties and towns are passing their own right-to-farm legislation to supplement the protection provided by state law.

The common law of nuisances forbids individuals from using their property in a way that causes harm to others. A private nuisance refers to an activity that interferes with an individual's reasonable use or enjoyment of his or her property. A public nuisance is an activity that threatens the public health, safety or welfare, or damages community resources, such as public roads, parks, and water supplies.

Right-to-farm laws are intended to discourage neighbors from suing farmers. They help established farmers who use good management practices prevail in private nuisance lawsuits. They document the importance of farming to the state or locality and put non-farm rural residents on notice that generally accepted agricultural practices are reasonable activities to expect in farming areas. Some of these laws also limit the ability of newcomers to change the local rules that govern farming. Local right-to-farm laws often serve an additional purpose: They provide farm families with a psychological sense of security that farming is a valued and accepted activity in their community.

◆ Livestock Facilities Siting Ordinance

Livestock Facilities Siting Ordinances are designed to create a standardized set of requirements for farmers across the state to follow when planning to establish a new facility or expand an existing facility that will have over 500 animal units. It has become important for producers to plan and manage expansions well to avoid potential conflicts and the expenses to both the producer and to local government caused by such conflicts. For facilities planned to have greater than the 500 animal units, the ordinance sets rules regarding property line setbacks, water quality setbacks, waste and manure management and storage, runoff management from animal lots and feed storage facilities (e.g. silage), mortality management, and odor management.

◆ Nuisance Ordinance

A nuisance can generally be defined as an action, or lack thereof, which creates or permits a situation that annoys, injures or endangers the peace, welfare, order, health or safety of the public in their persons or property. Nuisance ordinances can be defined in many ways, depending what issues are present in the community. Possible nuisances include noxious weeds, storage of vehicles, odors, noise, signs, obstruction of streets, animals, fireworks and any number of related type nuisances. Concisely defining nuisances as well as enforcement, abatement and recovery of costs for abatement are very important in the creation of a nuisance ordinance. A nuisance ordinance provides landowners and residents with a mechanism for identifying and preventing non-compliant situations.

Further, there are some practical but nevertheless important reasons for developing a local ordinance. They include: 1) the ability to set a minimum and a maximum forfeiture amount; 2) the ability to decide a protocol for providing notice and the time to cure or abate the nuisance; and 3) the ordinance can state that the unpaid bill for the cost of abating the nuisance can be placed on the tax bill as a special charge. Most public nuisance ordinances cover five broad areas. They include:

- Noxious weeds
- Environmental health
- Morality (sexually oriented businesses)
- Public safety and peace
- Junk vehicle or equipment

9.2.2 Non-Regulatory Implementation Tools

◆ Land Acquisition

Communities and non-profit conservation organizations can acquire land for conservation purposes simply by purchasing it outright. This is recommended when public access to the property is required.

◆ Conservation Easements

Conservation easements limit land to specific uses and thus protect it from development. These voluntary legal agreements are created between private landowners (grantors) and qualified land trusts, conservation organizations or government agencies (grantees). Conservation easements may be purchased but are frequently donated by conservation-minded landowners. Grantors can receive federal tax benefits as a result of donating easements. Grantees are responsible for monitoring the land and enforcing the terms of the easements. Easements can be tailored to the unique characteristics of the property and the interests of the landowner. Easements may apply to entire parcels of land or to specific parts of a property. The easement is recorded with the deed to the property to limit the future uses of the land as specified in the easement. Land protected by conservation easements remains on the tax roll and is privately owned and managed.

◆ Purchase of Development Rights (PDR)

The purchase of development rights is a land conservation tool that communities can use to protect important natural resources such as farmland, hillsides, and wetlands. Under a PDR program, a unit of government (city, village, town, county, or state) or a nonprofit conservation organization (such as a land trust) purchases a conservation easement that limits the use of the land to accomplish a certain purpose, including protecting the land from development. The rights purchased are recorded in a conservation easement. PDR programs are voluntary and participants retain ownership of their land. They can sell or transfer their property at any time; but, because of the easement, the land is permanently protected from certain types of development.

◆ Land Trusts

A land trust is a private, nonprofit organization with a mission to conserve land and its resources. Landowners may work with a land trust when they wish to permanently protect the ecological, agricultural, scenic, historic, or recreational qualities of their land from inappropriate development.

◆ Capital Improvements Program (CIP)

The capital improvements program is a way of implementing issues related to capital facilities specified in a plan. Capital improvements are those projects which require the expenditure of public funds for the acquisition, construction, or replacement of various public buildings such as police and fire halls, schools, and city/village/town halls; roads and highways; water and sewer facilities; and parks and open space.

A capital improvements program is a listing of proposed public projects according to a schedule of priorities over the next few years, usually a five year programming period. A CIP allows local communities to plan for capital expenditures and minimize unplanned expenses. Sources of funding for capital improvements include impact fees, subdivision requirements, special assessments, and revenue or general obligation bonding. The usefulness of the CIP depends upon the community properly budgeting for expenditures as part of the community's annual capital improvements budget.

◆ Impact Fees

Cities, villages, towns, and counties may impose impact fees. Impact fees are financial contributions imposed on developers by a local government as a condition of development approval. Impact fees are one response to the growing funding gap in infrastructure dollars between revenues and needs. Impact fees help shift a portion of the capital cost burden of new development to developers in an effort to make new development responsible for serving itself rather than raising taxes on existing development. Local governments can use impact fees to finance highways and other transportation facilities, sewage treatment facilities, storm and surface water handling facilities, water facilities, parks and other recreational facilities, solid waste and recycling facilities, fire and police facilities, emergency medical facilities, and libraries. Impact fees cannot be used to fund school facilities. Furthermore, counties cannot use impact fees to fund highways and other transportation related facilities.

◆ Tax Increment Financing Districts (TIF)

Wisconsin towns recently gained a new tool to help promote rural development in Wisconsin with passage of new legislation in 2004. This new legislation provides towns the authority to use the tax incremental financing authority that cities and village have been using for years, to provide infrastructure for tourism, agriculture, and forestry projects in towns. The new law will give an optional tool to help site projects in towns across the state when special infrastructure needs such as all-weather roads, power lines, improved rail connections, and more are needed to create new or expanded tourism, agricultural, and forestry projects. An example of the type of project this tool could be used for is to provide a town highway that could carry heavy truck traffic to such a facility as an ethanol production plant or large livestock facility. A new or improved town highway could be constructed to allow the new facility to be located in more remote areas of the state, thus reducing potential land use conflicts with neighbors, yet avoiding placing the burden of the new improvement on the remainder of the town taxpayers. This new legislation gives towns' similar authority for tax incremental financing as cities and villages, but is limited to the type of rural development in tourism, agriculture, and forestry that does not compete with cities and villages.

◆ Additional Planning Efforts

The updating or development of other planning documents can aid in the implementation of a Comprehensive Plan. Other planning documents can help with access to available funding sources and provide additional support to achieving the goals and objectives of a Comprehensive Plan. In addition, keeping this Comprehensive Plan up to date ensures that the Plan is a useful tool in creating and maintaining desired land use types.

Table 9-1 below provides a list of the programs and tools described above along with recommended changes or specific actions to be taken regarding the implementation of the Columbia County Comprehensive Plan. The table also recommends the groups that should be involved in making the change or taking the action and provides a recommended timeline for these activities to be completed in order to implement.

TABLE 9-1
Recommended Implementation Programs, Tools, and Specific Actions
Columbia County, 2007-2030

Program or Tool	Recommended Changes or Specific Actions	Groups Involved	Timeline	Related Goals and Objectives
Zoning (Conventional and Overlay)	♦ Review Shoreland Wetland Protection Zoning District for consistency with the Comprehensive Plan	P&Z, Towns	2013-2015	1-1-00 5-2-08 1-1-01 5-2-09 2-1-00 5-2-11 2-1-02 5-2-14 2-1-03 5-2-15 2-1-04 5-2-19 2-1-05 5-3-01 2-1-06 6-1-06 2-1-07 6-2-03 2-1-08 6-3-02 2-1-10 7-3-01 2-1-11 8-1-00 2-1-12 8-1-01 2-1-13 8-1-02 2-1-14 8-1-04 2-3-00 8-1-05 2-3-01 8-2-05 2-3-02 8-2-06 2-4-00 8-3-04 2-4-02 8-3-06 2-4-03 2-4-04 3-1-03 3-2-07 3-2-08 3-2-09 3-2-10 3-2-14 3-4-03 3-4-07 4-1-01 4-1-03 5-1-00 5-1-01 5-1-02 5-1-04 5-1-05 5-1-06 5-1-07 5-2-00 5-2-02 5-2-03 5-2-05
	♦ Evaluate and amend the zoning ordinance as needed to implement the Comprehensive Plan and address unforeseen issues with the 2012/2013 comprehensive revisions to the County zoning ordinance.	P&Z, Towns	Ongoing	
Historic Preservation Ordinance	♦ Conduct a comprehensive inventory of historic buildings and places within Columbia County.	P&Z, WHS, Towns	2013-2017	1-2-04 2-1-00 2-4-00 3-4-05
	♦ Develop a historic preservation ordinance that provides minimal protections for historic buildings and places within Columbia County.	P&Z, WHS, Towns	2013-2017	5-3-00 5-3-01 5-3-02

Program or Tool	Recommended Changes or Specific Actions	Groups Involved	Timeline	Related Goals and Objectives
	<ul style="list-style-type: none"> Pursue grants and other funding sources to use in the protection of historic buildings and places. 	P&Z	2009-Ongoing	5-3-03 5-3-04 5-3-05 5-3-06 6-3-03
Uniform Dwelling Code (UDC)	<ul style="list-style-type: none"> Participate in joint efforts with county municipalities to standardize and streamline the administration of UDC within Columbia County. 	P&Z, CVT	Ongoing	2-1-00 6-1-11 2-1-09 8-1-00 2-4-00 5-2-01
Land Division and Subdivision Ordinance	<ul style="list-style-type: none"> Require CSM's for all land divisions 80 acres or less. 	P&Z, LIO, RD	2013-2015	1-1-00 4-1-01 2-1-03 4-1-03 2-1-04 4-1-13 2-1-05 4-4-05 2-1-10 5-1-00 2-1-11 5-1-01
	<ul style="list-style-type: none"> Reference conservation design standards included within the Zoning Ordinance in 2012. 	P&Z, Towns	2013-2015	2-1-12 5-1-02 2-1-14 5-1-04 2-4-00 5-1-05 2-4-02 5-2-00 2-4-04 5-2-02 3-1-03 5-2-05
	<ul style="list-style-type: none"> Incorporate the "Residential Development in Agricultural and Other Open Space Designated Areas" requirements within the Land Division and Subdivision Ordinance. 	P&Z	2013-2015	3-1-10 5-2-06 3-2-00 5-2-09 3-2-07 5-2-13 3-2-08 5-2-14 3-2-09 5-2-15
	<ul style="list-style-type: none"> Evaluate and amend the Land Division and Subdivision Ordinance as needed to implement the Comprehensive Plan. 	P&Z	2013-Ongoing	3-2-10 5-4-01 3-2-11 8-1-00 3-2-12 8-1-02 3-2-13 8-1-03 3-4-06 8-2-05 3-4-07 8-2-06 3-4-09 8-2-07
Wind Energy Systems Ordinance (WES)	<ul style="list-style-type: none"> Evaluate the merits of developing a Wind Energy Systems Ordinance for Columbia County to regulate placement and construction of these facilities. 	P&Z, Towns	2013-2015	2-4-00
Nonmetallic Mining Reclamation Ordinance	<ul style="list-style-type: none"> Conduct a review of the existing nonmetallic mining reclamation ordinance and determine if changes are needed to make the ordinance more effective and consistent with other county ordinances. 	P&Z	2007-Ongoing	2-4-00
Private Sewerage System Ordinance	<ul style="list-style-type: none"> Conduct a review of the existing private sewerage system ordinance and determine if changes are needed to make the ordinance more effective and consistent with other county ordinances and this Comprehensive Plan. 	P&Z	2013-3015	2-1-03 2-1-12 2-1-05 2-4-00 2-1-06 2-4-05 2-1-07 4-3-00 2-1-08 2-1-11

Program or Tool	Recommended Changes or Specific Actions	Groups Involved	Timeline	Related Goals and Objectives
Driveway Ordinance	<ul style="list-style-type: none"> Work with Towns to ensure that Town driveway ordinances are consistent with Town and County plans. 	P&Z, HWY	2013-2016	2-1-03 3-1-03 2-1-04 3-1-10 2-1-12 3-2-05 2-4-00 3-2-06 3-1-00 3-2-07 3-1-01 4-1-04
Access Control Ordinance	<ul style="list-style-type: none"> Conduct a review of the county access control ordinance and determine if changes are needed to make the ordinance more effective and consistent with other county ordinances. 	P&Z, HWY	2013-2016	2-4-00 3-2-13 3-1-00 3-4-06 3-1-01 4-1-13 3-1-03 2-4-00 3-1-10 3-1-00 3-2-01 3-1-01
	<ul style="list-style-type: none"> Coordinate access control efforts between the state, county, and towns to streamline the permitting process and reduce confusion among the public. 	P&Z, HWY, WDOT	Ongoing	3-2-02 3-2-14 3-2-03 3-4-06 3-2-04 4-1-13 3-2-07
Official Maps	<ul style="list-style-type: none"> Work with towns, villages, and cities to develop official maps that preserve locations for future roads, parks, waterways, etc. 	P&Z, CVT	Ongoing	2-1-04 3-4-00 2-1-05 3-4-01 2-4-00 3-4-03 3-1-00 3-4-09 3-3-00
Cooperative Boundary Agreements	<ul style="list-style-type: none"> Work with towns, villages, and cities to develop cooperative boundary agreements that are fair to all sides and allow for orderly growth and development along municipal borders. 	P&Z, CVT	Ongoing	2-1-05 7-2-03 2-4-00 7-2-04 6-1-12 7-3-00 7-1-00 7-3-01 7-1-01 8-2-08 7-1-02 8-3-01 7-2-01
Extraterritorial Zoning	<ul style="list-style-type: none"> Coordinate efforts with municipalities that choose to utilize this tool. 	P&Z, CVT	Ongoing	2-1-05 2-4-00 7-2-01 8-2-08
Extraterritorial Plat Review	<ul style="list-style-type: none"> Coordinate efforts with municipalities that choose to utilize this tool. 	P&Z, CVT	Ongoing	2-1-05 2-4-00 7-2-01 8-2-08
Right-To-Farm Ordinance	<ul style="list-style-type: none"> Incorporate right to farm provisions within the Columbia County Land Division and Subdivision Ordinance. 	P&Z, Towns	2013-2015	1-2-02 5-1-01 1-2-03 5-1-02 2-1-13 5-1-03 2-4-00 5-1-08 5-1-00 5-1-09 8-1-01
Nuisance Ordinance	<ul style="list-style-type: none"> Evaluate the merits of developing a nuisance ordinance for Columbia County. 	P&Z, HHS, Sheriff	2013-2017	2-4-00
Land Acquisition	<ul style="list-style-type: none"> Promote the use of land acquisition to achieve the goals and objectives of the Comprehensive Plan, as appropriate. 	P&Z, LWC, CVT	Ongoing	2-4-00 4-4-08 4-4-00 5-2-00 4-4-04 5-2-17 4-4-06 5-2-18

Program or Tool	Recommended Changes or Specific Actions	Groups Involved	Timeline	Related Goals and Objectives
Conservation Easements	<ul style="list-style-type: none"> Promote the use of conservation easements to achieve the goals and objectives of the Comprehensive Plan, as appropriate. 	P&Z, LWC	Ongoing	2-4-00 5-2-19 4-4-00 4-4-04 4-4-06 4-4-08 4-4-10 4-4-11 4-4-12 5-2-00 5-2-02 5-2-17 5-2-18
Purchase of Development Rights (PDR)	<ul style="list-style-type: none"> Work with towns to develop an inventory of appropriate lands to be preserved through a PDR program. 	P&Z, Towns	Ongoing	2-1-13 2-4-00 4-4-08 5-2-00 5-2-18 5-2-19
	<ul style="list-style-type: none"> Pursue funding from federal, state, and county sources to purchase development rights in targeted areas. 	P&Z, Towns	Ongoing	
Land Trusts	<ul style="list-style-type: none"> Consider the development of a land trust to aid in the protection of the county’s natural resources. 	P&Z	Ongoing	2-4-00 5-2-00 3-4-05 5-2-18 4-4-00 5-2-19 4-4-08
Capital Improvements Program (CIP)	<ul style="list-style-type: none"> Develop and implement a CIP that lists and prioritizes large capital expenditures within county government over a five year period. 	All County Depts.	Ongoing	2-4-00 4-2-00 4-1-10 4-2-01 4-1-11 4-4-13 4-1-12 7-3-04 4-1-14
Impact Fees	<ul style="list-style-type: none"> Evaluate the feasibility of using impact fees to implement the goals and objectives of the Comprehensive Plan. 	P&Z	2013-2017	2-4-00 8-3-07 4-1-09 5-2-18 5-4-01
Tax Increment Financing Districts (TIF)	<ul style="list-style-type: none"> Work with towns, villages, and cities to promote the appropriate use of TIF districts for redevelopment and economic development purposes. 	P&Z, CVT	Ongoing	2-4-00
Additional Planning Efforts	<ul style="list-style-type: none"> Update of the Columbia County Park, Open Space, and Outdoor Recreation Plan to reflect the recommendations of this Plan and local comprehensive plans. Utilize the updated Plan to obtain grants. 	P&Z, LWC	2013-2017	All Elements
	<ul style="list-style-type: none"> Update the Columbia County Farmland Preservation Plan 	P&Z, LWC	2023, or with next Comp Plan update	
	<ul style="list-style-type: none"> Regularly update and amend this Comprehensive Plan. 	P&Z	Update by 2017	

Program or Tool	Recommended Changes or Specific Actions	Groups Involved	Timeline	Related Goals and Objectives
	<ul style="list-style-type: none"> ◆ Assist with the regular updates of the Columbia County Land and Water Resource Management Plan and work to ensure that the Plan is consistent with goals and objectives of this Comprehensive Plan. 	P&Z, LWC	Ongoing	
	<ul style="list-style-type: none"> ◆ Assist the municipalities within Columbia County in the development of comprehensive plans and other planning documents. 	P&Z	Ongoing	

Source: Columbia County Planning and Zoning

KEY for Table 9-1													
Groups Involved	<table border="0" style="width: 100%;"> <tr> <td style="width: 50%;">P&Z = Planning and Zoning</td> <td style="width: 50%;">LWC = Land and Water Conservation</td> </tr> <tr> <td>LIO = Land Information Office</td> <td>HWY = Highway Department</td> </tr> <tr> <td>RD = Register of Deeds Office</td> <td>CVT = Cities, Villages, and Towns</td> </tr> <tr> <td>WHS = Wisconsin Historical Society</td> <td>WDOT = Wisconsin Department of Transportation</td> </tr> <tr> <td>Towns = All Towns</td> <td>HHS = Health and Human Services</td> </tr> <tr> <td>Sheriff = Sheriff's Department</td> <td>All County Depts. = All Columbia County Departments</td> </tr> </table>	P&Z = Planning and Zoning	LWC = Land and Water Conservation	LIO = Land Information Office	HWY = Highway Department	RD = Register of Deeds Office	CVT = Cities, Villages, and Towns	WHS = Wisconsin Historical Society	WDOT = Wisconsin Department of Transportation	Towns = All Towns	HHS = Health and Human Services	Sheriff = Sheriff's Department	All County Depts. = All Columbia County Departments
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Related Goals and Objectives	<p>EXAMPLES:</p> <p>3-2-06 = Element #3 (Transportation) – Goal #2 – Objective #6</p> <p>2-4-00 = Element#2 (Housing) – Goal#4 – No Objective Cited</p>												

9.3 INTEGRATION AND CONSISTENCY OF PLAN ELEMENTS

The State of Wisconsin's statutes require that the Implementation element describe how each of the nine elements of the Comprehensive Plan will be integrated and made consistent with the other elements of the Plan. The planning approach used to produce the Columbia County Comprehensive Plan was conducted in such a manner that all nine of the Plan elements were developed through the same planning process. Each element was developed with the other elements in mind, thereby eliminating the threat of inconsistencies among the elements. In addition, the Plan development process was overseen by the Columbia County Comprehensive Planning Advisory Committee who further scrutinized the Plan for inconsistencies. Further, amendments to this Comprehensive Plan document were adopted in 2013 to assure consistency between this Plan and the 2013 County Farmland Preservation Plan. As a result of this Plan development process, there are no known inconsistencies among the Plan elements.

Over time, as Plan amendments occur the threat of inconsistencies will increase. It is important that county staff and the Columbia County Planning and Zoning Committee conduct consistency reviews to ensure that the Plan is up to date and consistent among the nine elements of the Columbia County Comprehensive Plan. It is also important to attempt to maintain consistency between town comprehensive plans and the Columbia County Comprehensive Plan. Amendments to either a town Plan or the County Plan can introduce inconsistencies and should be reviewed carefully.

9.4 MEASUREMENT OF PLAN PROGRESS

The State of Wisconsin's comprehensive planning statutes require that the implementation element provide a mechanism to measure the progress toward achieving all aspects of the Comprehensive Plan. Measurement of Comprehensive Plan progress can be achieved in two ways:

- Review of the goals and objectives of this Plan.
- Review of the Implementation Programs, Tools, and Specific Actions section of this element.

Goals and objectives are included in each element of the Comprehensive Plan and provide direction for the implementation of the Plan. The measurement of Plan progress can be accomplished through a review of these goals and objectives over time. Goals should be evaluated and measured to determine if they are still valid and that the intended purpose of the goal is being achieved. Likewise, objectives should be measured to determine if progress has been made toward achieving the objective and whether the objective is still relevant to achieving the goal. Measuring the progress of an objective can be as simple as determining whether the objective has been implemented or not. Each goal and objective in the Plan should be periodically reviewed to determine the amount of progress that has been made and the effectiveness of the goal or objective in achieving the intended results.

The Implementation Programs, Tools, and Specific Actions section of this element spells out the recommended changes to the County's ordinances as well as other planning related activities that should be carried out to implement the Plan. This section also provides a recommended timeline for accomplishing the recommended actions. The measurement of Plan progress can be determined by a review of this section to determine if the recommended activities have been implemented.

In an effort to insure the Plan is achieving the intended and desired results, a review of the Comprehensive Plan's progress shall be conducted by the Columbia County Planning and Zoning Department and reported to the County Board of Supervisors at least once every five years, or more frequently at the request of the Board.

9.5 AMENDING OF THE PLAN

The Columbia County Comprehensive Plan should be evaluated on a regular basis to gauge the progress made towards achieving the goals and objectives of the Plan. Unforeseen circumstances or opportunities in the future may warrant that amendments to the Plan are needed to maintain the effectiveness and consistency of the Plan. Amendments should be minor changes to the overall Plan and should be done after careful evaluation in a non-accommodating manner to maintain the Plan as a planning tool upon which decisions are based.

It is the intent of this Comprehensive Plan to have proposed amendments reviewed on an as needed basis. Changes and amendments to the Plan shall follow a process that requires a petition to the Planning and Zoning Committee of Columbia County Board of Supervisors. The petition shall specify the change requested and the reasons for the change. The same process used to initially adopt the Plan under the State of Wisconsin's comprehensive planning statutes shall also be used when adopting amendments to the Plan. Furthermore, state statutes should be monitored to determine if any changes have been made that would affect the amendment process.

9.6 UPDATING OF THE PLAN

The State of Wisconsin's comprehensive planning statutes require that a Comprehensive Plan be updated at least once every ten years. An update of the Plan requires a revisiting of the entire planning document. Unlike an amendment, an update is often a substantial re-write of the text, updating of the inventory and tables, and substantial changes to the maps. The Plan update process should follow a similar process as the one used in the initial creation of this Plan including similar time and funding allotments. State statutes should be monitored to determine if any changes have been made that would affect the updating process. The County may consider updating this Comprehensive Plan document and the Farmland Preservation Plan on a similar schedule in the future.